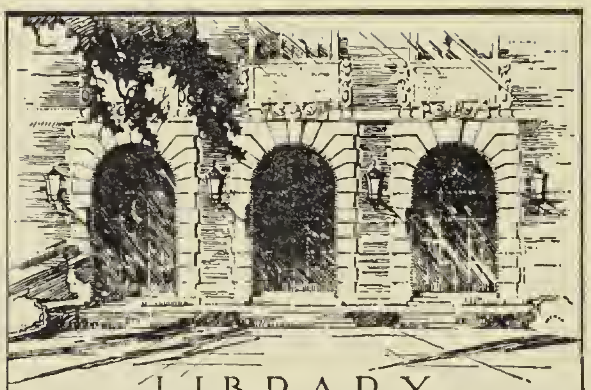

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The Journal

OF THE

American Medical Association

A MEDICAL JOURNAL CONTAINING

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GEORGE H. SIMMONS, LL.D., M.D.

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MEDICAL EDUCATION AND THE MIDWIFE PROBLEM IN THE UNITED STATES *

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When requested by the Chairman of the Committee on Midwifery of the Association for the Study and Prevention of Infant Mortality to prepare a paper on the midwife problem, I felt that important information on the subject might be elicited by interrogating the teachers of obstetrics throughout the country. Accordingly, I prepared a questionnaire, containing some fifty questions, which is appended, and which was sent to the professors in the 120 medical schools giving a full four-year course. Forty-three professors, representing schools in every section of the country, were good enough to reply.

As some of the queries were decidedly personal in character, I promised not to mention the names of those replying, or the schools with which they are connected; but at the same time I stated that I should feel free to use whatever information might be supplied. It is with great pleasure that I take this opportunity to thank those who replied for their courtesy and frankness, and at the same time to express the hope that their cooperation has not been in vain, as I feel that it will bear fruit by arousing general interest, not only in the midwife problem, but also in the much broader question of medical education, by showing that we have as yet failed to train practitioners competent to meet the emergencies of obstetrical practice.

While the responses were not so general as might be desired, they are nevertheless sufficiently numerous to give a fair idea of the conditions existing throughout the country. Thirty-one replies came from the sixty-one schools which are designated as "acceptable" by the Council on Medical Education of the American Medical Association, as compared with eleven from the fifty-nine non-acceptable schools, not including one from Canada. The forty-three schools replying may be classified as follows:

Eleven of the twenty-three schools demanding two or more years of college work for admission.

Four of the twelve schools demanding one year of college work.

Sixteen of the other twenty-six acceptable schools requiring four years of high-school work.

Eleven of the fifty-nine non-acceptable schools.

One of the acceptable Canadian schools.

The one favorable general impression which I obtained from the entire series of replies is that the forty-three professors of obstetrics who made them constitute a body of unusually frank and truthful men; as otherwise they would scarcely admit the existence of such a condition of affairs as their replies seem to indicate. For many years I have regarded the general attitude toward obstetrical teaching as a very dark spot in our system of medical education, and the majority of the replies to my questionnaire indicate that my pessimism was more than justified. Briefly stated, they indicate (a) that many professors are inadequately prepared for their duties and have but little conception of the obligations of a professorship; (b) that a considerable proportion are not competent to cope with all obstetrical emergencies; (c) that nearly all complain that their teaching and hospital equipment is inadequate for the proper training of students; and (d) most serious of all, that a large proportion admit that the average practitioner, through his lack of preparation for the practice of obstetrics, may do his patients as much harm as the much-maligned midwife.

THE PRESENT STATUS OF OBSTETRICS

In the first part of this report I shall attempt to set forth the condition of affairs as revealed by my questionnaire; while in the second part I shall venture to indicate some of the reforms necessary to place obstetrical teaching on a proper basis, and incidentally touch on certain features of the midwife problem, in an attempt to indicate how the public may obtain better obstetrical treatment. With this in mind, I shall take up separately each question of the questionnaire, and after giving the gist of the replies as objectively as possible, I shall make whatever critical remarks I may consider indicated. It is scarcely necessary for me to state that I have endeavored to reproduce faithfully the statements of my collaborators, for which I am in no way responsible; while my own views, and possibly my prejudices, will appear in the latter part of the report.

QUESTIONS I TO IV

These need not be considered, as they were asked only for purposes of orientation.

QUESTIONS V AND VI

Are you engaged in general practice, or do you limit your work to gynecology and obstetrics, or to obstetrics alone?

Seventeen professors replied that they were in general practice in addition to their college duties; twenty-one that they limited their work to obstetrics and gynecology, and five others solely to obstetrics. Accordingly, considerably more than one-third of the professors, including four in the so-called high-standard schools, are not specialists in any sense, and owing to the obliga-

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* Read in abstract before the American Association for Study and Prevention of Infant Mortality, Chicago, Nov. 17, 1911.

* Owing to the length of this article, about one-half is omitted from THE JOURNAL. The complete article appears in the author's reprints, a copy of which will be sent by the author or by THE JOURNAL on receipt of a stamped, addressed envelope.

tions of a large general practice have not sufficient leisure to become thoroughly versed in all of the problems of obstetrics and must necessarily take their professorial duties lightly. Moreover, five professors, including three in high-standard schools, limit their work exclusively to obstetrics; and as several of them admit that they are not competent to perform major operations, it is apparent that they cannot be ideal teachers.

QUESTION VII

Did you serve as a hospital assistant or intern immediately following graduation?

To this question, fifteen professors, including three in high-standard schools, answered in the negative, seventeen replied that they had served for less than one year, and eleven for a longer period.

At first glance this appears far from satisfactory, but when it is remembered that many of the professors graduated twenty or more years ago, it is not quite so poor, as at that time the facilities for serving as an intern in a general hospital were much more limited than at present. Consequently, it merely indicates that many of our professors did not receive rigorous hospital training in their youth, but gained their practical experience almost exclusively from private practice.

QUESTION VIII

Why did you take up obstetrics?

The forty-one answers to this question may be divided into four categories. Eight professors deliberately chose obstetrics as their life work and endeavored to obtain as ideal a training for its pursuit as possible. Thirteen stated that they were always interested in the subject, and nine that they were very much interested before taking it up seriously. On the other hand, eleven stated that chance alone led them to teach this branch of medicine. Several accepted the professorship merely because it was offered to them, but had no special training or liking for it, while others succeeded to it after having taught various other branches with more or less success.

QUESTION IX

What was your preparation for teaching?

Prior to assuming their professorial duties, twenty-one, or slightly less than one-half of the entire number of professors, served for varying periods in lying-in hospitals. In eleven instances the service varied from one to five months, in five it extended over six months, while in five others it covered one or more years.

Such a confession appears highly depressing, but on further consideration it must be admitted that it is about what might be expected in this country; as twenty-five of the professors graduated twenty or more years ago, when very few lying-in hospitals were in existence, and those poorly equipped and offering but slight opportunity for clinical observation. Such conditions, however, are in marked contrast with those obtaining in Germany and France, where the first requirement for a professorial career is a long period of preparation in a well-equipped lying-in hospital with abundant clinical material. At the same time, it must be noted that the preparation of a considerable number of our professors was augmented by service for varying periods in more or less well-organized out-patient departments.

Even more serious than the lack of rigorous hospital training, is the appallingly slight experience which many had before being appointed to professorships. The replies indicate that only nine of the entire number had seen 1,000 or more cases of labor, and twenty-two others considerably less, while eleven obtained their practical experience solely from an indefinite number of cases in private practice. Moreover, it is interesting to note that one professor admits that he had never seen a woman delivered before assuming his professorship, while five state that they had seen less than 100 cases, and thirteen others less than 500 cases.

Think of becoming a professor of obstetrics with an experience of less than 100 cases!

After considering the answers to this question, I think that it is difficult to avoid the conclusion that the majority of our professors entered on their duties with a comparatively poor equipment from a practical point of view, while their attainments in the underlying sciences were usually extremely faulty.

QUESTION X

Have you studied abroad?

The replies show that twenty-four of the forty-three professors have visited Europe, of whom fourteen, or one-third of the entire number, worked for three months or more in some well-organized clinic. This is a fairly satisfactory showing, and indicates that many of our professors were not satisfied with their home training, which they attempted to supplement by further work in well-equipped European clinics.

QUESTION XI

Is a lying-in hospital connected with your school?

The answers to this question are in general very depressing, and show that six schools have no connection with a lying-in hospital. Of the other thirty-seven, nine have hospital accommodations for less than 100 patients per year, fifteen for more than 100 but less than 250, four for 250 but less than 500; and nine for 500 or more patients per year, including two schools with accommodations for over 1,000 patients. These figures indicate that most schools are very poorly equipped in this regard, as only nine have anything like adequate clinical material for the instruction of their students. Moreover, with a few exceptions, even the best of our lying-in hospitals are vastly inferior, as far as the number of patients and equipment for teaching are concerned, to the clinics in the smaller German universities.

Twenty of the thirty-seven lying-in hospitals are owned and controlled by the school with which they are connected. Apparently, a most excellent showing; but closer examination shows that the conditions are not so ideal, as seven of the college-controlled hospitals have less than 100 deliveries per year, and only five out of the entire number more than 250.

In order to give an idea of the deplorable dearth of clinical material, I have tabulated the figures from ten of the smaller lying-in hospitals with from twenty-five to 125 deliveries per year, including two connected with high-standard schools. Together they have only 553 cases for the instruction of 575 students; and when it is remembered that, owing to the long summer holiday and other causes, practically one-half of the cases are lost for purposes of instruction, it is apparent that each student on an average has an opportunity to see only one woman delivered, which is manifestly inadequate. Moreover, the conditions are only slightly better, when the combined facilities of all of the twenty hospitals owned by the medical colleges are considered, as together they present a total of 5,655 deliveries per year for 1,400 students requiring clinical instruction, which means an average of only four cases per student.

Naturally, such calculations do not accurately represent the actual facts, as they are based on the supposition that only two students see and examine each woman in labor. Moreover, in certain schools the number of cases available is considerably less than the average, while in others it is greater. The actual figures show that in twenty-five schools each student sees three cases or less, in nine schools four to five cases, and in eight others five or more cases; while in some of the smaller hospitals this is possible only by having four to six students examine each patient, thereby subjecting her to unjustifiable risk of infection. Accordingly it would appear that in only eight of the medical schools under consideration do the students have an opportunity to witness anything like a satisfactory number of deliveries under appropriate clinical conditions. On the other hand, ambitious students may see a greater number of cases provided they are willing to work in their own schools during the summer months, or can afford to take a course in one of the large institutions, such as the New York Lying-In Hospital, which are not connected with a medical school.

Turning from the actual number of cases available for clinical instruction, to the opportunities afforded for training assistants, who should become the professors of the future, it is difficult to speak too strongly. In the thirty-seven lying-in hospitals under consideration, it is apparent that this function is in great part neglected, as is shown by the fact that the period of service is usually too short to permit of training well-rounded men. Thus, in thirteen institutions the assistants serve for periods varying from one to six months; in four for six months or more but for less than one year; in fifteen for one year; and in only five for a longer period, including two in which the service extends over four years. Consequently, it may be said that proper training can probably be afforded only in the five schools in the latter group, as in my experience assistants at the end of the first year are just beginning to be useful and are able to make a correct diagnosis only in the simpler cases, so that even with a comparatively large material, their experience is relatively so slight that they are not prepared to cope with serious emergencies even when they are recognized.

QUESTION XII

Do you maintain an outdoor obstetrical service?

The following answers were received: Five, none; six, small services without data as to number of patients; sixteen, with less than 250 deliveries; six, with between 250 and 500 deliveries; five, with between 500 and 1,000 deliveries; and five, with 1,000 or more deliveries per year.

At first glance these figures appear much more satisfactory than those for lying-in hospitals, as they show that ten of the schools have a fair out-patient material. At the same time, I have learned from my own experience that the value of such a department for teaching purposes is dependent on so many factors that the mere number of women cared for gives no idea of its adequacy. In order to be efficient for teaching, an outpatient service must be held in rigid discipline, be organized as an integral part of the regular obstetric service, and conducted through the lying-in hospital. Moreover, the students should not be sent to the homes of the patients alone, but should always be accompanied by an assistant to demonstrate the case, as well as by a trained nurse to prepare the patient properly and to render her surroundings as sanitary as possible.

In order to give an approximate idea of the total amount of clinical material available, I have calculated the total number of ward and out-patient cases in the various schools, on the supposition that two students see and examine each indoor, and one student each outdoor patient. The following table shows a progressive decrease in the number of cases in each of the four groups, according as the schools require for entrance two years, or one year of college work, or merely a high school education, or less:

I. 10 cases to each student, with extremes of 2 and 21 cases
II. 7 cases to each student, with extremes of 3 and 10 cases
III. 6 cases to each student, with extremes of 1 and 27 cases
IV. 3 cases to each student, with extremes of 0 and 12 cases

At the same time, it must be admitted that the average for the first group is considerably too high, which is due to the fact that one of the schools in this category has an immense hospital and outdoor service.

QUESTION XIII

What are your relations with the gynecologic service both in the medical school and the hospital?

Answers obtained from forty-two schools show that in twenty-four there is no cooperation, in five cordial cooperation, while in thirteen the two departments are more or less closely united. In the last category, the chairs of obstetrics and gynecology are united in eight schools; in two the chairs are separate but are held by the same incumbent; while in three the professor has a joint hospital service, but teaches only obstetrics.

From the standpoint of training students and assistants, such a lack of cooperation is greatly to be deplored, more particularly as it prevents the development of broad-minded professors, who are able to cope with all complications arising from the female generative tract. In hospitals in which there is no cooperation between the two departments, the obstetrician is generally looked down on by the gynecologist and is usually afforded markedly inferior facilities for his work. From my own experience, both in this country and abroad, I am convinced that it is essential that the obstetrician be a competent surgical operator; and, as the number of radical operations in obstetrics is comparatively limited, the most natural method of obtaining the requisite facility is by means of gynecologic surgery. I hold that one may be a fair gynecologist with only an elementary knowledge of obstetrics, but that no one can be a competent obstetrician without being at the same time a trained gynecologist. For these reasons, I consider from the standpoint of teaching that the schools in which the two chairs are fused will possess a considerable advantage.

QUESTION XIV

Are you competent to operate on any complications arising from the female generative tract?

To this thirty-five professors answered "yes," and eight "no"; and these figures I imagine, are much more favorable than the actual facts. Several professors frankly admit that they are not prepared to perform Cesarean section.

Consider that such a condition of affairs means that the professor is merely a man-midwife who is unable to carry a complicated case of labor to its legitimate conclusion! Or, imagine the effect on a patient, who places herself in the hands of a professor of obstetrics in a respectable medical school, when she is told that he can conduct the case satisfactorily if it is ended by the unaided efforts of Nature, or merely requires some slight interference, but in case radical interference is demanded he will be obliged to refer her to a gynecologist or surgeon. Think of the impression such an admission must make on the student, who cannot be blamed for believing that obstetrics is a pursuit unworthy of broadly educated men, but is suitable only for midwives or physicians of mediocre intelligence. This is not the place to go into the details of this question, but I have no hesitation in asserting that a professor of obstetrics who is not prepared to perform a Cesarean section or other radical operation is not competent to undertake the care of a case of labor complicated by pelvic contraction, and is not fitted to teach modern obstetrics.

QUESTION XV

Can you care for a case of ruptured uterus, advanced extra-uterine pregnancy or excision of the pelvic veins, as well as your gynecologic confrère?

To this thirty-two respondents answered "yes," and eleven "no." If one-fourth of the professors, including three in the high-class schools, make such an admission, it is safe to assume that a much larger number should be included in the same category. Moreover, when it is recalled that seventeen professors are engaged in general practice, and that five more limit their attention solely to obstetrics, and accordingly have but little opportunity to perfect themselves in operative technic, it is safe to assume that at least one-half of those replying to the questionnaire are unable to cope satisfactorily with these legitimate obstetrical complications.

QUESTION XVI

Do you consider your hospital and teaching equipment satisfactory?

To this fourteen respondents answered "yes," and twenty-nine unhestitatingly "no." In other words, the professors in two-thirds of the schools frankly admit that the conditions are highly unsatisfactory. If this were all it would be a grave admission; but the actual conditions are worse, and there is no justification for many of the affirmative answers.

I think that I am fairly conversant with the existing conditions, and as far as I know there is only one medical school in the country which is properly equipped for teaching obstetrics and gynecology along the lines of a well-conducted German woman's clinic. And I regret to say that it is not at the Johns Hopkins Hospital, whose lying-in department is very inferior, and far below the standard maintained by the other departments of that institution. At present, plans are being perfected in one of the eastern cities for the construction of an almost ideal woman's clinic, but unfortunately, it will be merely affiliated with, and not controlled by, the medical school. Three other fair-sized and well-equipped lying-in hospitals are also affiliated with medical schools, but are equipped only for practical clinical work and not for investigation.

On the other hand, in my opinion the favorable verdict concerning the equipment of the other nine schools is unjustifiable, and the fact that it is designated as satisfactory shows to what a slight extent many professors comprehend the obligations of a teaching position. A few examples will, I think, make this contention clear. One so-called satisfactory clinic has only thirty-five cases a year for the instruction of forty students. In three others the period of service for the assistants is, respectively, one and one-half, three and six months. Another lying-in hospital has no free beds, and the clinical instruction is given entirely in a large out-patient service. In a sixth "satisfactory" school the professor admits his inability to do a Cesarean section; in still another the director knows so little of his department that he is unable to give the number of beds under his control; and finally, the last school in this category stands low in the non-acceptable list, and is notorious for its poor equipment and the frequent failure of its students before state boards throughout the country.

QUESTION XVII

What is necessary to make your equipment satisfactory?

Leaving out of consideration the fourteen "satisfactory" schools just mentioned, the answers reveal an extremely depressing condition of affairs. On this occasion it would lead us too far afield to enter into details, but I imagine that the mere enumeration, under the following headings, of the main needs mentioned will suffice to prove that the conditions are far from ideal:

A. Need everything.
B. Need a lying-in ward.
C. Need a lying-in ward controlled by the school.
D. Need accommodations for more patients.
E. Need more intelligent assistants who serve for longer periods.
F. Need more money for current expenses or endowment.
G. Need better-prepared students.

On the other hand, no one mentioned the need of broad-minded, scientifically trained teachers, or of properly equipped laboratories for investigative work.

QUESTION XVIII

Have you ever trained a man who, you felt, was competent on leaving you to become professor of obstetrics in a first-class medical school?

Twenty-six respondents answered in the negative, while one naively replied "that he had never been called on to do so." On the other hand, seventeen professors answered in the affirmative, and several stated that they had trained a number of men of professorial caliber. As so imposing an output was somewhat of a surprise to me, I analyzed the replies with some interest.

If the figures are correct, it is pertinent to inquire what has become of the young professors! I do not know where they are located; and, as there are not seventeen first-class medical schools in the country, the discrepancy is explicable only on the supposition that many died in early youth, or that the respondents overestimated their attainments. Furthermore, it is interesting to inquire where they received their training and who were their teachers. As has already been indicated there are only five lying-in hospitals which keep their assistants for longer than one year; consequently, as it is hardly possible to train a competent professor in a shorter time, it must follow that most of them must have received their training in these schools, which is unlikely.

Again, it may be asked whether all of the seventeen professors giving positive answers are competent to train such men. This also does not appear probable; for, although I have been a close student of medical literature for the past twenty years, I do not recall having seen an article, good, bad or indifferent from five of them; and it is highly improbable that totally unproductive men would be able to stimulate young men to become excellent professors. Moreover, in some instances it would have been impossible for them to have obtained their knowledge from the obstetrical clinics of their own school, as less than 100 patients are delivered per year in four of the hospitals concerned, while one has only twenty-five patients. Furthermore, one is connected with a most notorious non-acceptable school, and several more, to my knowledge, are poorly equipped in buildings, clinical material and facilities for investigation. On the other hand, it is a pleasure to admit that a small number of the schools are doing good work in this direction and have turned out several men of really first-rate professorial caliber.

The replies in general are very discouraging, as they indicate, in the first place, that it is usually impossible for ambitious young men to obtain in the schools from which they graduate anything like sufficient opportunity to equip themselves for a teaching career; and, in the second place, they force us to conclude that many professors take their duties very lightly, and have but little conception of the obligations connected with a properly conducted professorship. If this is the case, is it not absurd to expect such men to inspire students with a proper conception of obstetrics, or to deserve and maintain the respect of members of their own faculty, or of the profession in the neighborhood in which they live?

QUESTION XIX

Do you consider that the ordinary graduate from your school is competent to practice obstetrics?

Eleven teachers, or one-quarter of the entire number, promptly answered "no"; while the remainder replied in the affirmative, although in many instances in a somewhat qualified manner. Thus, one replied: "Well, yes in a way; that is, some of them." It appears to me that the affirmative answers, as a rule, are more positive the poorer the school and the smaller its clinical material. That this is not an exaggeration is shown by the fact that affirmative replies came from several of the schools without lying-in hospitals, as well as from two others with only twenty-five cases per year available for the instruction of fifty students.

At the same time, most of the teachers qualify their affirmative answers by stating that their graduates are competent to conduct normal cases, while several others designate them as fairly efficient men-midwives. Moreover, most of them admit that their graduates are not competent to conduct operative labors, while several state that they deteriorate rapidly in technic after leaving the medical school.

After eighteen years' experience in teaching what is probably the best body of medical students ever collected in this country—the student body at the Johns Hopkins Medical School for the year 1911-1912, being made up of graduates from one hundred and twenty-eight colleges and universities in this country and Europe—I would unhesitatingly state that my own students are unfit on graduation to practice obstetrics in its broad sense, and are scarcely prepared to handle normal cases.

QUESTION XX

What proportion of labor cases in your city are attended by midwives?

The replies indicat great variations in different localities. Midwives are almost unknown in Montreal, and I am informed that only twenty-five practice in Boston. On the other hand, in most of our large cities including New York, Chicago, St. Louis and Atlanta, they conduct from 40 to 60 per cent. of all labor cases.

In regard to their licensure, eight teachers pleaded ignorance of conditions, while twenty-five stated that they were licensed and ten that they were not.

Concerning their necessity, there was still a wider divergence of opinion. Twelve professors replied that they did not possess sufficient data to justify an expression of opinion; while of the thirty-one giving positive answers, fifteen stated that they were necessary and sixteen not.

After analysis of the replies to this question, it is apparent that midwives attend many cases in most of our large cities, but that their employment is dependent on local conditions rather than general necessity; as is shown by the replies from Boston and Montreal. In most localities some attempt is made to control them in a feeble way, but nowhere effectively, while the teachers of obstetrics throughout the country are about equally divided as to their necessity.

QUESTION XXI

Do you believe that more women die from puerperal infection in the practice of midwives or of general practitioners?

This question, as well as the one immediately following, cannot be answered with accuracy; consequently the replies must be taken as the general impression of the respondents, rather than as precise statements based on exact statistics. In order to draw perfectly correct conclusions, many factors would have to be considered, concerning which accurate information is not at present available.

Consequently, as the replies represent merely the general impression of the various respondents, they are subject to many fallacies and are thereby greatly reduced in value. Nevertheless they are of great interest and are as follows: Eight teachers replied that they did not possess sufficient data on which to base an opinion; while of the thirty-five who answered, fifteen stated physicians, thirteen midwives and five that the death-rate is almost equal.

Accordingly, it appears that somewhat more than one-half of the teachers replying consider that general practitioners lose proportionately as many women from puerperal infection as do midwives. Even if based on somewhat faulty premises, such a conclusion is appalling, and is a railing indictment of the average practitioner and of our methods of instruction in obstetrics, more particularly as one of the main arguments urged against the midwife is the prevalence of infection in her practice.

QUESTION XXII

Do as many women die as the result of ignorance, or of ill-judged and improperly performed operations, in the hands of general practitioners, as from puerperal infection in the hands of midwives?

The same objection applies to this as to the former question, and consequently the answers must be regarded merely as the general impression of the respondents, some of whom are necessarily biased in their opinions. Eight teachers state that they are not prepared to answer the question; while of the thirty-five who do so, twenty-six answer against the general practitioner, six against the midwife and three hold that the two are equally bad. Moreover, many direct attention to the unnecessary death of large numbers of children, as the result of unnecessary or improper operating, and from the failure to recognize the existence of contracted pelvis.

If it appears necessary to reform anything, here is the opportunity. Why bother about the relatively innocuous midwife, when the ignorant doctor causes quite as many absolutely unnecessary deaths? From the nature of things, it is impossible to do away with the physician, but he may be educated in time; while the midwife can eventually be abolished, if necessary. Consequently, we should direct our efforts to reforming the existing practitioner, and to changing our methods of training students so as to make the physician of the future reasonably competent.

QUESTION XXIII

How do you consider that the midwife problem can best be solved?

Thirty-four answers to this question gave the following result: Eighteen advocated the regulation and education, and fourteen the abolition of midwives, while one advocated that the question be left *in statu quo,* and another held that the only solution lay in better-trained doctors.

On analyzing the replies several interesting facts were elicited. Thus, a thoroughly competent professor in one of the large western cities, in which more than one-half of all labors are conducted by midwives, states that, although the smaller portion of the obstetrical work in his city is in the hands of physicians, his experience forces him to conclude that the latter nevertheless lose from infection many more women than do the midwives.

Again, one of the respondents from New York City states that owing to the extension of lying-in charities, midwives now attend many less women than formerly, notwithstanding the rapid increase in the population of the city. A similar statement comes from Cincinnati, where, without stringent regulation, the number of women attended by midwives has decreased from 70 per cent. in 1880 to 30 per cent. in 1909, thus tending to indicate that prolonged residence in this country gradually overcomes the prejudices of our foreign-born population against the employment of physicians.

Those who advocate regulation and education vary greatly in their ideas, some advocating mere general regulation, while others demand extensive education in properly equipped hospitals, as in Germany and Italy, with constant supervision by the board of health, which should have power to revoke licenses whenever necessary.

Equally divergent arguments are advanced by those favoring the abolition of midwives. One group regards as hopeless any attempt to train them efficiently, while another holds that they may be entirely done away with by educating the laity, by extending lying-in charities, and by supplying better doctors and cheaper nurses; while my own views will be expressed in the second part of the paper.

QUESTION XXIV

Can you suggest any practicable method of improving the general standard of practical obstetrics outside of hospitals?

The mere fact that all but two of those answering my questionnaire make definite suggestions in this regard, offers further proof of the deplorable condition of obstetrical education and practice, and indicates the urgent need for reform.

It would lead too far to consider all of the suggestions in detail, and I shall content myself by enumerating the main ones, which are so arranged as to indicate the order of frequency in which they were made:

1. Better teaching and more abundant lying-in hospital accommodations.
2. Instruction of the profession and laity that obstetrics is surgery, and that its major operations are as serious as laparotomies.
3. Education of the laity concerning existing conditions and insistence that the proper place for major obstetrics is a well-conducted hospital.
4. Regulation of obstetric practice by the state boards of health, which should grant a provisional license to practitioners, revocable on demonstration of incompetency or neglect.
5. Better education of practitioners. A number of respondents do not believe that the present generation can be materially improved.
6. Teaching both doctors and the laity that the ordinary practitioner should attend only normal cases, and should refer the abnormal ones to specially trained men connected with well-equipped hospitals.
7. Better pay for practitioners doing general obstetric work, as it is held that it is useless to expect expert care for compensation which is generally regarded as adequate.
8. The collection and general dissemination of accurate statistics concerning the mortality of childbirth, as well as the injuries and illness which result from improper care.
9. Elevation of the importance of obstetrics in the eyes of practitioners, medical students and the laity.
10. Marked extension of obstetric charities and well organized lying-in hospitals.
11. Greater development of visiting nurses for those of moderate means, and the education of trained helpers to carry out their directions.
12. Differentiation of students into classes, one of which should be educated as men-midwives, and the other as broadly-trained obstetricians.

I am convinced that no fair-minded person who is interested in the welfare of the women and children of our country, or in the problems of medical education, can read the foregoing analysis without feelings of profound depression, or without admitting that we are facing a condition urgently in need of reform.

The replies clearly demonstrate that most of the medical schools included in this report are inadequately equipped for their work, and are each year turning loose on the community hundreds of young men whom they have failed to prepare properly for the practice of obstetrics, and whose lack of training is responsible for unnecessary deaths of many women and infants, not to speak of a much larger number, more or less permanently injured by improper treatment, or lack of treatment. Moreover, the spontaneous admission by most of the respondents that poor training of medical men is responsible for many unnecessary deaths in childbirth, forces us to acknowledge that improvement in the status of the midwife alone will not materially aid in solving the problem.

A priori, the replies seem to indicate that women in labor are as safe in the hands of admittedly ignorant midwives as in those of poorly educated medical men. Such a conclusion, however, is contrary to reason, as it would postulate the restriction of obstetrical practice to the former, and the abolition of medical practitioners, which would be a manifest absurdity.

The fault lies primarily in poor medical schools, in the low ideals maintained by inadequately trained professors, and in the ignorance of the long-suffering general public.

SUGGESTED REMEDIES

What is the remedy for these conditions? I shall enumerate some of them; but their mere number indicates how serious the problem is, and how impossible it will be to consider them all adequately at the present time.

Some of the necessary reforms are:

I. Better and properly equipped medical schools.
II. Higher requirements for the admission of students.
III. Scientifically trained professors of obstetrics with high ideals.
IV. General elevation of the standards of obstetrics.
V. Education of medical practitioners.
VI. Insistence by state examining boards on better training before admitting applicants to practice.
VII. Education of the general public.
VIII. Development of lying-in charities.
IX. Cheaper nurses.
X. Possibly the training of midwives.

SUMMARY AND CONCLUSIONS

A questionnaire containing some fifty questions concerning obstetric education and the midwife problem was sent to the professors of obstetrics throughout the country. Forty-three replies were received, representing one-half of the acceptable and one-fifth of the non-acceptable medical schools, which indicate a most deplorable condition of affairs, briefly as follows:

1. Generally speaking the medical schools are inadequately equipped for teaching obstetrics properly, only one having an ideal clinic.

2. Many of the professors are poorly prepared for their duties and have little conception of the obligations of a professorship. Some admit that they are not competent to perform the major obstetric operations, and consequently can be expected to do little more than train men-midwives.

3. Many of them admit that their students are not prepared to practice obstetrics on graduation, nor do they learn to do so later.

4. One-half of the answers state that ordinary practitioners lose proportionately as many women from puerperal infection as do midwives, and over three-quarters that more deaths occur each year from operations improperly performed by practitioners than from infection in the hands of midwives.

5. Reform is urgently needed, and can be accomplished more speedily by radical improvement in medical education than by attempting the almost impossible task of improving midwives.

6. In my opinion the following reforms are most important:

A. Reduction in the number of medical schools, with adequate facilities for those surviving, and higher requirements for admission of students.

B. Insistence in university medical schools that the head of the department be a real professor, whose prime object is the care of hospital patients, the proper training of assistants and students and the advancement of knowledge, rather than to be a prosperous practitioner.

C. Recognition by medical faculties and hospitals that obstetrics is one of the fundamental branches of medicine, and that the obstetrician should not be merely a man-midwife, but a scientifically trained man with a broad grasp of the subject.

D. Education of the general practitioner to realize that he is competent only to conduct normal cases of labor, and that major obstetrics is major surgery, and should be undertaken only by specially trained men in control of abundant hospital facilities.

E. The requirement by state examining boards that every applicant for license to practice shall submit a statement certifying that he has seen delivered and has personally examined, under appropriate clinical conditions, at least ten women.

F. Education of the laity that poorly trained doctors are dangerous, that most of the ills of women result from poor obstetrics, and that poor women in fairly well-conducted free hospitals usually receive better care than well-to-do women in their own homes; that the remedy lies in their hands and that competent obstetricians will be forthcoming as soon as they are demanded.

G. Extension of obstetric charities — free hospitals and out-patient services for the poor, and proper semi-charity hospital accommodations for those in moderate circumstances.

8. Greater development of visiting obstetric nurses and of helpers trained to work under them.

9. Gradual abolition of midwives in large cities and their replacement by obstetric charities. If midwives are to be educated, it should be done in a broad sense, and not in a makeshift way. Even then disappointment will probably follow.

1128 Cathedral Street.

A TYPHOID BACILLUS-CARRIER OF FORTY-SIX YEARS' STANDING, AND A LARGE OUTBREAK OF MILK-BORNE TYPHOID FEVER TRACED TO THIS SOURCE

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Toward the end of August, 1909, a sudden increase in the number of cases of typhoid fever reported from the boroughs of Manhattan and the Bronx attracted attention, and led to an investigation to ascertain the cause of the infections. A rapid survey of the cases showed that a certain milk-supply was common to almost all, and accordingly, September 1, the suspected supply was shut off. From the infections which had already occurred, however, additional cases came to be reported all through September, the total number belonging to this outbreak finally numbering several hundred. Some idea of the havoc wrought by this infection can be obtained by a glance at Table 1, in which are shown the cases of typhoid fever reported, week by week, in each ward, commencing August 1, and (in parenthesis) the average normal incidence of typhoid fever for the ward, based on the experience of the previous five years.

From this table it is apparent that the outbreak was limited to the Nineteenth, Twenty-Second and Twelfth Wards in Manhattan and affected both wards of the Bronx. The Nineteenth Ward embraces all the east side from Fortieth to Eighty-Sixth Street. The Twenty-Second Ward embraces the similar district on the west side, and the Twelfth Ward embraces all of Manhattan north of Eighty-Sixth Street, both east and west. In other words, the outbreak affected the city in the district from Fortieth Street north. By locating the cases on a map it was found that the west side was relatively much less affected, the main portion of the outbreak being localized on the east side of Manhattan beginning about Sixtieth Street and extending northward into the Bronx.

Comparing the cases actually reported with the normal incidence for the period in question, we find that there were some 380 cases more than the average normal. Practically all of these were in some way chargeable to the milk infection already mentioned, though, of course, some were cases secondarily infected in the city.

On tracing the source of infection back, through the wholesale dealer to the shipping station in the country, it was found that the infected milk came from Camden, N. Y. In fact, the former manager of the creamery there was ill with typhoid fever at the time of inspection, and, judging from the date of onset, was apparently also one of the victims of the infection and not the cause of it. There had also recently been a case of typhoid fever on the dairy farm of X., one of the three local milk-dealers of the village, but not a patron of the creamery. Further inquiry showed that there had been an undue prevalence of typhoid fever in Camden for years; in fact, it was called by several physicians "Camden fever" and believed not to be typhoid fever at all. It is safe to say that the number of cases of typhoid fever in the village has not averaged less than fourteen or fifteen each year, which is at the rate of fifty or sixty per 10,000 of population. The figures for New York City during this time have fluctuated between six and ten per 10,000 of population. A tabulation of all the cases occurring in the village in 1908 and 1909, twenty-seven in number, showed that twenty received milk from Dairy X., three from Dairy Ct., and three from Dairy Cm., while one received milk from "own cow."

Investigation of the dairy and home of Dairyman X. showed both to be exceptionally clean and well kept. The medical history of the dairyman's family was closely inquired into and proved extremely interesting. Briefly it was as follows:

Dairyman X., born in Wisconsin in 1848, and had typhoid fever there in 1863 or 1864. Came to Camden in 1866; married in 1871; began to sell milk, from same dairy as at present, in 1873.

1878:—His two-year-old daughter had "enteric fever." Illness lasted about two weeks; she lost much weight and "came near dying." During this girl's convalescence the grandmother who had nursed her, became very ill. She was delirious for three weeks. The disease was called "gastric fever."

1886:—The present son-in-law, then living on the farm as hired man, was very ill with fever lasting several weeks. Diagnosis, "gastric fever."

1893:—Another daughter was ill in the fall of the year: Diagnosis was "typhoid fever."

1897:—Still another daughter had what was called "intermittent fever" in the fall of the year. "It was a slow fever; she was sick in bed every day for about two or three weeks." (There were no intermissions, no chills, and no sweating.) During convalescence she sickened again, and this second attack lasted four or five weeks, during which time the patient was very ill.

1903:—A hired man left the farm to take lighter work and developed what was called "typhoid fever" ten days after leaving the farm.

1909:—Another hired man became ill with typhoid fever, July 20, and died August 7. Infection was contracted on the farm.

With such a history one could not help but suspect the presence of a chronic bacillus-carrier, and accordingly specimens of stool were obtained from the entire household. Those of the dairyman developed almost a pure culture of typhoid bacilli on Conradi-Drigalski plates. Subsequent examinations made after a month and again after a year yielded similar results.

It now remained to establish the connection between this dairy and the creamery shipping milk to New York. This was finally found to be the following: Dairyman X. lives about one-quarter mile outside the village limits; his son-in-law, who also runs a dairy and who takes his milk to the creamery, lives across the road, a little nearer the village, so that Dairyman X. always passes there on his way to the village with milk. Returning from his route with a few quarts of milk left over, it was perhaps quite natural that Dairyman X. should stop at his son-in-law's and ask the latter to include it with the milk taken to the creamery, and to give him credit for the amount thus turned in. Some days there was no milk left over; on other days there were a few quarts. It was established that milk was thus received from the X. dairy during the month preceding the onset of the city cases, and there is practically no doubt that this constituted the chain of infection. It is, of course, impossible to trace exactly what part the recent case of typhoid fever on the X. farm had in infecting the milk. This patient was ill from July 20, and died August 7; the city cases began about the middle of August, and continued heavily until shortly after September 1, with a considerable number having onsets during the first three weeks of September. Whatever part the recent case had, it is obvious that the prime cause of the cases of typhoid fever, both those developing year after year in Camden and those of the large outbreak in New York, was Dairyman X., the chronic bacillus-carrier.

Attention is called to the fact that the milk was shut out within a very short time after the outbreak began. It will be seen from the tabulation that the increase

TABLE 1.—CASES OF TYPHOID FEVER REPORTED BY WEEKS AND WARDS

Week Ending (1909)	Manhattan																						Bronx	
	1	2	3	4	5	6	7*	8	9	10	11*	12*	13	14	15	16	17	18	19	20	21	22	23	24
8/ 7 ..	.	.	.	.	.	.	(2.0)	.	1	.	2(1.3)	7(10)	.	1	.	3	2(2.6)	1	2(5)	8(2.1)	1	3(5)	3(5)	(2)
8/14..	.	.	.	.	.	.	1(2.0)	.	1	.	2(1.2)	9(10)	.	1	.	.	1(2.2)	.	1(6)	3(3.7)	.	1(6)	7(4)	4(3)
8/21..	.	.	.	.	1	.	3(2.0)	.	.	3	2(1.6)	6(12)	.	1	.	.	5(2.6)	3	1(6)	4(4.2)	2	5(5)	4(7)	3(2)
8/28..	.	.	.	.	1	.	2(2.5)	1	3	.	3(3.0)	25(19)	3	1	2	.	1(3.3)	1	24(8)	1(3.9)	1	9(8)	26(5)	10(4)
9/ 4 ..	.	.	.	.	.	1	4(3.5)	.	2	1	2(3.3)	13(21)	4	1	3	.	4(3.1)	4	54(10)	4(4.6)	3	7(6)	16(8)	6(4)
9/11..	.	.	.	.	.	.	5(3.0)	.	.	2	(2.4)	45(20)	4	2	2	.	8(4.3)	2	90(10)	11(4.0)	2	19(6)	16(10)	3(4)
9/18 ..	1	.	.	1	1	.	(3.0)	.	1	1	2(3.0)	31(23)	3	.	1	.	9(5.3)	6	65(9)	4(4.3)	1	20(7)	24(8)	9(5)
9/25..	.	.	.	.	.	.	1(3.3)	.	1	3	3(3.5)	32(22)	3	.	2	3	4(4.9)	3	28(9)	7(4.2)	2	28(8)	13(5)	6(4)
10/ 2 ..	.	.	.	1	.	1	(2.6)	2	3	2	(1.5)	18(21)	1	.	1	1	4(3.8)	5	16(7)	4(4.6)	.	10(10)	14(8)	6(4)
10/ 9 ..	2	.	.	1	.	.	(2.2)	.	3	1	2(2.5)	7(20)	3	.	2	1	2(3.2)	3	9(9)	3(4.0)	1	5(8)	6(6)	8(5)
10/16..	.	.	.	.	.	1	(2.5)	.	.	.	5(4.0)	9(18)	1	.	1	1	3(2.7)	2	1(8)	1(3.5)	1	3(8)	9(6)	3(4)
10/23..	1	.	.	.	.	.	2(3.1)	.	.	1	1(2.5)	9(17)	1	.	2	1	4(2.5)	2	6(6)	(3.5)	2	3(8)	11(5)	7(3)
10/30..	1	.	.	.	.	1	(2.0)	.	4	1	1(2.5)	8(17)	1	1	3	2	2(2.6)	1	6(7)	1(3.5)	2	5(8)	7(3)	1(2)

* The numbers in parentheses show the average normal incidence of typhoid fever for the ward, based on the experience of the previous five years.

began with the week ending August 28. The milk was shut out September 1. This is about as quick work as is possible under the most favorable circumstances. Nevertheless, the infections which had already taken place by that time were so numerous that the outbreak assumed really enormous proportions.

Another point to which we wish to call attention is the fact that milk may be infected by a chronic bacillus-carrier handling it, even though he be cleanly in his habits. This particular dairyman was a better-class dairy farmer who kept his home and his dairy much cleaner than the average dairyman. Moreover, he was personally clean. The occurrence of repeated infections in this case shows the danger of having bacillus-carriers on a dairy.

Dairyman X. died Sept. 22, 1911, of "heart disease", and it will be interesting now to study the further incidence of typhoid fever in the village. This will be made the subject of a subsequent paper.

The following shows the biologic characteristics of the bacilli isolated from the stools of Dairyman X. Four specimens of feces were examined from this case:

Oct. 23, 1909......	showed	almost	pure culture of typhoid
Nov. 3, 1909......	"	30%	typhoid-like colonies
Dec. 27, 1910......	"	no	" " "
Jan. 27, 1911......	"	50%	" " "

A loopful of feces was diluted in about 6 c.c. of sterile broth, and a loopful of this dilution was streaked over a Conradi-Drigalski plate. The typhoid-like colonies which developed after twenty-four hours' incubation were fished into broth and after growth for twenty-four hours, 37 C., were tested for agglutination with an antityphoid horse-serum.

TABLE 2.—CULTURES OBTAINED FROM FECES OF DAIRYMAN X

	Control	1/1000	1/2000	1/5000	1/10000
Laboratory typhoid culture............	—	++	++	+!	±
S.1..................	—	+	+	+	±
S.2..................	—	+	+	+	±
S.3..................	—	+	+	+	|
S.4..................	—	+	+	±	Non mobile

The cultural characteristics of the X. cultures in neutral-red-lactose-peptone-water fermentation tubes, in glucose fermentation tubes, in litmus milk, in gelatin and in Dunham's peptone solution (indol test being negative) were like those of the laboratory typhoid culture used as a control.

An absorption test of the agglutinins in the antityphoid horse-serum was made using one of the X. cultures.

TABLE 3.—ABSORPTION OF AGGLUTININS IN TYPHOID SERUM BY X CULTURE

	Control	1/10	1/20	1/40	1/80	1/160	1/320	1/640
Laboratory typhoid cultures	—	+|	+|	+|	+	±	±	—
X culture.....	—	++	+|	+	|	—	—	—

A Nation's Health.—The health of a nation is its most valuable asset, and the maintenance of health is of much more importance than the treatment of disease. The struggle for existence is not merely an individual question, but it is becoming more and more a national question, and the nation which produces the finest race is sure to win in the long run. As Prof. Arthur Thomson says, "What children usually die of is their parents, and what a nation dies of is lack of men." —Sir James Barr, in *Canada Lancet.*

VACCINE INOCULATION, PROPHYLACTIC AND CURATIVE, OF TYPHOID FEVER *

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To those not wholly familiar with the subject it will come as a surprise to know that the theory of immunization by bacterial vaccination is nearly as old as the science of bacteriology itself, dating from Pasteur's experiments with the anthrax bacillus in the early eighties of the last century.

It is now twenty-five years since Frankel and Simonds immunized rabbits against typhoid, and fifteen years since Pfeiffer and Kolle and Wright almost simultaneously gave the first typhoid inoculations to man. Partly on account of faulty methods of preparation of the vaccine, and partly on account of false premises and prejudice, typhoid inoculation made little headway and, for a time after the South African war, was somewhat discredited.

With the past five years, however, the practice has been put on a sound footing, first as a prophylactic measure and more recently in treatment, and it is proving its worth in both fields.

There are so many features of the subject that few can be considered, and these but briefly.

First to be spoken of is the preparation of the vaccine. Of the many types, I will speak only of that in use in the United States Army, which is prepared by Major Frederick F. Russell in the laboratory of the Surgeon General's office in Washington. The organism used is from an old culture which has ceased to be pathogenic, and which produces an abundant growth on agar. It is inoculated on agar in specially constructed flasks giving a known surface of media. After eighteen hours' incubation the agar cultures are washed off with the normal salt solution, put into flasks, and the culture killed by subjecting it to 55-56 C. over a water bath for one hour. While sterilization is taking place, a count is made of the bacterial suspension for the purpose of standardizing, after which it is diluted with normal salt solution, so that 1 c.c. shall contain 1 billion bacilli, and 0.25 per cent. tricresol is added. It is tested by bacteriologic methods for both aerobic and anaerobic bacteria, and as a further measure of safety inoculations are made into guinea-pigs. It is then put up in sealed ampules containing 1 to 25 c.c.

The immunizing dose of the vaccine is given in three injections at intervals of ten days. The first injection is of 0.5 c.c., while the second and third are of 1 c.c. each. The injection is given with an ordinary hypodermic syringe into the deltoid muscle near its insertion. The site of the inoculation may be previously sterilized by any of the ordinary means, but in the military service where large numbers are treated at a time, it is customary to paint the skin with tincture of iodin before the inoculation and touch the needle wound with the same solution afterward.

The reaction following the inoculation is usually not severe. Locally there is an area of hyperemia around the wound made by the needle, and more deeply there is a sharply circumscribed area of induration, which is somewhat tender. Movements of the arm calling the deltoid into play are painful and there is some stiffness.

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* Read at a joint meeting of the Philadelphia Pediatric Society and New England Pediatric Society with the Section on Pediatrics, New York Academy of Medicine, Nov. 9, 1911.

Exceptionally there is some swelling and tenderness of the axillary glands, but no case of suppuration has ever been reported. Sloughing around the site of injection never occurs. An urticarial rash is one of the less common results. It usually involves the chest and abdomen of the patient and may persist for a week or more. Herpes facialis has been reported a few times. Some constitutional disturbance is usual, though frequently entirely absent. This consists only of feverish sensations and malaise in the lighter cases. The more severe reactions, classed as moderate, show a fever up to or above 101 F., chills, slight nausea, profuse perspiration and some nervous disturbances. Hysterical attacks have been reported, and I have seen several cases in which there were attacks of dyspnea, which were apparently of hysterical origin. The onset of the reaction is usually within six hours, it is at its height in twelve hours and has subsided in twenty-four hours, leaving only a little stiffness of the arm. Reaction is much more constant and more severe after the first injection than after the subsequent ones, though the reaction after the second is often the more severe on account of the increased number of bacilli. Children, though complaining rather uniformly of the local pain, have usually little general reaction.

At the Columbus Barracks recruit depot, where I have been recently stationed, each recruit is vaccinated against small-pox and given the first typhoid inoculation on the day of enlistment. At the time of the second inoculation, ten days later, many of the men are suffering with vaccinia, so that in these men reaction from the second inoculation is frequently moderately severe, but even in these cases the ill effects are quite transient. With this rather unavoidable exception the inoculations are not given to men suffering from any illness. This precaution is an important one, for the vaccine has proved that it is not without ill effects on the sick, and the aged and debilitated should also be excluded from its use. The report of the Surgeon-General of the United States Army for 1911 cites the case of a man who, after being given the first inoculation, gave a severe reaction followed by symptoms of acute pulmonary tuberculosis. It was evident that a latent infection had been stirred up to activity by the effects of the injection. Severe reaction coming on quickly after the injection, with fever of 103 F. or more together with gastro-intestinal symptoms occur very rarely. Russell places the percentage of these reactions at 0.1 per cent. and attributes them to the introduction of the vaccine into a large vein.

It will be seen that the discomfort and pain from the typhoid inoculation is comparable only with that of the lighter cases of vaccinia following small-pox vaccination. If it can be shown that it offers a comparable degree of immunity to a much more imminent danger, why should not its use become equally general?

The typhoid immunization, at first a voluntary measure in our army, has since July 1, 1911, been made compulsory for all officers and enlisted men below the age of 45 years who have not had an authenticated case of typhoid fever.

The immunization of the army has proceded rapidly until, at the present time, somewhat over 60,000 men have completed the necessary three inoculations. It is to the records of our army, together with those of Great Britain and Germany, that we must look for evidence of the practical value of the procedure. It was first introduced as a practical measure on a large scale by Sir Almroth Wright, who inoculated about 100,000 men during the South African war. No reliable records were kept and such as were available seemed to discredit somewhat the value of the procedure, and its use in the English army was abandoned. Wright, however, collected data concerning about 20,000 of the men who had been inoculated and from this he was convinced that the vaccination had resulted in a diminution in the typhoid rate. Though the public confidence in the vaccination was badly shaken, Wright with the aid of a commission headed by Sir William Leishman succeeded in rehabilitating the practice and in getting its use restored in the British army in 1904. The latest figures available from this service are those of Col. R. H. Firth, R. A. M. C., covering the colonial army in India during the years 1906 to 1910 inclusive. He gives the rates of typhoid and of deaths therefrom, and of men inoculated per thousand for these years, as follows. In 1906, the typhoid rate was 15.6 and the death-rate 3.19 among a military population, 66 per thousand of whom had been inoculated. In 1907, the typhoid rate was 13.1 and the death-rate 2.77, the inoculated population being 143 per thousand. In 1908, the typhoid rate was 14.5, death-rate 2.76, inoculated population 225 per thousand. In 1909, the typhoid rate was 8.9, death-rate 1.58, inoculated population 613 per thousand, while in 1910 the typhoid rate had fallen to 4.6, the death-rate to 0.63, while the protected population had been raised to 823 per thousand. Here the use of the inoculation must be given the credit for a reduction in five years of the typhoid rates from about 15 to less than 5 per thousand, the death-rate from over 3 per thousand to 0.63 per thousand. Taking the year 1910, there occurred in a strength of about 70,000 men, 306 cases of typhoid, 155 in about 60,000 inoculated and 151 in about 10,000 who were unprotected. This gives a rate approximately six times as great for the uninoculated. Of those who contracted typhoid, 11.2 per cent. of those inoculated died, while the death-rate for those not inoculated was 16.1 per cent.

Very reliable data is available for the use of typhoid immunization in the German army in Southwest Africa during the Hereros campaign from 1904 to 1907. Though the results achieved were not as brilliant as those just quoted for the British army in India and for our own army to be spoken of later, they were, nevertheless, convincing of the value of the procedure, and any lack of success must be charged up to the earlier methods of preparing the vaccine. Of 16,496 men who participated in the campaign, 7,287 took the inoculation, which was voluntary. Among these men there occurred 1,277 cases of typhoid, the rates being 5.09 per cent. for those inoculated, and 9.84 per cent. for those uninoculated. Still more striking is the evidence shown by the differences in the death-rates, cases among the inoculated giving a death-rate of 6.47 per cent., while for those uninoculated the death-rate was 12.8 per cent. When it is considered that these figures are for nearly 1,300 cases of typhoid all with the same surroundings, the value of the prophylactic inoculation in reducing the severity of the disease is apparently beyond question.

Nowhere, however, do we get such convincing evidence for the practice of typhoid immunization as from the records of our own army. Up to the present time over 60,000 men have completed the inoculation, and among this entire number, and covering a period of nearly three years, but twelve cases of typhoid have developed and no death has occurred. One man at the Guantanamo Naval Station died five days after the first inoculation from a case of walking typhoid. This is the only fatal case of typhoid in the government service in any one on whom the inoculation had been begun. The record of the Maneuver Division in camp at San Antonio, Texas, during the past summer has been most instructive. An army division having an average strength of 12,800 men, all inoculated, occupied the same camp for four months, from March to July, and in this command but one case of typhoid developed. This was a mild case in a hospital corps man who had not completed the inoculations necessary for protection. Lieut.-Col. J. R. Kean, who has recently reported on this camp, is authority for the report of forty-nine cases of typhoid with nineteen deaths for the city of San Antonio for the same four months. During the same period that this camp existed at San Antonio, between three and four thousand men were in camp at Galveston, Texas, and in this command no case of typhoid occurred, while the city of Galveston furnished 192 cases of the disease during the existence of the camp. The city and the camp had the same water-, milk- and food-supply, the only difference being that the camp had been protected by inoculation.

About 3,000 men were scattered along the Mexican border mostly in small camps, many of them in localities where typhoid was present, yet of this command only one man contracted typhoid, which ended in recovery. Contrast the record of these camps with those of the concentration camps of the Spanish-American war and consider the intimate contact of these camps with typhoid-infected cities. It is inconceivable that, with such conditions, the practical abolition of typhoid could have been effected without the use of the immunizing inoculations. There are a few thoughts that suggest themselves here.

First as to the paratyphoids. Clinically these are not to be distinguished from the milder cases of true typhoid. Yet neither the degree nor the constancy of the group reactions among the bacilli concerned would warrant us in believing that typhoid inoculations would be protective against the paratyphoid bacilli. Therefore, before we can obtain absolute data concerning the protection afforded by inoculation, it will be necessary to obtain the proportion of paratyphoid fever to true typhoid in the community, or by bacteriologic examination to trace the organism concerned in every case of supposed typhoid among the inoculated. In the tropics it is likely that a fair proportion of the continued fevers are paratyphoids, and in such localities inoculation may prove comparatively disappointing. In any community where the proportion of paratyphoid infections is found to be high the use of a mixed typhoid and paratyphoid vaccine might well be indicated.

The duration of immunity conferred by the inoculations is an important matter not yet settled. Firth, after a statistical study of the question on the British Colonial Army in India, places the period of protection after the first immunization at thirty months. Leishman thinks the reinoculation should be given after two years. In the United States Army the enlistment period is three years and for the present the orders are that the inoculation shall be given at each enlistment. This is a point that only experience will clear up; and also as to whether, as in small-pox, the second inoculation will confer practically permanent immunity.

The treatment of typhoid by inoculations is still in the experimental stage. To show how unsettled this practice is, it need only be observed that the dosage given and recommended by different writers varies between 1 million and 1,000 million bacilli. No reports of large numbers of patients treated by individuals are yet available, but those to the number of thirty or forty have been reported by a few. The total number of cases in the literature will probably not exceed 100, but most of these have been closely observed by most competent men. The sum of the opinions of these men is unquestionably favorable.

Inoculation shortens the fever period and the total duration of the disease; it reduces complications and relapses markedly; the mortality of all cases that I have been able to find reported is 4.9 per cent. A distinct crisis following the second inoculation is reported by Meakins and Foster of Montreal, to take place in 50 per cent. of their cases. It is interesting that these men gave the largest dosage of the vaccine—from 1 billion to 2 billion bacilli. Very pronounced amelioration of headache, gastro-intestinal symptoms and toxemia is usual. It has apparently been directly life-saving in a few, all but hopeless, cases, though ordinarily it has little effect on such. All agree, however, that even in the cases in which it causes no improvement, it has done no harm. The negative phase of Wright, which did so much to retard progress in typhoid immunization, is non-existent except in the most excessive dosage of the vaccine. In few cases reported was there any increase of temperature following the treatment, and in none was there any aggravation of the disease. The dosage employed in the earlier cases usually ran from 10 to 100 million. With increasing confidence the dosage has been increasing, until at the present time it is usually from 100 to 500 million. It is probable that those who have reported negative or discouraging results have been using the vaccine in too small dosage and that, with increasing dosage, even better results than thus far reported will be obtained.

The conclusions to be drawn from all this evidence are of a definite character. The case for typhoid immunization, both in prevention of the disease and in decreasing case mortality, is a strong one. It is with reason that the Surgeon-General of the Army has given it as his opinion that the protection afforded by vaccination against typhoid would compare favorably with that against small-pox.

In treatment the vaccine has yet to definitely prove the extent of its worth, though in it we see the ray of hope of an agent which will reduce typhoid mortality below its heretofore irreducible minimum.

THE OCCURRENCE OF A POSITIVE WASSERMANN REACTION IN TWO CASES OF NON-SPECIFIC TUMOR OF THE CENTRAL NERVOUS SYSTEM

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So much experience has accumulated and has been published in attestation of the high diagnostic value of the Wassermann reaction that observations which seem in any measure to diminish that value should be dealt with circumspectly. It appears to have come to this: that, providing the performance of the test be not impugned, a positive Wassermann reaction is almost universally considered as imposing the obligation to find evidence of syphilis in the tissues or in the history, or, failing in this, nevertheless confidently to assume it. But cases will occur in which one cannot get rid of a sense of perplexity. Such are the two cases I am about to record. The first is sufficiently odd, apart from the discrepancy between what the Wassermann reaction indicated and what the autopsy disclosed. In both the interpretation will choose between an error somewhere in the complicated process of the test and the existence of occult syphilis; for to dispute the specific nature of the Wassermann reaction would at present seem rash. It is proper to state that the examinations of the blood-serum and the cerebrospinal fluid were made by men whose experience with the method now extends to thousands of cases, and that the histologic character of the tumors was determined by Professor Ophüls, of Stanford University.

Case 1.—*Epitome.*—Word-deafness and paraphasia of rapid onset. Wassermann positive. Temporary improvement under specific treatment. Tumor of left breast. Increase of cerebral symptoms. At autopsy carcinoma of the breast, gliosarcoma of the brain. Wassermann in the cerebrospinal fluid positive.

History.—When on April 13, 1911, I was requested to call on the patient, a widow aged 53, I was told that she had been complaining of pain in the left side of the head for about ten days, and also of dizziness, but it was only on the evening before that she first appeared confused, misnamed objects or could not name them at all, and to familiar questions returned irrelevant answers. On this information a sensory aphasia and paraphasia had been anticipated. It was therefore with some surprise that Dr. M. B. Lennon and I, when introduced to the patient, heard the voluble protestations of good health with which she greeted us, and perceived her comprehension of the remarks addressed to her. But we were still more startled when the patient's intelligible speech suddenly changed to jargon and her ability to comprehend what we said to her at the same time ceased. In about ten minutes coherent speech and power of comprehension returned, to be lost again later in the same abrupt manner. We observed this alternation of disorder and recovery of speech several times in the course of something more than an hour that we spent with her. However, even when her spontaneous speech was intelligible and her power of understanding normal or approximately so, she evidently had difficulty in naming objects; a watch, especially, was beyond her power to name. She could read and also write to dictation.

Examination.—Oppenheim's case[1] of a tumor in the supramarginal gyrus, in which the aphasia was strikingly affected by the patient's sitting up and lying down, immediately occurred to me, but we could not establish in our case any relation between the disturbance of speech and the patient's position. There was a slight tenderness of the skull to pressure above the left ear. Papillitis could not be discerned. Neurologic examination revealed nothing further at this visit. Blood was withdrawn for the Wassermann reaction the same evening and on the following day Dr. L. S. Schmitt reported that it was positive. There was no means of confirming this result from the history. The patient's husband died about twenty years ago of Bright's disease. Her children are healthy.

Course.—Treatment with iodid of potash and with mercurial injections was commenced by Dr. Lennon without delay. On the following morning he found the patient able to speak correctly and to understand what was said to her, and also to name objects, including the watch, which she had not been able to do the evening before. The attacks of dizziness and the headache subsided, and for several weeks her progress was considered satisfactory by the physician and the family.

On May 27 Dr. Lennon reported that after a period of vomiting the same difficulty of speech as in the beginning had recurred. The patient again became dizzy and complained now of pain in the left side of the face. On this day she showed Dr. Lennon for the first time a hard, nodular mass in the left breast. I visited her for the second time June 8 and found her restless and loquacious as at the first visit, and now persistently word-deaf and paraphasic. She could read fluently certain words submitted to her. The temporal bone over the external auditory meatus had grown more sensitive. Dr. W. F. B. Wakefield having agreed with us that the tumor in the breast was in all likelihood a carcinoma, it now seemed probable that the disease in the brain was also carcinomatous. We did, however, hesitate in our conclusion on account of the absence of palpable metastases, and the positive Wassermann, furthermore, made us pause. The rapid, even sudden, onset of the aphasia as related by the family of the patient denoted rather syphilis or a metastatic growth than a primary tumor of the brain. Yet had not the tumor in the breast been there, we should have attempted to remove the cerebral tumor; its localization was certain and it seemed easy of access. A right hemiplegia gradually developed, the disks became choked, the patient failed rapidly and died July 11.

Pathologic Examination.—Dr. Lennon removed the brain and excised the tumor from the breast. It is much to be regretted that a complete necropsy was not performed. Cerebrospinal fluid from the cranial cavity was examined by Dr. Schmitt. This also gave a positive Wassermann and a strong reaction with Noguchi's butyric acid and with Nonne's method. Microscopic examination showed that the tumor of the breast was a carcinoma and that the tumor of the brain was a gliosarcoma. The latter was attached to the dura, was spherical, about 1¾ inches in diameter, and occupied on the surface of the brain the full width of the left second temporal convolution, invaded the third and was bounded above by the superior temporal sulcus. On a frontal section of the brain passing just in front of the pons the growth could be seen to have penetrated into the first temporal convolution; this section also showed the effects of the pressure exerted by the tumor on the internal capsule, which accounts for the hemiplegia. There was no trace of syphilis in the brain.

Does the triad of carcinoma, sarcoma and positive Wassermann signify anything more than a fortuitous concourse of two kinds of malignant growth and syphilis? Or is there a causative relation between the tumors[2] or between the one or the other of the tumors and the Wassermann reaction?

The concomitance of a positive Wassermann reaction with a fibroma situated in the cerebello-pontile angle has been reported by Oppenheim[3] in one case and by Marburg[4] in another. Toby Cohn[5] also observed a patient with a cerebral tumor, whose blood-serum was tested by the Wassermann method three times, each time with a positive result. In none of these cases was there a history of syphilis, but in all of them there was a more or less marked temporary improvement under antisyphilitic treatment. Forster[6] mentioned, in a discussion of these cases, that he had seen a patient with the symptoms of a spinal tumor and a positive Wassermann reaction, from whom an endothelioma was removed, but as subsequently a hemianopsia supervened there may have been syphilis after all. Nonne[7] has objected that in these cases the positive reaction could not prove more than that the patients had at some time been infected with syphilis: to prove the syphilitic nature of the disease in the central nervous system the Wassermann test should have been applied to the cerebrospinal fluid.

But that even this extension of the Wassermann test may give a result not in accord with the ascertainable facts I soon had an opportunity to learn. For on the day following the death of the first patient, while I was, so to speak, conning the lesson her case seemed to teach, the second case presented itself.

Case 2.—*Epitome.*—Gradual development of symptoms of compression of the spinal cord. In October, 1910, Wassermann reaction in the blood-serum positive. In July, 1911, reaction in the cerebrospinal fluid positive. Aug. 31, 1911, removal of an intradural psammoma; reaction in cerebrospinal fluid procured during operation negative. Sept. 18, 1911, reaction in blood-serum negative.

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[1] Oppenheim's Lehrbuch der Nervenkrankheiten, ed. 5, p. 1025, and Deutsch. med. Wchnschr., 1898, xxiv, 155.

[2] Schmorl (Verhandl. d. deutsch. path. Gesellsch., 1908, p. 101) relates the simultaneous occurrence of a melanosarcoma and a carcinoma of the stomach in one case and of carcinoma of the uterus and lymphosarcoma of the left ovary in another.

[3] Oppenheim: Neurol. Centralbl., 1910, p. 338.

[4] Marburg: Neurol. Centralbl., 1910, p. 570.

[5] Cohn: Neurol. Centralbl., 1910, p. 688.

[6] Forster: Neurol. Centralbl., 1910, p. 697.

[7] Nonne: Neurol. Centralbl., 1910, p. 1178.

History.—Particulars of this case will be confined at present to the matter under immediate consideration; further details may be published later. The patient was a woman aged 45. Her husband stated that he had a "chancre-wart" thirteen years before he married her; he cauterized it himself with a stick of caustic and observed no consequences of it. The first pregnancy terminated early with a miscarriage; the second went to term and its issue was a daughter, now 20 years old and apparently well. Further pregnancies were voluntarily aborted.

Diagnosis and Treatment.—In September, 1910, Dr. H. C. Moffitt expressed the opinion that a tumor was causing the compression of the cord. It was at his instance that the Wassermann reaction of 1910 was made; it was positive. Knowing the result of that examination of the blood-serum and bearing in mind Nonne's objection in July, 1911, I withdrew fluid by lumbar puncture and immediately conveyed it to Dr. H. R. Oliver, who reported that the reaction was positive. One may say that it seemed obstinately positive, for, since the previous October, the patient had undergone prolonged inunctions of mercury, injections of a (presumably insoluble) mercurial preparation, a subcutaneous injection of 0.6 salvarsan, followed by an intravenous injection of 0.3 salvarsan, besides treatment with some iodid. All this had not inhibited the progress of the compression. Still deferring to the verdict of the Wassermann test, however, specific treatment was resumed and continued for another month.

Operation.—Finally I requested Dr. Harry M. Sherman to perform a laminectomy. In the course of the operation, after the patient had been under the influence of the anesthetic for about an hour, cerebrospinal fluid was obtained through a pipette before the dural sac was slit open. This fluid was submitted to Dr. L. S. Schmitt, who reported that both the Wassermann and the Noguchi methods gave a negative reaction. The tumor was successfully removed, and the patient has regained much of the power that had been lost. On September 18 a quantity of blood was taken from a vein and divided into four parts. Dr. Whitney, who, I understand, had made the examination in October, 1910, Dr. Schmitt, Dr. Oliver and Dr. E. A. Victors each examined one of these parts and all reported that the reaction was negative.

Two such experiences will justify a disinclination to regard a positive Wassermann reaction in similar cases as absolutely decisive, and I must confess that they have made me doubtful of another case, in which there has been no opportunity yet for verification. My first case and three of those quoted in the foregoing illustrate the possible fallaciousness of a diagnosis *ex juvantibus*, so that it is extremely urgent that whatever uncertainties attach to the practice of the Wassermann method should be eliminated.

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The Blood-Cell as an Agent in Immunity.—Gengou, after a most exhaustive series of experiments conducted in the Pasteur Institute, reaches this conclusion: The phagocytes, under the stimulus of the bacillus and its products, exhibit a positive chemiotaxis of a marked character. They approach the bacilli, ingest them by a physiologic act, and destroy by means of a substance which is not found in either the plasma or the blood-serum, but which can be demonstrated in an extract of the microphages. Similar experiments have been conducted on rats, by Sawtchenko, who found that the resistance offered by the rat to the anthrax was due to phagocytic activity. Did time and space permit, a mass of further evidence might be adduced to show that the natural immunity, the active, protective agent is the blood-cell which in a healthy organism is amply able to attack and destroy the intruding enemy.—Sweeney in *New York Medical Journal.*

THE TREATMENT OF INTESTINAL AMEBIASIS *

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As is the case in so many other infections, especially those manifesting themselves as more or less chronic processes, the natural tendency in amebic infections of the colon is toward recovery.

In routine post-mortem examinations in Manila, all stages of healing and even healed amebic ulcers are very frequently encountered where amebic disease had not been suspected during life, and where no dysenteric therapeutics had been employed. Furthermore, we have a large number of records of cases of undoubted amebic ulceration of the colon, characterized by an unmistakable clinical picture with amebas in the stools and in some cases the diagnosis confirmed by sigmoidoscopic examination, in which apparent recovery took place without any special or sufficient treatment and in which post-mortem examination from one to five years later failed to show any ulceration, visible scarring or other abnormality of the colon.

We conclude from these facts not only that there is a natural tendency to recovery from the disease, but also that such recovery actually takes place in a considerable percentage of patients and that recovery in many instances may be so complete as to leave little or no permanent scarring of the intestinal wall.

Another factor which may increase the difficulty of accurately determining the results of treatment goes back to the pathology of the infection. Formerly, our conception of the pathology of the amebic lesion consisted mainly in a definite and typical type of ulceration. Later studies have shown that the types of ulcers vary considerably and several decidedly different lesions have been described. Wooley and Musgrave and Rogers have described and illustrated erosions too insignificant to be called ulcers, and the former authors have also noted epithelial cell-death around nests of amebas situated in the follicles of the intestinal mucosa, without loss of continuity of tissue—the pre-ulcerative lesion. At the time of the publication of these results, all these lesser processes were considered but early manifestations of the more extensive and typical destruction of tissue.

For a number of years, my opinion has been growing stronger that all expressions of amebic harm are not to be found in ulceration of the mucosa, and that there is a definite amebic pathology in which there is no break in the continuity of the mucous membrane of the bowel.

This proposition is not susceptible of proof at the present time, but there are many data which may be used in support of such a hypothesis, and if we accept the etiologic rôle of amebas at all, I do not see any other explanation of some of the clinical types and pathologic conditions so commonly encountered in zones where amebic infections are frequent.

There does not appear, *a priori*, any more reason to assume that ulceration of the colon is a *necessary* and constant lesion of amebic infection than that ulceration of the follicles of the ileum is necessarily a result of typhoid fever. In many cases of amebic ulceration of the colon, a catarrhal condition of parts of the intact mucosa may be found, in which sections show a suggestive relationship between the areas of degenerating epithelial cells and the location of colonies of amebas. The acceptance of amebic etiology of this condition is hypothetic, but personally I believe that future and more accurate studies of the pathology of this infection will recognize an amebic colitis without ulceration of the mucous membrane.

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

THE IPECAC TREATMENT

One may obtain from the literature of the subject pretty good authority for the most divergent views as to the value of ipecac in dysentery. It is not my intention to review this mass of literature, which consists largely of conclusions arrived at as a result of that very difficult and often fallacious test, "clinical results."

If we assume, as we must, the honesty and accuracy of the observations of many experienced workers who have reached diametrically opposite conclusions from their experiences with this drug, it is reasonable to conclude that there are unknown or overlooked factors which have influenced their conclusions.

The three most important of these factors are:

1. The incomplete knowledge of the pharmacology of ipecac.
2. The different conceptions of "dysentery."
3. The various definitions as to what constitutes a cure in "dysentery."

Very little is known of the physiologic action and other pharmacologic properties of ipecac, and because of this deficient knowledge it is impossible for manufacturing chemists to standardize their products, with the result that there may be a considerable variation in the efficiency of the drug as it is found on the market. Many authorities consider this probable variation in the different preparations of the drug as responsible, at least in part, for the divergent therapeutic results obtained from its administration in dysentery. Such a position seems well taken, for there is every reason to believe that the unknown active principle of this drug may vary in strength as much as that of any of the other well-known medicinal plants; and until pharmacologic standardization of ipecac becomes possible, probable variation in the strength of the drug must be taken into consideration in drawing conclusions as to its therapeutic value.

The drug very probably exerts some very decided action on the intestine, as is proved by the results of its administration to healthy persons:

Ten healthy persons with no symptoms of gastro-intestinal disturbance were given 3-gram doses of powdered ipecac in salol-coated pills in a manner similar to that employed in the "ipecac treatment" of dysentery. Seven of these persons developed diarrhea, which in four was severe with frequent stools and the condition lasted from two to four days; in three there was considerable abdominal pain and slight tenesmus. Special preparation to prevent nausea and vomiting usually are not necessary with Filipino patients because, in the majority of instances, the administration of the drug in ordinary gelatin capsules is not followed by either nausea or vomiting.

Without doubt the most important factor influencing the various opinions regarding the value of ipecac in dysentery is the wide difference in the definition of "dysentery" among medical men. This statement is true to such an extent that if we carefully examine the literature with this point in view, it is possible to see a good deal of harmony in the results of actual experiments. In general, it may be stated that the majority of pro-ipecac literature deals with results obtained in acute and chronic "clinical dysentery" characterized by frequent stools with blood and mucus and usually accompanied by tenesmus, whereas most of the writers who have made less satisfactory reports as to the value of the drug in amebiasis have considered the disease more from etiologic and pathologic standpoints and have thereby included many of these numerous cases of ulceration of the colon without "clinical dysentery" symptoms—cases which are rarely classed as dysentery—amebic or otherwise—in the reports most favorable to the ipecac treatment of the disease.

With a few notable exceptions, articles discussing the ipecac treatment of dysentery follow the above idea so closely that one may anticipate the author's conclusions by reading abstracts of his clinical case records. Such an analysis of the literature permits one general conclusion—which so far as I know never has been seriously disputed—that ipecac is a valuable drug in "clinical dysentery" of whatever etiology.

After a personal experience with the ipecac treatment in several hundred cases, it has seemed to me possible to estimate its value only in terms of "clinical symptoms," which we now know do not necessarily express the actual conditions existing in the colon in amebiasis.

In "clinical dysentery," as defined above, of whatever etiology, ipecac given in large doses, as usually recommended, is a valuable drug. In the majority of instances its administration is followed by a rapid subsidence of the symptoms and quick convalescence. In a smaller percentage of such cases it apparently does no good whatever, and in a not insignificant number its administration is followed by an aggravation of the symptoms which in some grave cases may at least hasten an unfavorable termination, particularly if, as may happen even with the greatest care, severe nausea and vomiting results from the treatment.

However, it must be remembered that it is in the class of "clinical dysenteries" that the best results are obtained with other forms of treatment beside that of ipecac. The natural course of an acute attack of dysentery is usually short and terminates in death or recovery. In a small percentage of cases "chronic dysentery" follows an initial acute dysentery, but in the majority of instances the chronic disease, particularly of amebic etiology, develops gradually and no such acute onset occurs.

Acute outbreaks, due either to an exacerbation or to intercurrent infection, are frequent in chronic dysenteries, particularly in amebic cases, and, if the patient can withstand the effects of the acute inflammation, a beneficial influence on the chronic process usually results. This is true particularly in intestinal amebiasis as is indicated by the following brief report of fourteen such cases.

In fourteen private patients suffering from intestinal amebiasis a cure with permanent disappearance of amebas from the stools has followed recovery from an intercurrent acute dysentery which in the four cases, in which the cause was studied, was due to the *Bacillus dysenteriæ*.

My attention was first directed to this point some years ago in the following case:

Mrs. C., an American, four years in the Philippine Islands, developed a typical attack of amebiasis with moderately severe clinical symptoms and with amebas in the stools. The diarrhea was intermittent and occasionally small amounts of blood were found in the stools. She was placed under treatment and the clinical symptoms subsided in about five days, but amebas were still present and continued so in many examinations during the next year. During this time there were several recurrences of clinical symptoms of the infection, and the patient lost about 10 kilos in weight. She refused to take treatment except during the time when she had diarrhea. More than one year from the time of the diagnosis of the amebic infection, the patient suddenly developed a typical attack of clinical severe acute dysentery. Amebas were present in the stools, and *B. dysenteriæ* were isolated by culture. The attack was a particularly severe one with the several symptoms of this condition, such as fever, frequent bloody mucous stools, tenesmus and prostration. During three days the patient was delirious, and stools were voided involuntarily. On the fifth day of the acute disease, there were a few motile amebas present and many cells of doubtful diagnosis. On the fifteenth day no amebas were found in the stools and none have been found since in many examinations. Convalescence from the acute dysentery was satisfactory; there has been no subsequent bowel trouble, the patient has regained her former weight, and is apparently perfectly well.

The other thirteen cases mentioned were somewhat similar to this, differing principally in the duration and severity of both the acute dysentery and the amebiasis and in the time of the disappearance of the amebas.

In two of the patients, amebas were found for one month after the acute attack and in one case for three months, but they finally disappeared without any special treatment of the disease.

I do not know how general such a condition as described in these cases of double infection may be, but the curative influence of the acute disease on the more chronic one of the amebic infection seems a decidedly positive one. This conclusion also is borne out by autopsy studies. I have several records and specimens of cases of old chronic amebic infection in which death occurred as the result of an intercurrent acute bacterial dysentery. At autopsy in these cases the pathologic picture is that of an acute inflammatory condition engrafted on the older amebic ulceration. The edges and bases and tissues surrounding the usual typical amebic lesions show decided changes. The dull, necrotic, undermined, chronic process has been changed to an acute one with congestion and hyperemia. The contents of the ulcers have changed from the indefinite, granular, foul-smelling material and mucus usually seen to the serous, mucoid material seen covering the surfaces in acute ulceration. Sections examined microscopically show a change from the necrotic, progressively destructive process of granular material containing amebas and with a small amount of cellular infiltration and tissue reconstruction surrounded by a practically non-inflammatory zone, to a typical acute process with hyperemia, edema, hemorrhages, and leukocytic infiltration.

GENERAL MEASURES

The general management of cases of amebiasis is determined largely by the clinical conditions of the patient. "Clinical dysentery" with bloody mucous stools, tenesmus and the other usual symptoms, of whatever etiology, demands during such period absolute rest in bed, a very restricted milk-free diet and measures for the control of intestinal peristalsis and for the relief of pain. When the acute symptoms have subsided and in all other cases in which the symptoms are less severe a much more liberal policy is indicated. Cases characterized by diarrhea, constant or intermittent, with more or less emaciation and general debility with or without an occasional acute exacerbation with more severe symptoms form the large majority of those seen in Manila and constitute what may be called average cases, very chronic in character and usually lasting for years unless properly handled. In former publications I have recommended a liberal diet and some form of occupation requiring both physical and mental activity of a moderate degree in this class of patients, and such a recommendation is reiterated at this time. Such treatment being contraindicated only during acute outbreaks and in the presence of symptoms indicating interference with the digestion and assimilation of food. *Proper support of nutrition* is considered the first requisite in the treatment of this usually chronic affection, and there is no satisfactory evidence that a sufficient amount of properly prepared digestible food aggravates the disease or interferes in any way with the success of the treatment unless the "ipecac treatment" is being used, when a temporary restriction of the diet is essential.

Only such medication is indicated as that which perhaps may have a tendency to improve the patient's general condition, and in certain instances to meet special conditions, as excessive fermentation, hyperchlorhydria and other manifestations requiring special consideration.

LOCAL TREATMENT

Local treatment by bowel irrigation, either alone or combined with some other form of medication, gives the most satisfactory results in the majority of cases of amebiasis. To secure the maximum of efficiency this form of therapeutics requires special attention to certain details, particularly to

A. The manner and time of giving the enema.

B. The solution to be used.

In former publications I have recommended the use of the long rectal tube to be employed with the patient in the left lateral (Sims) position. The experimental work of a number of investigators has proved the futility of trying to pass a long rectal tube through the sigmoid colon, and the same line of experiments, of showing the course of rectal tubes and fluids introduced by them by radiographic work with bismuth emulsions, has shown conclusively that no such special effort is required in order to get enemas to reach all parts of the large bowel from rectum to cecum. Indeed, it has been shown that the entire large bowel is easy of access by any form of enema provided sufficient quantity of fluid is used. In view of these results, the long 1- and 2-meter rectal tubes, formerly recommended and generally used in Manila, have been practically abandoned for the ordinary large-sized male rubber catheter which may be attached to an ordinary 2- or 3-liter irrigator, preferably made of glass.

In order to secure the best results from any form of rectal medication, the bowel must be distended by the substances employed. This object may be accomplished by using large amounts of fluid, and the result is materially influenced by the position of the patient and to a less extent by the condition of the lumen of the bowel at the time of the treatment.

The bowel capacity varies greatly in different individuals, owing to variations in actual size of the organ and particularly to its resistance to the introduction of foreign substances. Ordinarily, with proper care, from 2 to 3 liters of fluid may be used, but in many instances, particularly in women, as much as 4 liters may be introduced without any special discomfort to the patient. In those cases in which less than 2 liters of fluid can be taken, the condition may be assumed to be due to contractions of the bowel-wall, and if the best results are to be obtained from the treatment special preparatory treatment looking to an amelioration of the influence must be employed. Such treatment consists in a preliminary washing of the bowel, the use of sedatives, as opium in some form or, what is simpler and frequently sufficient where there are no special contra-indications, the administration of 25 to 30 c.c. of brandy by mouth, ten or fifteen minutes before giving the enema. Alcohol is much less objectionable for this purpose than is opium, because of the repetition which may be necessary with each treatment until a tolerance for the enema is established as is sure to occur under favorable conditions. Since the appearance of Meltzer's and Shaklee's work on the physiologic action of magnesium sulphate on peristalsis, this substance has been employed for the above purpose in 15- and 20-gm. doses given four to six hours before the enema, with very encouraging results. The knee-chest position undoubtedly is the best one for any form of medicated enema. The physiologic reasons for this statement are obvious, and experience has shown that in the great majority of cases a larger quantity of fluid may be taken in this manner than in the Sims position and that it is retained with greater comfort to the patient. The only objections to the method are esthetic ones, and as patients, particularly women patients, rarely require assistance in taking such enemas after a single instruction, this objection becomes of minor importance. The bath-room floor with the patient stripped and a bath towel under knees and chest is a most satisfactory place for this treatment because of the privacy and convenience to both toilet and water; this method is one now largely practiced in Manila.

Enemas should not be given during digestion because the reversed peristalsis usually set up by such treatment interferes with the process of digestion and may aggravate stomach symptoms already present in this disease.

A very good time to take the treatment is just before retiring at night and the first thing after waking in the morning. One enema each twenty-four hours usually will be found sufficient, but in many instances two a day will give quicker and more satisfactory results. More than two treatments of this character in twenty-four hours are never indicated.

SOLUTIONS

A large variety of chemicals selected largely because of their supposed amebacidal properties have been used in the local treatment of amebiasis. As a matter of fact, very few of them are endowed with appreciable amebacidal properties and it is an open question, which will be discussed presently, whether or not whatever virtue the most successful ones may have is due to their amebacidal properties.

Of the list of such substances, thymol, quinin and silver nitrate are the three which have been proved to be of greatest value.

Thymol is by far the most efficient of the known amebacidal agents and it has been my main reliance in the treatment of amebiasis since its antiparasitic properties were so thoroughly demonstrated by J. B. Thomas.[1] On account of the difficulty in getting the drug in solution in water, the following formula has been worked out and has proved to be very convenient and satisfactory:

℞	Gm. or c.c.
Thymol	25
Alcohol Glycerin āā	250

M. et Sig.—Add 10 c.c. to each liter of water used in enema.

This gives a finished product of approximately 1 to 2,000 solution of the drug which, when the additional dilution formed by the bowel contents is considered, brings the actual intra-intestinal solution well within the antiprotozoal limits of the drug which is very actively amebacidal in 1 to 10,000 solution.

There does not appear to be any particular choice between the various quinin salts. The bisulphate is freely soluble and well adapted for use. The drug may be used in 1 to 1,000 to 1 to 500 aqueous solution depending on the irritability of the bowel. One of the principal objections to quinin is the constitutional effects often produced by its absorption from the bowel, particularly in patients who are able to retain enemas for considerable lengths of time.

Nitrate of silver frequently proves of decided benefit in solutions of from 0.1 to 1 per cent. in distilled water.

The method of action of these and various other substances frequently used in colonic lavage is not understood. Formerly the amebacidal properties were considered the most important, but careful consideration of the morbid anatomy of the disease makes this hypothesis a very doubtful one.

The parasites which are intimately associated with the lesions, and which therefore may be considered the most dangerous ones, are so buried in the tissues that there seems little likelihood of their contact with the solutions injected. These lesions are constantly discharging millions of amebas into the lumen of the bowel, and amebacidal substances may destroy these and prevent their forming new lesions. It seems rational, however, to consider the intestinal reaction due to irritation of the bowel by the solutions as being probably more important than any direct antiparasitic property of the chemicals.

The effect of acute inflammatory condition of the bowel on the chronic amebic process has been indicated above, and it is probable that much of the good of the local treatment, of whatever character, is in its irritating influence and consequent altered blood-supply on the mucosa of the colon. Practically all the substances of proved value in local treatment are irritants, and it is a generally recognized therapeutic fact that the prognosis of the disease is more favorable in irritable bowels than in the kind in which the enemas cause little or no pain or discomfort to the patient. Tuttle's ice-water injection often gives excellent results in the disease, but is seldom used because of the intense pain frequently produced by the severe reaction in the intestinal wall.

MISCELLANEOUS SPECIAL TREATMENT

As is to be expected from the chronic nature and the lack of a definite specific cure for the disease, numerous so-called specifics and especially efficient methods of treatment have been proposed from time to time. Of these may be mentioned, the saline treatment, the simaruba treatment, the bismuth treatment, tannin preparations of various kinds, calomel, metallic mercury, various crude tropical plants and several patent medicines which have secured considerable indorsement.

Some of the well-known chemicals of this list are of value in special conditions, but probably none of them are in any sense specifics, and all the rest of the remedies are useless or dangerous in the treatment of the disease.

The effect of mercury salts in the treatment of amebiasis deserves further investigation. During the last year I have had most encouraging results from the use of the protoiodid of mercury in old sluggish diarrheal types of the disease which reacted slowly to other methods of treatment.

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[1] Thomas, J. B.: Bull. Bur. Gov. Lab., Manila, 1904.

The drug was administered just as it would be in syphilis, tablets of 0.015 gm. each were given from two to four times a day, the quantity being determined by the tolerance of the patient, the symptoms of intestinal irritation being controlled by small doses of paregoric when necessary and the drug pushed to the point of tolerance as determined by the mouth symptoms. This treatment should be continued for one to three or more months with occasional intermissions of a few days.

Of the sixteen patients whose records are complete and satisfactory, twelve were permanently free of amebas in from twenty to ninety days, and eight of these patients whose after-histories are known to me have remained free from amebas and from clinical symptoms from three to eight months after cessation of treatment.

SURGICAL TREATMENT

Appendicostomy and cecostomy followed by colonic irrigation from above downward has been recommended by a number of surgeons, particularly in cases of amebiasis which fail to recover under other methods of treatment. Our experience in Manila with this form of treatment is very limited. Dr. McDill has performed appendicostomy for this purpose on several patients, but the results hardly have warranted a continuation of the procedure. With improved methods of medical treatment and the removal of the old opinion that rectal irrigations do not reach the cecum, the conditions usually recommended before surgical interference is attempted are very rarely seen in our work.

COMMENTS

Whatever the form of treatment used in amebiasis, the old adage to "treat the patient rather than the disease" applies with particular force. Amebaphobia and overtreatment are two important factors in preventing recovery. Amebaphobia may not be confined to patients, but too often it influences the judgment and actions of the physician in a way very unfavorable to the patient's best interest.

Overtreatment is a very common error and comes from the desire to destroy all the amebas, which is practiced without due regard to the patient's general condition and is no more consistent with good therapeutics than it would be to employ remedies in typhoid or pneumonia, looking primarily to the destruction of the microorganisms causing these diseases.

It probably would be dangerous to consider any patient cured so long as amebas are discharged with the bowel contents, but with the patient in a satisfactory clinical condition this contingency should cause no particular alarm, because the accidents and complications of the disease are extremely rare in patients who have undergone a thorough preliminary treatment and whose clinical condition is kept in a satisfactory state by subsequent intermittent treatment.

As to choice of the methods of treatment, each case must be a law unto itself. The irrigation treatment is the main reliance, particularly in what may be termed average or usual cases. Ipecac is particularly valuable in the presence of clinical dysentery and may be tried either alone or in combination with bowel irrigation. The substance used in enemas should be arbitrarily changed from time to time in cases in which satisfactory progress is not being made by any one method of treatment.

With proper care, the prognosis of this disease is good as to recovery and, while the treatment usually requires several months, patients in the majority of cases may continue their regular vocations during treatment with an occasional rest and diet for a few days during exacerbations manifesting themselves as clinical dysentery.

In emaciated patients with old chronic cases of long standing, who have had no treatment, and in cases complicated by mixed infections and otherwise, the prognosis is not so good and the treatment of the latter requires additional consideration.

ABSTRACT OF DISCUSSION

DR. WALTER BREM, Los Angeles, Cal.: For a long time I have looked on Dr. Musgrave as my master in the study of amebic infections. A monograph which he wrote with Clegg seven years ago first interested me in the subject. I feel, therefore, a certain timidity in disagreeing with Dr. Musgrave regarding the ipecac treatment of intestinal amebiasis. But, since any investigation of the treatment of intestinal amebiasis must be based on a careful study of a few selected cases over a considerable period of time following the treatment, I feel that there may be some excuse for my speaking.

In Panama, Zeiler and I treated amebic infection for four years by irrigations. We used chiefly quinin in from 1 to 2,500 to 1 to 250 solution, and thymol in from 1 to 3,000 to 1 to 1,000 solution, and quinin and thymol combined. Our results were unsatisfactory. Two years ago, after Dr. George Dock published his paper on ipecac treatment of amebic dysentery, we decided to give this method a thorough test. In our classification of cases, we considered "amebic dysentery" a chronic condition, with acute exacerbations, characterized by diarrhea and tenesmus and the presence of blood, mucus and amebas in the stools. Our criterion of cure was the eradication of the infection, and we considered this demonstrated only by repeated examinations of the stools over a reasonably long period of time after the treatment was discontinued. We apparently cured twenty-one out of twenty-two patients treated with ipecac. About ten of these patients were followed over six months and repeated examinations of the stools were made. Several of them were followed more than a year and there was no recurrence of dysentery or reappearance of amebas.

One of our patients had amebas continuously in his stools for over two years. We tried every method known to us to rid him of the infection but failed. There were always from twenty to thirty amebas in each field of the low power lens at every examination. We finally gave this patient 120 gr. of ipecac in twenty-four hours. The amebas immediately disappeared and there has been no recurrence in over one year.

One patient we failed to cure by giving ipecac by the mouth. He had three recurrences of dysentery, and on his last admission to the hospital he was emaciated and apparently dying. Dr. Lloyd Noland did an appendicostomy on him and found the intestine thickened and diseased. Dr. Noland kindly returned the patient to us for postoperative treatment and we introduced ipecac through the appendix. In three days the amebas had disappeared from the stools; they did not reappear, and the patient made a rapid recovery. He was kept in the hospital as an orderly so that he could be watched and frequent examinations of his stools could be made. It is now five months since treatment and he is well and no amebas can be found. The conditions of the treatment render the case one of experimental value.

We had another patient whom we failed to cure by giving ipecac by the mouth. We then gave it per rectum, suspended in starch water. There were ulcers present in the rectum and we had the satisfaction of seeing these gradually heal after the enemas were given.

There are several chances of failure in the ipecac treatment of amebic dysentery and I think that these chances of failure are responsible for the conflicting reports that come from various observers. In the first place, the ipecac may be adulterated. In the second place, the salol coating may be so thin that it is dissolved in the stomach and the ipecac vomited. Third, if the pills are too thickly coated they may pass through the intestine intact without the salol coating being dissolved at all. Fourth, the matter of diet is important, for if food that resides long in the stomach is given before the ipecac, the latter also is held in the stomach until it is vomited. No solid food should be allowed for six hours before the administration of ipecac.

Dr. Musgrave thinks that ipecac relieves the symptoms of dysentery, and is of value for that reason. My experience leads me to believe that in addition it will eradicate the infection when properly administered—that it is a specific for intestinal amebiasis, at least in the early and moderately advanced stages.

Dr. W. E. Musgrave, Manila, P. I.: The last word has not yet been said regarding the therapeutic use of ipecac. In general autopsy work (over 1,000 autopsies) 22 per cent. of the cases which showed the amebic ulcerations gave no manifestations of the disease during life. A patient may have the disease in the tropics, return to the United States, and show no manifestations of the disease until a late period of life, if at all.

THE PURIN CONTENT OF COMMON ARTICLES OF FOOD *

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Uric acid in the human body and its excreta has been recognized and studied for over 100 years. It was soon recognized that it had a relation to gout, that protean, baffling disease. Efforts to explain this relation drew more largely on theory and the imagination than on facts, and medical literature teems with the contention of different schools on these points.

The earlier discussions had much to say about the causative relation of the acidity or the alkalinity of the blood. These ideas penetrated to the laity and are the basis of the popular belief that acidity in the food is a potent cause in producing gout and rheumatism. Even a large proportion of the medical profession are to-day more or less influenced by the idea that the acidity of the blood has a causative relation to these conditions, oblivious of the fact that the investigations of recent years have failed to show in demonstrable facts any warranty for this belief.

New and more accurate methods of analysis were introduced about thirty years ago, which render practically valueless the observations based on previous methods. Improvements on these methods are still being made, and greater accuracy in the methods of the future may materially alter the reliability of what we to-day regard as established "facts" in this connection.

The subject is an extremely complex one—complex from the point of view of the clinician, and complex also to the physiologic chemist. Each finds problems that his present means of investigation are inadequate to solve. Everybody agrees that there is some relation between uric acid and gout, but the best authorities who are unbiased and candid stop there and admit that very little beyond this bald statement is definitely known.

The practicing physician who has kept at all in touch with the advances in this subject is indeed warranted in feeling bewildered. He sees his old theories demolished, but no new ones to take their place. Even if his old theories were wrong, they gave him a feeling of satisfaction because he thought that he knew what ought to be done. If the patient improved in the natural course of events, in spite of the physician's wrong theories, the latter had the added satisfaction of being convinced that his remedies had done the work. To-day this is all changed. His confidence is gone; the conscientious physician dislikes giving remedies on the traditional dictation of empiricism, but what can he do? He asks the physiologic chemist for bread, in the form of comprehensible directions based on known facts, and what he gets is a stone; for the average man can neither understand the answer nor apply the results.

The problem has hardly been simplified as yet by the introduction of the term "purin." Uric acid is but one of a group of substances that are closely related chemically. These substances are built chemically around a nucleus, $C_5H_4N_4$, to which the name "purin" has been given. Emil Fischer noted this fact and published the results in 1899, yet the general practitioner may look in many standard works to-day and not even find the term "purin" used.

When, however, we realize that the purin nucleus is an important constituent of nucleoprotein, and that nucleoprotein in turn is the important chemical substance of the nuclei of the body-cells; when we also recognize that the nucleus plays a most important part in cell activity; we can readily understand that some knowledge of the purin metabolism is essential to the physician if he is to appreciate at all the new knowledge about cell activity, both in health and disease, which the physiologic chemist will soon open up. At present we are only just beginning to get light on the subject, yet we can see enough to be convinced of its great importance. How much of what is now known is it essential for physicians in general to know? What practical bearing may it have on the treatment of disease?

These are the two questions that we have had chiefly in mind in elaborating this paper. We would modestly disclaim any special experience or knowledge of physiologic chemistry. Compared with the chemist we are but medical laymen, who listen to what the men of science have to say, and try to garner from the rich harvest of confusing facts and theories a few practical bits of information that may help our fellow practitioners.

The purin bodies associated with the metabolism of the nuclear elements of the body, their formulas and classification are as follows:[1]

Purin	$C_5H_4N_4$	(not yet found in the body as such)
Hypoxanthin	$C_5H_4N_4—O$	Oxypurins
Xanthin	$C_5H_4N_4—O_2$	
Uric acid	$C_5H_4N_4—O_3$	
Adenin	$C_5H_4N_4—NH_2$	Aminopurins
Guanin	$C_5H_4N_4—ONH_2$	

All five are included under the term "purin bodies." With the exception of uric acid, they are known also as "purin bases."

The relation of the purin bases to nucleoprotein may be stated as follows:

Nucleoprotein = *nuclein* + protein.
Nuclein = *nucleinic acid* + protein.
Nucleinic acid = *adenin* + *guanin* (*purin bases*) + pyrimidin bases + phosphoric acid + carbohydrates.

The breaking up of nucleoprotein furnishes the purin bases, adenin and guanin. These are aminopurins, and by the replacement of the NH_2 group by O, we get, respectively, hypoxanthin or xanthin (oxypurins), and by the further oxidation of these we get uric acid.

Experiments show that these changes from the nucleoprotein of the nucleus to uric acid do take place in the body; and we believe that this process accounts for most of the nucleoprotein that is used up in the body, and explains an important source of uric acid in the body.

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* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

[1] Based on Lusk: The Science of Nutrition, Ed. 2, 1909, p. 335.

Such part of the uric acid or purin bodies as is derived from the cellular activity of the body itself is called endogenous. Such part as is derived from outside the body and introduced in the food is called exogenous.

We have no satisfactory way of measuring the amount of purins in the body and so our best method of measuring the activity of these processes is by the excretion of purins in the urine. Uric acid constitutes the chief form in which the purins are thus excreted, only about 10 per cent. or less appearing as other purin bodies.

If we put a person on a purin-free diet, that is, remove the exogenous source of purins, then the amount of purins in the urine falls and after a few days remains constant at a lower level. This is considered to represent the endogenous purin metabolism of the body. As might be supposed, it remains practically constant for an individual while he is on a purin-free diet, because it represents the wear and tear of his body, which is essentially a constant factor.

While the daily amount of endogenous urinary purins remains fairly constant for any individual, the amount varies considerably for different individuals in health. It will usually be found between 0.3 and 0.5 gm. daily.

If food containing a definite amount of purins is given, the amount of urinary purins rises, but does not rise by the same amount that is ingested. In other words, a part of the exogenous purins are used up in the body and do not appear as such in the urine. Authorities differ somewhat as to what proportion is recovered in the urine, but a number of good authorities place it at one-half or a little more. The rest is used up in some way that has not yet been clearly determined, but this is one of the reasons that leads to the conclusion that uric acid is in part broken down in the body and not all excreted as uric acid.

The endogenous production of urinary purins is very little affected by drugs or by any measures at our command, but the amount of purins that the body has to dispose of may be considerably reduced by limiting or excluding the purins in the food. This is desirable in gout; for while we do not know the exact relations of this disease to uric acid and the other purins, we do know that there *is* some close relation; that purin metabolism is disturbed; that the excretion of uric acid is generally lowered from normal, and that there is a tendency for it to accumulate in the body.

Exogenous purins come essentially from two sources—from the nuclei of cells in the food, and from free purins (chiefly hypoxanthin) found in muscular tissues. The chief sources are animal foods, and these are rich in purins in proportion to the number of nuclei in a given amount of the tissue. For example, glandular organs are much richer than muscle.

PURIN-FREE FOODS

Of animal foods, milk and eggs, and all articles made from them, are essentially purin-free. Fish eggs are included in this list. Cheese may include an appreciable amount of purin, if rich in bacteria.

Usually all vegetables are permissible, being practically purin-free. Seeds, however, contain a certain amount of purins in the plant embryos. In extreme cases, therefore, the use of peas, beans, corn, wheat and oats may need to be restricted or even excluded. It should be noted, however, that such objections as there may be to these seeds do not apply to flours made from them, for the process of bolting the flour removes the plant embryos.

In this connection caffein and theobromin may be mentioned. Each contains a form of purin, but they are methyl-purins. The methyl radical is much the more active, and the amounts of these substances taken would be limited by the methyl action long before the action of the purins would become objectionable. These purins may be practically disregarded in our consideration of the subject.

COMMON ARTICLES CONTAINING PURINS

These, as we have seen, are chiefly animal foods containing cells, and they are rich in proportion to the number of cells in a given amount of food.

Our knowledge of the purins and the rôle they play in the body is not sufficiently accurate to make it worth while to try to calculate the exact amounts taken in a given quantity of food, so that the exact percentage has little practical value. On the other hand, the *relative* amount in different foods has a practical value. This can be expressed conveniently by taking as a unit the amount of purins in a given weight of any food that is relatively poor in purins, and then classifying other foods as containing multiples of that unit.

A satisfactory method is to compare the foods according to the number of grams of purins in a kilogram of the food. Cod may be taken as the standard to determine our unit. Our figures are taken from I. Walker Hall.[2] There are 0.582 gm. of purins in 1 kg. of cod, so that our unit may be placed at 0.5 gm. per kilo. The common foods will be classed in groups having approximately the same amount of purins, and in each group they will be arranged from above down beginning with the lowest of the group and ending with the highest.

It will be noted that there is no difference chemically between the "red" and the "white" meats. Also note that while the common forms of white fish like cod are low in purins, other fish, like halibut and salmon, are as rich as the common meats.

PURIN CONTENT OF ANIMAL FOODS

1 unit.	Tripe. *COD.*
1½ units.	Plaice.
2 units.	Mutton. Rabbit. Halibut. Pork. Beef (ribs). Ham. Veal. Salmon.
2½ units.	Turkey. Chicken. Beef (sirloin).
4 units.	Beefsteak.
6 units.	Liver.
20 units.	Sweetbreads. (thymus).

PURIN CONTENT OF VEGETABLE FOODS (containing more than a trace).

Two-fifths unit.	Asparagus.
Four-fifths unit.	Pea-meal.
One unit.	Oatmeal.
Six-fifths unit.	Beans.

Sweetbreads and liver must be omitted from the diet entirely whenever it is desired to limit the amount of purins ingested, and beefsteak should be used in only half the amounts that other meats are allowed. Boiling meats reduces the amount of purins, as it removes a good deal of the soluble xanthin bases, whereas these are all retained when the meat is broiled.

The method of dealing with a patient who needs to have the purins restricted would be, first, to put the patient on a purin-free diet of milk, eggs, bread and vegetables for a number of days, in order that he may rid his system of any excess of purins that are retained in the system. Then we may test his tolerance by beginning with an allowance once a day of a moderate serving of one of the articles from the table above that is rather poor in purin—that is, an article that relatively has not more than 2 cod units. The amount should not exceed 100 gm. If these lower substances are well borne, then we may try the stronger ones, but we should begin with smaller amounts, not over 50 gm. at the start. These stronger articles should not be put on the regular bill of fare, but only allowed occasionally, even if there are no apparent symptoms from their occasional use.

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[2] The Purin Bodies of Food Stuffs; Their Estimations, Action and Significance, 1902, Chap. iii.

A word may be added about beverages. Tea and coffee may be used in moderation, if not otherwise objectionable. In general, alcohol inhibits purin metabolism. This is the objection to alcoholic drinks, rather than any question of their purin content. Beer, ale and porter contain small amounts of purin. Spirits contain none. Light wines usually agree best with gouty patients, but there is no definite rule as to the way in which gouty patients are affected by different alcoholic drinks.

One final word of caution should be added. Gout is a variable disease. Each case has its idiosyncrasies and its peculiar problems. Treatment must be individualized, and the general principles laid down may need considerable modification to meet these individual requirements. Nevertheless, the intelligent regulation of the diet so as to meet the needs of the body for nutrition and yet to limit the amount of purin ingested will remain a cardinal principle of treatment.

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DISORDERS OF PURIN METABOLISM *

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NEW YORK

The old time term "uric acid diathesis" was an elastic expression, embracing such different conditions as gout, chronic rheumatism, uratic calculus, obesity and certain nephritides. In the light of more recent knowledge, the meaning of the term has been gradually narrowed until at the present time it includes only those diseases or clinical syndromes which are more or less intimately connected with a pathologic purin metabolism. It will be our purpose in this paper to consider those disease types which fall under this heading, to point out, as far as is possible, wherein lies the departure from normal metabolism, to formulate any general rules which can serve as a basis for rational treatment, and to bring out such facts as are known concerning special or specific therapy.

One of the most striking conditions in the uric acid diathesis is the occurrence of an increase in the uric acid content of the blood—uricemia or uricacidemia. This is not necessarily an evidence of faulty purin metabolism, however. Thus a uricacidemia and high uric acid excretion may be a result of alimentary flooding of the circulation with exogenous purin bodies, a condition quite comparable to alimentary glycosuria. Excessive nuclear destruction, as occurring in pneumonic resolution and in leukemia may also induce it. Uricacidemia is also found in a group of diseases which present in common a severe cachexia, such as carcinoma, chronic malaria, and pernicious anemia. Many of these, as hepatic carcinoma, for instance, give a largely increased uric acid excretion and a ratio of uric acid to total nitrogen which is above normal. Blumenthal[1] explains this as due to the increased body-protein catabolism of the cachexia and points out that the increase in uric acid disappears when the protein catabolism is temporarily relieved. Garrod and von Jaksch have noted uricacidemia in renal insufficiency (a retention uricacidemia). As will be seen later, normal amounts of uric acid are usually excreted in nephritis, and Magnus-Levy[2] explains this uricacidemia on the assumption that the concentration of the acid in the blood must reach a higher level than normal to pass through the kidney.

Uricacidemia, then, may be quite independent of an abnormal purin metabolism. On the other hand, variations in the amount of uric acid in the blood and urine are constant occurrences in the uric acid diathesis, and can be ascribed here only to a disorder in purin metabolism.

Of the various diseased states intimately connected with the uric acid diathesis, gout is of chief importance. Its essential pathology is unknown. The disease is associated with uricacidemia and a deposition of sodium urate in the tissues, the latter not being a result of the uricacidemia itself, but dependent on the accession of another unknown factor. The explanation of the cause of the uricacidemia in gout is not clear. It cannot at present be ascribed to an increase in uric acid formation. It persists in spite of a complete withdrawal of exogenous uric acid from the diet. The present belief is that it is a result of an anomaly of excretion. In this connection von Noorden[3] offers two hypotheses.

1. As Magnus-Levy and Minkowski have described in the case of nephritic uricacidemia, so in gout the renal cells may not be permeable to uric acid until it has reached a blood concentration greater than normal. Such an impermeability could occur without a recognizable anatomic lesion, and would be comparable to other functional insufficiencies of the kidney in which no organic structural change is observed. It is quite apart from and unrelated to nephritis. Such a functional disorder might eventuate in the chronic granular kidney of gout and this in turn increase the uricemia, but by no means could the gout be a result of the nephritis.

2. In the blood in gout, uric acid is held in a combination which is less easily excreted than normally. It is quite unknown in what form uric acid circulates in the blood normally, but that its solution depends on the alkalinity of the blood, as Pfeiffer held, has been disproved by more recent work. In the urine, His[4] has been able to obtain all the uric acid by centrifugation. In the blood, on the other hand, Bloch,[5] by this method, could obtain only a little more than half the uric acid shown by analysis to be present. It may be assumed, then, that part at least of the blood uric acid is in organic combination.

A further factor in the pathology of gout lies in the deposition of urates in the tissues. In this connection may be mentioned the recent work of Gudzent,[6] who believes that uric acid forms two primary sets of salts, which are isomeric and differ only in solubility. In nuclear metabolism there occurs first, the alpha, or lactam form. This is unstable and gradually changes in solution into the second isomer, the beta, or lactim form. This is stable. Since uric acid circulates only as a monosodium urate, these two isomeric salts are the forms in

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* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

* From the Laboratory of Pharmacology, University and Bellevue Hospital Medical College.

1. Blumenthal: Charité Ann., xxi, 144.
2. Magnus-Levy: Ztschr. f. klin. Med., xxxvi, 353.
3. von Noorden: Pathology of Gout, 1907, iii, 647.
4. His: Quoted by von Noorden, see Note 3.
5. Bloch: Arch. f. klin. Med., lxxxiii, 499.
6. Gudzent: Ztschr. f. physiol. Chem., lx.

which it occurs in the blood. In water the unstable or lactam form is about one-third more soluble than the stable or lactim form, and neither is very soluble. In the blood, as compared to water, the solubility of each is lessened, but not proportionately, for the stable form becomes less than one-half as soluble as the unstable form. With the transformation of the unstable into the stable form, there comes, then, a lessening in solubility and this fact explains why with its gradual accumulation in the blood there is the tendency for precipitation and deposition of urates.

In addition to the uricacidemia and deposition of urates in gout, there exist undoubtedly other pathologic factors. Of the nature of these we know nothing. They constitute what von Noorden calls the "unknown gouty factor," and on their elucidation depends the explanation of both the uricacidemia and urate deposition. It is possible that an accumulation of uric acid or allied bodies in the blood may exert a toxic effect, but this can occur only under suitable conditions, as exist in gout. That there is a definite gout toxin may well be questioned, but some evidence in this direction is afforded by the fact that while in gout there may be a nitrogen retention, yet there may be also quite definite periods of toxic destruction of protein, with increased elimination of total nitrogen and of uric acid. Such an effect might be due to an endogenous toxin such as is assumed to be active in diabetes.

It must be recognized, finally, that true metabolic gout is to be carefully distinguished from retention or kidney gout. In true gout there is an endogenous uricacidemia. Between attacks the uric acid excretion is within the normal figures, but tends toward the lower limit, thus allowing of a gradual accumulation which reaches a maximum just before an acute attack. With the attack comes a largely increased excretion, and then again a return to the lower level.

It is interesting to note that cases are occasionally found which clinically are undoubtedly gout, and yet on laboratory study present no anomaly of purin metabolism. Magnus-Levy[7] and His[8] have each reported such a case in which laboratory findings would have led to an erroneous diagnosis, because the purin metabolism was normal. Yet beyond doubt the patients were gouty. We have had a similar case in which the clinical diagnosis of gout was well sustained, although the purin excretion and reaction to exogenous purins were normal.

This case, briefly, was as follows:[‡]

The patient, W. G., aged 48, was a well-developed, overnourished man of large frame; English; in the United States seven years; father was subject to repeated gouty attacks. The patient was always a heavy eater, drank moderately, especially whiskey and ale, and was subject to chronic constipation. Fourteen years prior to examination the great toe of the left foot was swollen, red and painful for three days. One year later the patient had a similar attack, the onset being at night and pain very severe; dorsum of foot and ankle were soon involved. Since then the patient has had numerous attacks involving great toes, ankles, knees, elbows and wrists in order named. Except for one period of five years, he has averaged three attacks yearly. Present attack began two and a half months previous to examination in dorsum of right foot, then of left foot, then both ankles and knees. One week prior to examination the right great toe, elbow, metacarpal joint of index-finger, and wrist became acutely inflamed. Under a gout mixture containing colchicum, potassium iodid and potassium acetate, the symptoms improved and all medication was stopped in order to carry on studies on the purin metabolism. With the withdrawal of medication the joint symptoms immediately recurred with great intensity, and after three days colchicum was again administered with very quick relief. (See Table 1.)

TABLE 1.—PURIN METABOLISM IN A CASE OF GOUT. (W. G.)*

Date Mch.	Urine c.c.	NaCl gm.	Total-N gm.	Urea-N gm.	Urea-N %	NH_3-N gm.	NH_3-N %	Uric Acid N gm.	Purin Base N gm.	Total Purin N gm.	Total Purin N %	Remarks
18-21	2,000	10.56	16.90	14.64	86	.683	4	.219	.099	.318	1.8	Daily average of three normal days, no medication.
23-26	1,315	2.09	14.84	12.85	86	.622	4	.167	.042	.209	1.4	Daily average of four days' period on gout mixture.†
28-29	1,560	4.62	16.96	13.66	83	.983	6	.223	.100	.323	1.9	Daily average of two meat days, 400 gm. meat each.
30-1	1,505	6.09	16.21	13.72	84	.847	5	.177	.056	.233	1.4	Daily average of three days succeeding meat days.

* In the work tabulated, the uric acid and purin bases were determined by a modified Ludwig-Salkowski method, the urea, ammonia and total nitrogen by the methods of Benedict, Folin and Kjeldahl respectively. Diet was purin-free for three days before experiment and throughout, except as otherwise noted. In the meat (lean raw steak as weighed) was roughly 0.5 gm. purin N. Of this 0.250 gm. should have been excreted. Table shows 0.3 gm. of exogenous purins was excreted.

† Gout mixture (Pot. iodid, Pot. acetate, Vin. colchici, Syr. sarsaparilla) was begun March 22 and contiuued in same dosage throughout.

TABLE 2.—PARENCHYMATOUS NEPHRITIS AND GOUT. (M.)

Date	Urine c.c.	Total N gm.	Uric Acid N gm.	Purin Base N gm.	Total Purin N gm.	Total Purin N %	Purin-free diet throughout
May 16-17	1,490	6.85	.051	.051	.102	1.4	Daily average of two normal days.
18-19	1,580	6.71	.045	.034	.079	1.1	Daily average of two normal days with solurol 1.5 gm. each day.
20	1,760	7.60	.041	.006	.047	.6	One day, following solurol.

It has already been pointed out how closely renal insufficiency may approach gout. In fact the two conditions are often confused. A study of tables presented by many workers on purin excretion in different forms of nephritis leads to the conclusion that, in general, uric acid and purin bases are excreted in normal amounts, as compared to the excretion of healthy persons on a corresponding diet. The fact that some investigators find a decreased uric acid excretion may be very largely explained by the low protein diet so generally employed in treating nephritis. It has been stated that uricacidemia is associated with nephritis, but when the uric acid concentration reaches a certain height, the kidneys seem normally permeable to amounts above this. A reduction of uric acid excretion is most marked in advanced limitation of renal function, but even here it is not so great as is the reduction of urea, and hence indicates an extreme impairment of the renal filter. The studies that have been made on purin metabolism in nephritis justify the conclusion that the excretion of uric acid nitrogen lies within the normal limits of 0.07-0.34 gm. In a case of our own, of parenchymatous nephritis, we found a marked diminution of uric acid, however, possibly to be explained by the advanced stage of the disease, which illustrates the lack of kidney permeability. The daily average in a purin-free diet, with no medication, is shown on May 16 and 17 of Table 2.

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[7] Magnus-Levy: Deutsch. med. Wchnschr., April 27, 1911.
[8] His: Quoted by Magnus-Levy, see Note 7.

[‡] We are indebted to Dr. A. A. Smith and Dr. H. M. Biggs for allowing us the privilege of their wards in Bellevue Hospital, from which a number of our cases were obtained.

Clinically this man presented a cardio-arteriosclerotic picture, with arthritic symptoms of pain, tenderness and swelling in both ankles and feet. It would be interesting to see whether this condition would not progress to a frank gout. One other case of chronic interstitial nephritis in our series gave normal figures for uric acid excretion, averaging in a four-day purin-free diet period, uric acid N 0.149 gm. daily, total nitrogen 11.2 gm., or 1.3 per cent.

TABLE 3.—PURIN METABOLISM IN CHRONIC RHEUMATISM. (J. K.)

Date	Urine c.c.	Total N gm.	Uric Acid N gm.	Purin Base N gm.	Total Purin N gm.	%	Purin-free diet. No medication
June 5, 8, 9	1,700	15.36	.202	.072	.274	1.7	Daily average three normal days.
10, 11	1,375	15.70	.131	.099	.230	1.4	Daily average solurol two days, 2 gm. each.
12, 13	1,740	14.25	.139	.083	.222	1.5	Daily average two days following solurol.

TABLE 4.—PURIN METABOLISM IN RECURRING ACUTE ARTICULAR RHEUMATISM. (G. K.)

Date	Urine c.c.	Total N gm.	Uric Acid N gm.	Purin Base N gm.	Total Purin N gm.	%	Purin-free diet
May 15, 16, 17	1,570	18.35	.266	.066	.332	1.8	Daily average three normal days. No medication.
June 5, 6, 7	1,715	17.75	.271	.082	.353	2.0	Daily average three normal days on constant salicylate medication.
8	1,325	11.02	.187	.048	.235	2.1	One day. Some medication, 2 gm. solurol.
10, 11	1,200	15.55	.200	.093	.293	1.9	Daily average two days following solurol. Same medication.

In a series of purin metabolism studies, Badt has reported two cases of mixed gout and nephritis with subnormal purin excretion. From a comparison of these with nephritis alone and with pure gout, he concludes that gout plus nephritis gives an especially low purin excretion.

Few diseases have popularly been more closely connected with uric acid disorders than rheumatism, yet acute rheumatism seems entirely separate from primary purin disturbance. As for chronic rheumatism it is impossible at present to arrive at a judgment, since this term embraces an indefinite group of disorders more or less related clinically, which are only slowly being separated.

We cite in Tables 3 and 4 the findings in two cases of rheumatism coming in our series.

Consideration of the fact that the major part of uric acid destruction normally occurs in the liver, would lend probability to the view that any disease process which limits the functional power of the liver would seriously disturb purin metabolism. This view is supported by the occurrence of increased uric acid excretion in hepatic cirrhosis and acute yellow atrophy. It might also in part account for the uricemia often found in hepatic carcinoma.

We have studied several cases of cirrhosis of various types and in particular one which showed marked hepatic insufficiency according to the levulose test of Strauss.[9]

This patient gave a strong Wassermann reaction, had a marked alcoholic history, moderate ascites and a very definite atrophic cirrhosis. The clinical diagnosis was syphilitic and alcoholic cirrhosis. The patient was put on purin-free diet and determinations made as shown in Table 5. The purin nitrogen excretion in the initial normal period of three days averaged .266 gm., well within normal limits. This was 2.5 per cent. of the total nitrogen. On the two meat days there was a very slight rise in purin excretion, from .266 gm. to .279 gm. daily average. On the three days following, the average daily excretion was only .246 gm. This shows a complete intolerance for purins, at least in the quantity given. (See Table 5.)

Circumstances did not allow us to repeat the tolerance test with a smaller amount of meat and it is very possible that a better reaction would have been found had this been done. The purin tolerance, however, was certainly far below normal. This is just contrary to what would be expected and in the absence of any kidney lesion we are unable to offer an explanation. The table also shows a delayed excretion of the additional nitrogen to be expected from the meat, but this may be explained by the fact that the meat probably replaced other constituents of the purin-free diet, as no effort was made to control the nitrogen intake. The relation of functional efficiency of the liver to purin metabolism is shown to be a complex matter and valuable results should follow further work on this problem.

In discussing the therapy of abnormal purin metabolism, uricacidemia should first be considered. As its ultimate cause is unknown, the first rational step is toward its reduction by any means at hand. It has been shown that this cannot be effectually accomplished through efforts at lessening endogenous formation of uric acid. As the exogenous sources of uric acid are so largely under dietetic control, the regulation of these becomes a matter of primary importance. Could the uricacidemia be prevented by merely keeping the patient on a purin-free diet, the therapeutic problem would be a simple one. Unfortunately a condition obtains which, for purposes of illustration, may be compared to that in diabetes. In complete diabetes the body loses entirely the ability to utilize not only the carbohydrates of the food taken, but those arising from the tissue metabolism as well. So, in a complete derangement of purin metabolism, it might be assumed that there is an inability to care for the purin of endogenous as well as exogenous origin. The analogy is not complete because derangement of endogenous metabolism may mean more than inability to care for purins after their formation. Here the break may occur in any part of the complex chain of nuclear metabolism. The analogy is serviceable, however, to illustrate the principle of dietetic therapy, for just as in diabetes, so here it is highly desirable to determine the tolerance of the patient, to increase this if possible, and to arrange a diet which does not exceed it. It is practically impossible to keep a patient on a purin-free diet for months and years, and further it is doubtful if such a measure is at all necessary.

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[9] Strauss: Deutsch. med. Wchnschr., 1901, p. 757.

The determination of the purin tolerance is a matter of no great difficulty. The manner of procedure is as follows:[10]

> First, the endogenous total purin excretion is determined, during a period of purin-free diet. Then 400 gm. lean beef (raw weight) are added to the dietary on each of two consecutive days, and the total purin excretion determined as before. This amount of meat contains on an average 0.24 gm. purin N. Of this about 50 per cent. should be excreted for each meat day, so that the total purin excretion should be increased by 0.24 gm. if metabolism is normal. It has been found that while the excess purins from the meat may be excreted rapidly, often two or even three days are required for their complete elimination. In such cases it becomes necessary to compare the total purin output of the two meat days, plus the three succeeding days, with the output during the fore period of purin-free diet, in order to determine whether the exogenous purins from the meat have been normally excreted. If the rise in output is less than 50 per cent. of the ingested purin it shows an inability of the body to handle the purins of 400 gm. meat, and the test must be repeated, using smaller amounts. The tolerance for purins is established, then, just as is the tolerance for sugar in diabetes. (See Table 6.)

TABLE 5.—RESULTS OF PURIN-FREE DIET IN SYPHILITIC AND ALCOHOLIC CIRRHOSIS. (F.)

Date	Urine	Total N	Urea-N		NH_3-N		Uric Acid N	Purin Base N	Total Purin N		Diet purin-free throughout, except as below
May	c.c.	gm.	gm.	%	gm.	%	gm.	gm.	gm.	%	
8, 9, 10	1,380	10.54	8.43	80	.945	8	.188	.078	.266	2.5	Daily average three normal days.
11, 12	1,660	10.66	8.97	84	.471	4	.155	.124	.279	2.6	Daily average two meat days. Diet + 400 gm. meat each day.
13, 14, 15	1,760	11.63	8.51	73	.567	4	.158	.088	.246	2.1	Daily average three days following meat days.
16, 17	1,450	11.04	8.66	78	.922	8	.182	.070	.252	2.2	Daily average two days, each + solurol 1.5 gm.
18, 19	2,155	13.00	10.57	81	.919	7	.218	.078	.296	2.2	Daily average two days following solurol days.

TABLE 6.—CASE ILLUSTRATING NORMAL PURIN TOLERANCE. (McC.)

Date	Urine	NaCl	Total N	Urea N		NH_3-N		Uric Acid N	Purin Base N	Total Purin		Remarks Purin-free diet throughout, except as below
	c.c.	gm.	gm.	gm.	%	gm.	%	gm.	gm.	gm.	%	
Mch. 16-17-27	955	7.54	9.26	7.50	81	.567	6	.122	.067	.189	2.0	Daily average of three normal days.
28	1,080	7.55	14.48	12.01	82	.897	6	.211	.026	.237	1.6	Diet + 400 gm. meat.
29	870	7.17	11.07	9.32	84	.625	5	.133	.035	.168	1.5	Day succeeding meat day.
Apr. 18-22	1,240	10.36	11.25	9.62	85	.684	6	.129	.054	.183	1.6	Daily average five days normal.
26-27	1,755	13.05	14.94	11.95	80	...	.	.205	.113	.318	2.1	Daily average two meat days, 400 gm. each.
28-30	1,260	8.20	13.26	....	..	...	.	.111	.036	.147	1.1	Daily average three days succeeding meat days.
May 5	1,085	9.53	11.35	9.49	83	.868	7	.181	.037	.218	1.9	One normal day.
6	1,500	11.03	13.85	11.52	83	.832	6	.179	.048	.227	1.6	+ 1.5 solurol.

With the purin tolerance known, the diet is so adjusted as to contain just under this value of purins. There are two reasons for this: first, if the body can accommodate a certain purin quantity, there is no occasion for cutting off all purins with the consequent further limitation of the dietary; second, it has been found that the tolerance for purins increases when the diet contains a quantity just under what the body can manage. This is quite in line with the increase in tolerance often seen in diabetes.

When the purin tolerance is subnormal, the purin intake must be correspondingly restricted to that quantity which the organism can utilize without risk of causing uric acid retention and accumulation. If the tolerance is very little below normal, an occasional course of two to four weeks on strictly purin-free diet is highly advantageous, in order, as it were, to allow the organism to "catch up." Such purin-free periods undoubtedly have a beneficial effect in preventing uricacidemia and possible acute exacerbations.

Among the patients whose tolerance we have studied is the one of gout already described (Case 2). This man reacted normally to an addition of 400 gm. meat to his purin-free dietary and only long-continued study could show whether he had periods of comparative intolerance for meat.

But even though purin tolerance is apparently normal, it must yet be considered whether the reserve tolerance for amounts of purin above the normal is lessened or entirely lost. In such a case excesses in diet would have a direct effect in producing uricacidemia. Again, a decrease in the reserve tolerance may be followed by inroads on the normal tolerance and thus dietary excesses lead to a gradual onset of true gout.

As von Noorden and Schliep point out, if purin tolerance is normal to 400 gm. meat, the reduction of purin diet below this is unnecessary, but consideration of the reserve tolerance may indicate very definitely a regulation of amounts over this figure.

In acute attacks of gout, purin-free diet is certainly indicated in the effort to reduce the uricacidemia, even though it be recognized that the acute attack may be a conservative and protective process, designed to relieve suddenly a uricacidemia which has been gradually increasing over a varying length of time.

Regulation of purin diet, then, has a very definite place in the direct treatment of both chronic and acute disorders of purin metabolism, and, in addition, is of primary importance in the prophylaxis of these disorders.

A question as yet unsettled is whether the tolerance for meat purins is a measure of the tolerance for the purins from other sources. In other words, do food purins from all sources influence the body alike? It is well known that caffein and its congeners are not oxidized to uric acid, but are excreted as xanthin compounds. Hence caffein does not increase the output of uric acid. The inter-relations of food material, leukocytosis, and body temperature are of great importance in this line of study, but our present knowledge here is most rudimentary.

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[10] Von Noorden and Schliep: Berl. klin. Wchnschr., 1905, p. 1297.

Certain drugs, as salicylic acid and antipyrin, have been credited with a power of decreasing synthetic purin formation or of changing the destructive process in nuclear metabolism. There is no valid experimental proof for this, however, and we must attribute any good results from these drugs, as in the case of colchicum, to other actions, either in facilitating uric acid elimination or as analgesics.

The discussion of any metabolic disease must allow a prominent place for the possibility of a specific therapy. And so in purin disorders, we must consider whether there may be some means of striking directly at the root of the whole purin pathology. On the hypothesis of von Noorden, that uric acid in gout circulates in some abnormal form or combination which is less easily excreted than normally, and remembering the probability that uric acid is responsible in some way for the toxemia of gout, the search for a specific remedy narrows itself to some means of restoring the excretability of uric acid. In trying to find some agent to accomplish this, one naturally turns first to the source of uric acid, the nucleic acids. These vary somewhat, according to the organ from which they are derived, but their general properties are quite similar. They have the property of preventing the precipitation of uric acid *in vitro*, in acid solution. And there is a possibility that uric acid circulates in the blood as a nucleic acid combination. Seo[11] found that one molecule of nucleic acid would combine in some way with two molecules of uric acid *in vitro*. He cites a series of animal experiments showing that uric acid is excreted faster in this combination than when injected as such.

Minkowski[12] suggests that a nucleic acid from which all the purin content had been split off would fulfil the conditions. Such a body was believed to exist in nucleotin-phosphoric acid, or thyminic acid. But it is impossible to remove the entire purin content from nucleic acid without disrupting the nucleic nucleus, and thyminic acid appears to be not a definite compound, but a mixture of several bodies. Bendix and Rücker[13] have conducted investigations with what was supposedly a purin-free thyminic acid. They found a largely increased uric acid excretion, and in a case of gout believed that the tophi showed a decrease in size. But according to Minkowski this thyminic acid contained a certain quantity of purin which might have accounted for the increased uric acid elimination.

In 1905, and again in 1908, articles appeared in the London *Lancet* by Fenner detailing remarkable results attained in the treatment of gout by the use of a thyminic acid preparation, known as "solurol." Unfortunately his clinical results were not controlled by chemical analyses. We have secured a quantity of this substance and studied its effects. According to the manufacturer, solurol is purin-free, and corresponds to a formula $C_{16}H_{25}N_3P_2O_{12}$, which would give a nitrogen content of 8.1 per cent. Our analysis gave 4.57 per cent. total nitrogen, of which nearly one-third, or 1.75 per cent., was purin nitrogen. The results we obtained with its use are given in Tables 2 to 6.

We have been unable so far to study its effects in a case of pure gout, but in the case of mixed gout and nephritis no increase, but a decrease, in uric acid excretion was noted. It is only fair to add that the manufacturers state that solurol has no effect on uric acid metabolism in non-gouty individuals, a statement with which our results fully agree.

In concluding this interesting phase of specific therapy we can only say that while no very tangible therapeutic results have as yet been attained, future work may develop a very definite line of treatment.

Finally, with regard to specific therapy, the effects of radium are to be considered. Gudzent,[14] whose work on the isomerism of uric acid salts has already been cited, assigns to radium the rôle of a reversible ferment and has shown that under its influence the stable and less soluble urate may be transformed back into the more soluble form. His results have been confirmed by Bechhold and Ziegler,[15] and it seems established that radium emanations may hinder the deposition of urates in the tissues, and favor their elimination by the kidney. Corroborative of this is the finding that the waters of certain mineral springs, such as Baden-Baden, are radioactive, and that treatment with such waters[16] brings about an increase in the elimination of uric acid. Literature is gradually accumulating on this subject, and although there is at present a lack of accurate experimental work, future investigations offer much promise.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. ARNOLD AND LARRABEE AND REED AND WALLACE

Dr. Theodore G. Davis, Los Angeles: I wish to suggest the pathology of gout in this connection. Uric acid has a distinct circuit in the body. The affected cells in the kidneys do not eliminate. To me the pathology of pure gout in the joints is an infection which reduces or splits the uric acid from its combination which is soluble and precipitates an insoluble urate. That has been my view of gout for a long time.

Dr. L. Duncan Bulkley, New York: The diet is of extreme importance. Not long ago we continued giving white meats, chicken, etc., in these various conditions, and it is relatively recently that we have found that we could not give even sweetbread. Analysis now shows that these various substances, which we have heretofore allowed, are as injurious as red meat. Many patients come to me who have been eating sweetbreads, thinking them harmless, and they were simply piling up the nitrogen products which lead to the purin disorders. I think all this modern study helps us greatly along dietary lines. I mentioned yesterday a certain diet which I find of much practical value. I made a number of purin studies some two or three years ago, but pressure of work was too great to permit of my long giving the necessary time to it. I find a diet of rice, bread and butter and water supplies quite sufficient calories to sustain the patient for an almost indefinite length of time, although I commonly give it for only a period of five days, and return to it later if necessary. I find that my gouty patients and my patients with imperfect uric acid elimination are so enormously benefited by a period of absolute nitrogen-free diet that I cannot help urging again the immense value of a strictly vegetarian diet in many conditions. I mentioned yesterday that I had myself tried the rice diet on three occasions with a remarkable result. I did not measure the purin elimination, I am sorry to say, but did establish the nitrogenous output. I analyzed my own urine immediately after taking absolutely nothing but bread, butter, rice and water for five days, and found that I excreted more uric acid than I had on the day before I began it. I have been suffering from uric acid for a long time. Thus, after five days of nitrogen-free diet there was actually a higher percentage of uric acid excreted than before, which was of course obtained from the tissue, thereby relieving the system of effete nitrogenous matter.

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[11] Seo: Arch. f. exper. Path. u. Pharm., lviii, p. 75.

[12] Minkowski: Nothnagels Spec. Path. u. Therap., lxxii.

[13] Bendix and Rücker: Quoted by Minkowski.

[14] Gudzent: Deutsch. med. Wchnschr., 1895, xxi, 921.

[15] Bechhold and Ziegler: Berl. klin. Wchnschr., 1910, p. 712.

[16] Aerztlich. Mitteil. aus und für Baden, 1909; also Wilke: Ztschr. f. phys. diat. Therap., 1909.

Dr. Lawrence Litchfield, Pittsburgh, Pa.: In connection with what has been said regarding the endogenous and exogenous purins, I would like to report the case of a patient who had been on a purin-free diet for several years, and who had distinct gouty symptoms following ten days after an operation for acute appendicitis.

Dr. H. D. Arnold, Boston: Practically, the question whether the body can handle 400 gm. of meat a day has very little importance. There are in 400 gm. of meat, somewhat depending on the kind of meat, perhaps 75 to 80 gm. of protein. I think 90 gm. of protein is an abundance for anybody, including the protein of eggs, bread, milk and our ordinary articles of food. Now, if we have a case in which we need to investigate the tolerance for purins, it seems to me we certainly have a case in which metabolism is distinctly disturbed, and we would naturally have our patient on a low protein diet. For scientific purposes, therefore, in order to establish a measure of tolerance of body for purins, the 400 gm. may be a very useful test; but if the laboratory investigators are to give us clinical men something really useful, the thing we are really interested in is the disturbance in purin metabolism that occurs with amounts of meat that we are likely to give such patients. This would be far below 400 gm.

PERNICIOUS VOMITING OF PREGNANCY *

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A subject involving so many questions, to be answered with our present incomplete knowledge of physiology, chemistry and pathology, must from necessity be far from solution. It is the object of this paper, from the recent work which has been done on the toxemias of pregnancy, to draw some conclusions as to where we stand in regard to the differentiation, treatment and prognosis of pernicious vomiting.

REPORT OF CASE

The following case of pernicious vomiting presents characteristics of the three theoretical types: reflex, neurotic and toxic, and is therefore presented:

A woman, 29 years old, when married one month became pregnant. At about the fourth week vomiting began, and became so severe that in the tenth week, her physician deemed it necessary to induce abortion. It is interesting that a portion of the placenta was retained and that vomiting continued until this came away, a few days later.

Five months afterward the patient became pregnant a second time, and in the fourth week the same type of vomiting returned. This was severe and had continued for two weeks when she came under my care. The patient was able to eat practically nothing and had lost considerably in weight. A twenty-four-hour specimen of urine taken at this time was 720 c.c. in amount, contained 7.53 gm. of nitrogen and an ammonia coefficient of 3.9 per cent. The patient was thoroughly discouraged and felt that, as before, only the termination of pregnancy could end the nausea. The nervous element was marked and for two days suggestion was tried with some success. A pelvic examination then made revealed a cyst, the size of a small orange, arising from the left ovary, and in front a two-months' pregnant uterus pushed upward so as to be palpable above the symphysis pubis.

The patient was seen by Dr. C. A. Powers of Denver in consultation, and two days later, having assured the patient that the vomiting would cease, I removed the cyst, a dermoid. This assurance was given for the mental effect. Following the operation, in spite of ether, there was for twenty-four hours, no nausea. On the following day, however, when a little albumin water was given the vomiting returned. Rectal feeding of dextrose solution was then started; the patient gradually improved, became encouraged, and little by little food was taken by the mouth.

Two weeks after the operation there was still some vomiting; the twenty-four-hour specimen of urine was 1,230 c.c. in amount, contained a trace of acetone and diacetic acid; 5.78 gm. of nitrogen, and an ammonia nitrogen ratio of 6.2 per cent. On this day a severe spell of nausea returned and the patient again completely discouraged, stated she could not continue. She was given to understand that under no consideration would abortion be induced and from that time there was practically no vomiting. The amount of food was increased and in ten days the acetone and diacetic acid had disappeared. The remainder of the pregnancy was normal, and a healthy child was born at term.

In this patient, the presence of a dermoid cyst associated with vomiting was only a coincidence. The neurotic element was an important factor, and though the ammonia coefficient was at all times low, and the urinary picture one which could be explained by starvation alone, I would consider this a case of vomiting of a mildly autotoxic nature.

BRIEF HISTORY

Williams,[1] in 1906, gave a complete review of the subject, vomiting of pregnancy, and suggested that the evidence seemed to justify the differentiation of three distinct types of pernicious vomiting, namely—reflex, neurotic and toxic.

The reflex type, first brought into prominence by Graily Hewitt,[2] who wrote extensively on the subject, is dependent on some abnormality in the generative tract for its origin. There are several reports of cases in which, after the removal of an ovarian cyst (Krassowsky[3]) or the correction of a retroverted pregnant uterus (Frank and Hunter[4]), vomiting has stopped immediately.

Kaltenbach[5] was the first to call general attention to the neurotic type, when, in 1890, he stated that practically all vomiting of pregnancy was due to a neurosis and was amenable to suggestion. While experimental evidence (Blumreich and Zuntz[6]) leaves little doubt that there is an increased nervous irritability during gestation, certain observers (Kaltenbach and Ahlfeld[7]) would attribute most of the disorders of pregnancy to this factor.

The autotoxic nature of vomiting was first definitely suggested by Lindemann.[8] In 1892 he reported the autopsy of a woman who had died with neuritis associated with vomiting. Both the mother and the child showed parenchymatous neuritis and cloudy swelling of liver and kidneys, whereby he concluded that only some

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* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

1. Williams: Pernicious Vomiting of Pregnancy, Bull. Johns Hopkins Hosp., 1906, xvii, 71.
2. Hewitt: The Vomiting of Pregnancy: Its Causes and Treatment, Tr. London Old Soc., 1871, xiii, 103; The So-Called Uncontrollable Vomiting of Pregnancy, ibid, 1885, xxvi, 273; The Severe Vomiting of Pregnancy, Tr. Am. Gynec. Soc., 1888, xiii, 218.
3. Krassowsky: Les vomissements incoercibles de la grossesse, Ann. de gynéc. et d'obst., 1894, xli, 37.
4. Frank and Hunter: Therap. Gaz., 1906, xxx, 372-7.
5. Kaltenbach: Ueber Hyperemesis gravidarum, Ztschr. f. Geburtsh. u. Gynäk., 1891, xxi, 200.
6. Blumreich and Zuntz: Exper. u. klin. Beitr. zur Path. d. Eklampsie, Arch. f. Gynäk., 1902, lxv, 737.
7. Ahlfeld: Hyperemesis gravidarum, Ptyalismus, Hysterie, Centralbl. f. Gynäk., 1891, xv, 329.
8. Lindemann: Zur path. Anat. d. unstillbaren Erbrechens d. Schwangeren, Centralbl. f. allg. Path. u. path. Anat., 1892, iii, 625.

circulating toxin could be at fault. Matthew Duncan[9] had previously called attention to the liver in hyperemesis and reported a case in which the changes were those of acute yellow atrophy. In 1885 Roughton[10] substantiated Duncan and made the statement that the liver in normal pregnancy often shows mild grades of the more extensive lesions seen in fatal disorders.

It was not, however, until 1901 that the hepatic lesions were brought into prominence. De Ribes and Saint Blaise[11] reported definite liver lesions in vomiting, and described the liver of a woman who had suffered throughout her pregnancy with hyperemesis, and died in the latter part with convulsions. The liver changes they considered identical with those of eclampsia, and drew the conclusions that the two were the result of a functional disturbance of the liver; that vomiting constituted a prelude to eclampsia and that the two had the same anatomic basis.

Frank,[12] in 1893, made the first study of the metabolism in vomiting. He found the amount of nitrogen in the urine greater than that taken in the food, so came to the conclusion, which had long been held, that death was due to starvation. In 1894 Davis[13] noted the low urea output in the urine, a point used by Saint Blaise[14] in his argument that vomiting is a prelude of eclampsia. Pierrehughes[15] and Meillère,[16] later, independently observed that though the elimination of urea was small, enough sodium hypobromite solution was decomposed to indicate the presence of a normal urea content. We now know that this would indicate the high ammonia coefficient recognized by Williams as being of prognostic importance.

The first definite observation clearly indicating the toxic nature of vomiting of pregnancy, accompanied by liver necrosis resembling acute yellow atrophy, and by changes in the urinary nitrogen, was made by Stone[17] in 1903. He reported the autopsy findings in a fatal case of vomiting, in which the liver showed the entire central portion of each lobule to have undergone complete necrosis, while the peripheral portion showed signs of fatty degeneration, with only a few cells remaining perfectly normal.

Ewing,[18] in 1904, confirmed these observations, and with a further series of cases came to the conclusion that "persistent vomiting, acute yellow atrophy, and eclampsia are closely related conditions of metabolic, and chiefly hepatic origin, and that chemical analysis of the urinary nitrogen gives indications in support of this view, and should be employed in diagnosis." Edgar,[19] the same year, advanced similar views. In 1906, Williams[1] with a report of cases gave his reasons for believing that pernicious vomiting and eclampsia are not manifestations of an identical toxemia, and in the classification of reflex, neurotic and toxic types, stated that the latter, by a study of the ammonia nitrogen ratio, could be diagnosed and the treatment ordered.

CONSIDERATION OF REFLEX, NEUROTIC AND TOXIC TYPES OF VOMITING

In consideration of these three types, reflex, neurotic and toxic, there is considerable clinical evidence of a reflex variety of vomiting. Many of the cases once considered of this nature are no longer, however, classed as such. While it is generally accepted that reflex vomiting exists, it is extremely rare, and authorities state that this form does not assume the character observed in the toxic variety. As regards the neurotic type, though it is universally agreed that the nervous system forms a part of an intrinsic picture, that it is alone responsible for the vomiting is improbable. Ordinarily, pernicious vomiting begins as the simple nausea and vomiting of pregnancy and becomes more and more severe. For a symptom to be so common as to appear in 50 per cent. of all cases, it is natural to consider a certain etiologic factor necessary, and the theories seem to point to this being an autotoxemia of some sort. Hofbauer[20] has asserted that the livers of all pregnant women show some fatty degeneration of the central portion of the lobule, a lesion which in fatal cases of pernicious vomiting is pronounced.

According to Ewing and Wolf[21] and others, the urine of practically all pregnant women shows some signs of perverted nitrogen metabolism, a high undetermined nitrogen, and an increased ammonia coefficient. Strauss[22] has reported cases in which, following suggestion, vomiting has ceased immediately, though the patient died hours later from the effect of the toxemia. If the vomiting were purely hysterical it would never end in death.

While it is possible that those cases in which the ammonia coefficient is low are a distinct non-toxic type, a high ammonia need not be present in all cases of toxic vomiting. Sufficient injury to the liver cells need not have been produced to reduce its ureagenic function. Patients in this class not showing high ammonia, and consequently less liver destruction, almost invariably recover. It is admitted here that the nervous control is an important element, but that the vomiting is augmented by a neurosis seems more logical than that it is a distinct cause for the condition.

THEORY OF ETIOLOGY

The theories of the etiology of the toxemias is a long story in itself, and will not be touched on further than to say that at the present time, mainly from the work of Weichardt[23] and Hofbauer, the belief is prevalent that there is a toxin of placental origin. Definite poisons have been sought for in the blood, fetus and placenta, but with no uniformity of results.

Since Fischl,[24] in 1884, reported a case of severe hyperemesis of pregnancy, cured by evacuation of a densely packed colon, intestinal putrefaction has been recognized as a factor or even a cause in this condition. It has been shown by experiment that a liver already the seat of functional disturbance is further injured by injection of indol. It is then probable that the absorption of these products of putrefaction is an *additional* element in toxic vomiting of pregnancy.

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[9] Duncan, Matthew: Hepatic Diseases in Gynecology and Obstetrics, London Med. Times and Gaz., 1879, i, 57.

[10] Roughton: Pernicious Vomiting of Pregnancy, Lancet, London, 1885, ii, 425.

[11] de Ribes (de Ribes and St. Blaise): Note sur un cas de vomissements incoercibles avec autopsie, Compt. rend. Soc. d'obst., de gynéc. et de pédiat. de Par., 1901, iii, 95-97.

[12] Frank: Ueber Hyperemesis gravidarum, Prag. med. Wchnschr., 1893, xviii, 11, 24; Ueber Hyperemesis gravidarum, Centralbl. f. Gynäk., 1898, pp. 448-449.

[13] Davis: Toxemia of Pregnancy, Am. Jour. Med. Sc., 1894, cvii, 147.

[14] Saint Blaise: Les autointoxications gravidignes, Ann. de gynéc. et d'obstét., 1898, i, 342, 372.

[15] Pierrehughes: Etude critique sur les vomissements incoercibles de la grossesse, Thèse de Paris, 1902.

[16] Meillère: Sur quelques cas de rétention des chlorures, Compt. rend. Soc. de biol., 1902, liv, 1135.

[17] Stone: Toxemia of Pregnancy, Am. Gynec. Jour., 1903, iii, 518; New York Med. Jour., 1905, lxviii, 295.

[18] Ewing: The Pathologic Anatomy and Pathogenesis of the Toxemia of Pregnancy, Am. Jour. Obst., 1905, li, 145.

[19] Edgar: Hepatic Lesions in Obstetric Practice, THE JOURNAL A. M. A., 1905, xliv, 1077.

[20] Hofbauer: Beiträge z. Aetiol. u. z. Klinik d. Graviditätstoxicosen, Ztschr. f. Geburtsh. u. Gynäk., 1907, lxi, 200.

[21] Ewing and Wolf: The Clinical Significance of the Urinary Nitrogen: II. The Metabolism in the Toxemia of Pregnancy, Am. Jour. Obst., xv, No. 3; Am. Jour. Med. Sc., cxxxi, 751.

[22] Strauss: Am. Jour. Obst., 1906, liii, 164.

[23] Weichardt: Exper. Studien. u. d. Eclampsie, Deutsch. med. Wchnschr., 1902, p. 224; Ueber Eiweissüberempfindlichkeit, Centralbl. f. Bakteriol., 1909, lii, 77.

[24] Fischl: Zur. Genese der Hyperemesis gravidarum, Prag. med. Wchnschr., 1884, ix, 222, 229.

Several articles have been written of late on the functions of the various glands which point directly or indirectly to their relation to the toxemias of pregnancy. Metabolic studies on the influence of the thyroid and parathyroid secretions show analogies which furnish much to explain the urinary changes observed in pernicious vomiting. The successful use of thyroid extract in hyperemesis of pregnancy by Siegmund.[25] and of epinephrin by Rebaudi,[26] are evidences of the therapeutic application of this idea.

There is abundant evidence of the close interrelationship of the ovaries with the thyroid gland (Goodall and Conn[27]). In view of our recent knowledge of hormonic influences, it may well be asked if pernicious vomiting of pregnancy is to be explained by the action of some hormone from fetal tissue, uterus, or ovary acting on those glands which govern metabolism, depressing or stimulating them to pathologic activity.[28] The toxemia of menstruation, which, as shown by Keiffer,[29] exhibits the same clinical phenomena and urinary changes observed in the toxemias of pregnancy, seems in accord with such an hormonic relation.

Accompanying the removal of the parathyroid there is an increase of ammonia in the blood. Carlson and Jacobson[30] find that the ammonia-destroying power of the liver is reduced as much as 30 per cent. after parathyroidectomy in animals, and this reduction they attribute principally to loss of liver function rather than to acidosis. Underhill and Saiki[31] demonstrated that the removal of the thyroid and parathyroid was accompanied by an increase of ammonia in the urine even beyond what is observed in starving animals. The loss of calcium noted by MacCallum and Voegtlin[32] following parathyroidectomy is in line with the observations of Mitchell,[33] Drennan[34] and others, who would explain the toxemias by this factor.

Histologic variations in the thyroid, parathyroid and suprarenal glands have been noted during gestation by different observers, but the results of their observations have not been constant. Investigation concerning the function of these organs, while too recent to permit of positive statements, promises much in solution of the toxemia of pregnancy.

CONSIDERATION OF URINARY CHANGES

Since Hahn, Pawlow, Massen, Nenchi[35] and others showed that accompanying the establishment of an Eck fistula, there is an increase of ammonia and a decrease in the amount of urea in the urine; the dependence of urinary changes on liver function has been generally accepted. This belief has been sustained by later investigation which shows that the portal blood contains about four times the amount of ammonia salts found in arterial blood. Accordingly, in pernicious vomiting the high undetermined nitrogen, and the high ammonia without acetone derivatives, are thought to indicate desamidization dependent on liver injury.

That the perversion of urinary nitrogen in toxic vomiting is dependent on some additional factor other than liver injury alone is probable, from the results of metabolic studies in artificially produced hepatitis. After considerable destruction of liver tissue with hemolytic serum, Pearce and Jackson[36] found little urinary change. The liver lesion in hyperemesis is practically identical with that of chloroform poisoning, yet in the latter condition when there was extensive degeneration, Howland and Richards[37] observed a high total nitrogen, a very slight increase in the percentage of ammonia, and undetermined nitrogen.

From what has been said of the apparent relation of the several glands to the toxemia of pregnancy, and their influence on proteid metabolism, it is possible that their activity is the additional factor determining the nitrogen partition in pernicious vomiting.

In a recent article, Underhill and Rand[38] have stated that the urine in vomiting of pregnancy shows no significant change so long as the patient is able to retain a sufficient amount of nourishment; that, in fact the whole picture may be accounted for by inanition alone. While it is generally admitted that starvation has undoubted influence on nitrogen partition, because of the apparent significance of urinary interpretations, their criticism, if founded, is of practical importance.

Concerning the presence of leucin and thyrosin, Underhill and Rand state that the figures used by Stone to represent the undetermined nitrogen are so low that it is difficult to see how these substances could be present in sufficient quantities to crystallize; that the lead method of determining them is inaccurate; that they were not found in the cases reported by Williams, or in their own series, and that until further evidence, more convincing, is offered, their presence cannot be said to be established.

They believe that the undetermined nitrogen, emphasized by Ewing and Wolf, does not necessarily indicate deficient desamidization. A portion of the creatin and hippuric acid have not been included in this factor, and the employment of the Pfaundler method has been found to be unreliable. The existence of this perversion, they state, is apparent rather than real, since too great reliance has been placed on so-called normal ratios without due consideration of normal variations.

These same observers state further that little reliance can be placed on percentage values in the determination of whether a urine is normal. Williams' theory, that when the ammonia reaches 10 to 15 per cent. of the total nitrogen, the patient is in grave danger, cannot be accepted as a diagnostic measure. Its employment as a working hypothesis in treatment will inevitably lead to erroneous conclusions.

In a recent article this inanition theory has been disputed by Ewing,[39] who states that "neither the clinical symptoms, nor the pathologic anatomy, nor yet the urinary chemistry are those of pure starvation. Starvation is not marked by persistent vomiting, pruritus, salivation, jaundice, maniacal delirium, or a fatal course in ten days to two weeks. The organs in starvation show simple atrophy of liver cords, granular degeneration, and focal necrosis (the work of Schulz[40] on fasting dogs, and Bianchi[41] with rabbits and mice), not the extensive degeneration seen in the toxemia of pregnancy. The urinary signs of starvation and toxemia may be similar, but the clinical significance of these signs is entirely different. The high ammonia in the urine of fasters means the consumption of tissue proteins and fats, in the absence of carbohydrates. In toxemia this ammonia ratio indicates that the patient is incapable of digesting, absorbing, and probably of burning the proteins, fats and carbohydrates consumed."

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[25] Siegmund: Zentralbl. f. Gynäk., 1910, No. 42.

[26] Rebandi: Zentralbl. f. Gynäk., 1909, No. 44.

[27] Goodall and Conn: Relation of the Thyroid Gland to the Female Generative Organs, Surg., Gynec. and Obst., May, 1911.

[28] An increase in the ammonia and amino-acid nitrogen percentage is present in the urine of the normal pregnant woman (Hofbauer) when but a slight liver lesion exists; if, as in chloroform poisoning, a similar but extensive process does not produce this urinary change, something besides the hepatitis must be found to explain the picture. From the analogies produced in the urinary nitrogen by hypothyro-parathyroidism, and the apparent relation of these glands to pregnancy and toxemias, it seems that such an idea of a derangement of hormonic relationship should be entertained.

[29] Keiffer: La menstruation dans ses rapports avec la pathologie gén., Jour. Obstétrique, 1897, ii, 289.

[30] Carlson and Jacobson: Proc. Soc. Exper. Biol. and Med., 1909, i.

[31] Underhill and Saiki: Jour. Biol. Chem., October, 1908.

[32] MacCallum and Voegtlin: The Relation of the Parathyroid to Calcium Metabolism, Bull. Johns Hopkins Hosp., 1908, xix, 91.

[33] Mitchell: Med. Rec., New York, Nov. 19, 1910.

[34] Drennan: Am. Jour. Obst., April, 1911, p. 653.

[35] Hahn, Pawlow, Massen, Nenchi: Arch. f. exper. Path. u. Pharmakol., 1893, xxxii, 161.

[36] Pearce and Jackson: Experimental Liver Necrosis, Jour. Exper. Med., 1907, ix, 552.

[37] Howland and Richards: An Experimental Study of the Metabolism and Pathology of Delayed Chloroform Poisoning, Jour. Exper. Med., 1909, xi, No. 2.

[38] Underhill and Rand: The Peculiarities of Nitrogenous Metabolism in Pernicious Vomiting of Pregnancy, Arch. Int. Med., January, 1910, v, 61.

[39] Ewing: The Pathogenesis of the Toxemia of Pregnancy, Am. Jour. Med. Sc., June, 1910.

The high rest nitrogen he has found a very significant feature of the urinary change in toxemia. Though the increase may be missing when the ammonia is high, it is often the only noticeable change. In many cases when the patient became free from symptoms, the high undetermined nitrogen dropped to a comparatively low figure. The validity of the assumption that Folin's[42] variations are those occurring in health, Ewing believes may be questioned. He and Wolf have noted that with an individual on a mixed diet, when the rest nitrogen reaches 1 gm., or 10 to 15 per cent., certain symptoms followed.

Regarding the high ammonia, in a personal communication, Williams says:

> There is no doubt that in a certain number of cases, inanition alone will cause a marked rise in the ammonia coefficient, but I do not consider that this is always the case. I know of several in my own experience, where the ammonia coefficient began to fall immediately after the termination of pregnancy, even though starvation continued for several days longer. On the other hand, the significance of ammonia is not so clear. I have recently seen several cases with recovery in which the coefficient had reached 20 per cent. I therefore am inclined to regard it more as a danger-signal than as an indication for immediate interference. If the symptoms do not promptly improve under treatment I consider that it offers a definite indication for the termination of pregnancy.

INDICATION FOR TERMINATION OF PREGNANCY

When little or no food has been taken, as in vomiting of pregnancy, it is impossible that starvation is not a factor. The carbohydrate supply is withdrawn, the fats and tissue proteins utilized, and a certain amount of the ammonia in the urine is due to combination with acetone bodies which have developed.

Underhill and Rand, and others, have tried dextrose solution by bowel with the idea of eliminating the part played by starvation. In this experiment certain patients have improved, while in others, in spite of dextrose, the toxemia and ammonia have increased. Theoretically, provided the sugar is absorbed, the ammonia due to acetone bodies should be overcome, and the high ammonia, which remains, must have its origin from some other source. While it is suggested that combination with other acids (lactic acid, Underhill and Rand) may cause the high ammonia, there is little evidence for this assumption. The conclusion follows that this persistent high ammonia is due to the diminished urea-forming function of the liver. It seems justified, therefore, in the present state of our knowledge, when high ammonia persists, in spite of dextrose solution by bowel, to use this test as an indication for the termination of pregnancy.

Falk and Hesky[43] have shown that in pregnancy the ureagenic and glycogenic functions seem to run parallel. With evidence of perversion of proteid metabolism levulosuria is easily produced. In several cases of toxic hyperemesis, Lequeux[44] has tested the assimilation for sugar and found it materially lowered. Because it parallels the general condition so closely, he is convinced that the glycogenic power is the most reliable index of the hepatic condition. The patient is given from 20 to 50 gm. of cane-sugar and his experience has shown that when the power of assimilation is below 1 gm. per kilogram of body weight, the prognosis is grave and the pregnancy should be terminated at once.

The evidence of impaired glycogenic function, then, is further proof of the measure of liver destruction and, together with the high ammonia test, seems to constitute a fairly sound indication for obstetric interference.

RELATION OF PERNICIOUS VOMITING, ACUTE YELLOW ATROPHY AND ECLAMPSIA TO ONE ANOTHER

Though there are certain differences, that acute yellow atrophy and pernicious vomiting are manifestations of a similar toxic process is a logical conclusion. They arise under similar conditions, in pregnancy, pursue much the same course, the anatomic lesions are similar, and the chemistry of the urine in the two is practically identical. Ewing states that intermediate cases, between the typical forms, both clinical and anatomic, are occasionally observed. He suggests that the more widespread complete liver destruction in acute yellow atrophy may be explained by the solvent action of extravasated bile and that polycholia from some specific form of intestinal putrefaction may cause the more intense jaundice.

One is not so easily persuaded, however, that pernicious vomiting and eclampsia are closely related toxic conditions. Clinically, hyperemesis is associated with a toxin of emetic properties, shows hypotension, occurs almost always in the early months, and is rarely accompanied by convulsions. Eclampsia, on the other hand, shows hypertension, with rare exception occurs late in pregnancy, and is practically always attended by convulsions.

No specific poison has been isolated in either disease, and as identical symptoms may occur with different pathologic conditions, our opinion must be based on histologic differences, and the chemical examination of the urine. Since Jürgens,[45] and later Schmorl,[46] described the liver in eclampsia, the picture has been considered pathognomonic of the disease, and as yet we know of nothing else which produces it. The lesion is essentially a thrombosis of the capillaries, with hemorrhages, and degeneration of the cells at the periphery of the lobule. In pernicious vomiting, the pathology is a fatty degeneration and necrosis of the cells at the center, extending toward the periphery. Based on the work of Opie,[47] calling attention to the importance of zonal necrosis of the liver lobule, the histologic pictures are distinctly different, and dependent on separate changes for their origin.

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[40] Schulz: Arch. f. d. ges. Physiol., 1899, lxxvi, 379.

[41] Bianchi: Leber- und Nierenzellen wahrend d. Verhungerung, Frankfurter, Ztschr. f. Path., 1909, iii, 723.

[42] Folin: Laws Governing the Chemical Composition of the Urine, Am. Jour. Physiol., xiii, No. 1, p. 66.

[43] Falk and Hesky: Ztschr. f. klin. Med., 1910, lxxi, 261.

[44] Lequeux: Recherches sur le pouvoir glycolytique chez la femme enceinte de vomissements incoercibles, Obstétrique, May, lii, New Series No. 5, pp. 35-560.

[45] Jürgens: Fettemboli u. Metastase von Leberzellen bei Eklampsie, etc., Berl. klin. Wchnschr., 1886, xxiii, 519.

[46] Schmorl: Path. anat. Untersuchungen über Puerperal-Eklampsie, Leipzig, 1893; Zur Lehre von der Eklampsie, Arch. f. Gynäk., 1902, lxv, 504.

[47] Opie: Zonal Necrosis of the Liver, Jour. Med. Research, 1904, xii, 147.

Ewing has recently emphasized that eclampsia is not to be separated because of its peculiar hepatitis, and states the typical eclamptic liver is found only in rapidly fatal cases, and if the condition is prolonged, convulsions not pronounced, and jaundice is not present, that one is apt to find the hepatic lesion indistinguishable from that seen in some cases, which because of the absence of convulsions has been called acute yellow atrophy.

Here it seems, too much dependence has been placed on the appearance or non-appearance of a common symptom. Convulsions do occur in pernicious vomiting, and eclampsia without convulsions is a recognized condition (Esch,[48] Slemons[49]).

Dienst[50] believes that eclampsia is dependent on a combination of liver and kidney damage. But there is not infrequently degeneration of the renal epithelium in pernicious vomiting, and while in practically every case the kidney is injured in eclampsia, Olshausen,[51] Lusbarsch,[52] Goldberg,[53] Hughes and Carter,[54] and Schmorl have reported cases in which there was no demonstrable nephritis.

The examination of the urine rarely reveals albumin, casts and blood until the terminal stage of pernicious vomiting, while in preeclamptic toxemia, often, one of the first evidences of trouble is the appearance of albumin. The urinary nitrogen is quite similar in the two conditions, the nitrogen is low, especially in eclampsia, the urea decreased and the amino-acid, as observed by Ewing and Wolf, increased in both. Zweifel[55] has shown that the ammonia is high in eclampsia during the convulsions, but only for a short time following. The high ammonia coefficient usually present throughout the course of vomiting is of bad prognostic significance, while in eclampsia Williams[56] considers it a good sign.

In regard to the possible relationship between eclampsia and pernicious vomiting, Schmorl, Winter, Williams and others, on the basis of different liver lesions, hold they are entirely distinct processes. In direct contradiction to this opinion, Ewing, Dienst, Hofbauer, Strauss and many others explain away the zonal distribution of the liver lesions and maintain that there is but one toxemia of pregnancy.

Since the observations of Freund,[57] in 1882, and Lange,[58] in 1893, it has been generally acknowledged that there is a hypersecretion of the thyroid gland during pregnancy. The relation existing between the thyroid and metabolism led Nicholson[59] to believe that eclampsia might be due to thyroid insufficiency. Lately, Ward,[60] Foulkrod[61] and others have reported cases to substantiate further the relation of the thyroid and the toxemias.

A similar function has been ascribed to the parathyroid. Since 1906, Silvestri[62] has held the opinion, based on clinical and experimental evidence, that convulsions in general are due to hypocalcification of the brain, possibly due to hypoparathyroidism. Quest[63] has demonstrated a loss of lime during the last days of pregnancy, and in view of the observations along these lines it is possible that eclampsia and hyperemesis are accompanied by derangement of the glands of internal secretion, and it is their influence which explains the differences in the two conditions.

CONCLUSIONS

The characteristic vomiting of pregnancy, moderate or severe, is probably always of autotoxic origin. There is abundant evidence of the relation of certain glands of internal secretion (thyroid, parathyroid, adrenal) to the toxemias. The liver lesion alone does not explain the urinary picture, while metabolic studies on the influence of the thyroid and parathyroid glands, show analogies to explain the urinary changes. The importance of the neurotic element may be explained by the nervous influence on glandular activity.

On the assumption that the high ammonia nitrogen, after thorough administration of dextrose by enemata, is an indication of insufficient ureagenic function, it is urged that this test be given a trial in determining the indication for obstetric interference. To further substantiate the evidence of liver destruction, the glycogenic function may be determined by the experimental production of alimentary glycosuria using definite quantities of sugar.

The clinical picture and liver lesion are against the probability of eclampsia and pernicious vomiting being one toxic process. Whether the differences are to be explained by such additional factors as kidney involvement, loss of calcium or differences in the perversion of metabolism by glandular influences, remain to be proved.

When operative interference is indicated in the toxemias of pregnancy, chloroform is contra-indicated. The liver destruction following its use is heaping insult on injury. In view of the evidence of the relation of the thyroid, parathyroid and adrenal glands to the toxemias, a complete therapeutic trial of their extracts is urged.

ABSTRACT OF DISCUSSION

Dr. John Osborn Polak, Brooklyn: It is unfortunate that there has been any suggestion of the neurotic vomiting of pregnancy. In my experience the condition is either reflex or toxic. All of these so-called neurotic cases are mildly toxic, or suffer from an auto-intoxication rather than on account of an actual neurotic element. A strong neurotic element augments these conditions. The reflex conditions that we have found prominent factors in the vomiting of pregnancy are overdistention of the uterus and retroversion. In the undeveloped uterus, pregnant for the first time, with marked anteflexion, the woman will vomit and frequently abort. The next pregnancy will proceed without pernicious vomiting. Many of us are apt to let these toxic cases go too far. With the tests which Dr. Ingraham has given we should be in position to determine on a definite course of treatment in a week or ten days. It has been our rule to put these patients to bed, watch them, feed them with saline or sugar solution, lavage the stomach and note the urinary output and the hepatic output. If the vomiting persists after there is a total withholding of everything from the stomach and we find we have an increased nitrogen-coefficient, labor should be induced. I have seen two cases end fatally from unskilled inductions. These cases are toxic and chloroform should not be used. Furthermore, the toxemia renders the patient liable to sepsis and unless this procedure is carried out promptly and properly results are unsatisfactory. I have laid down a rule in these cases, that before the eighth week these wombs should be emptied with curet and forceps after a preliminary treatment to soften and shorten the cervix and render the evacuation easy. After the third month the best procedure is to make an incision of the anterior lip of the cervix and empty the uterus by the so-called vaginal Cesarean section. The more quickly we can empty this uterus, with the least trauma and by the correct surgical method, without leaving parts of the embryo within, the safer the patient is.

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[59] Nicholson: Case of Puerperal Eclampsia Treated by Large Doses of Thyroid Extract, Jour. Obst. and Gynec. Brit. Emp., 1904, v, 32-37.
[60] Ward: Surg., Gynec. and Obst., 1909, ix, 617.
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[63] Quest: Quoted by Silvestri.

Dr. T. Mitchell Burns, Denver: I have not had a very large experience with pernicious nausea and vomiting and recall only one case in which I had to induce abortion. In this case there was acute anteflexion. In all the other cases I have never failed to cure by prohibiting anything by the mouth—particularly water—and feeding by the bowel. Because of this I believe there is always a marked neurotic element present. It may not be the only cause but one can cure most of the patients by suggestion of some form or other.

Dr. C. Jeff. Miller, New Orleans: I have known gastric lavage to relieve almost instantly in some of the neurotic cases and have also found it extremely beneficial in some cases which showed unquestionable toxic features.

Dr. Walter T. Hasler, Lehi, Utah: There has been a question in my mind as to whether possibly the condition may come on as the result of extreme hunger—a toxic condition from that cause. I have had a few cases in which as the nausea persisted the patients continued to go without eating, so that the vomiting increased with the degree of hunger. When I insisted on the patients taking food at frequent intervals the vomiting ceased.

Dr. C. B. Darling, Boston: In view of what has been said in regard to the stomach-tube, it may be interesting to mention a case I had some years ago in which all sorts of things were tried for the vomiting which had persisted up to nearly the fourth month. Finally, the patient herself caught on to the scheme of drinking water when she got up in the mornings, sometimes two, eight or ten glassfuls of water until she vomited the whole mass. She was then without nausea during the rest of the day. She carried the pregnancy through with this copious autolavage.

Dr. F. T. Andrews, Chicago: I had a patient who had been in such a condition with three previous pregnancies that induced abortions had been necessary and were done before I saw the patient. She came to me to care for her in her fourth pregnancy. I was young and thought I could do it and finally I fell on this plan. I knew that women who went to Europe or other places on steamships took various remedies for seasickness and got on very well. I therefore had two of these remedies analyzed and found that they contained bromids and antipyrin. I prescribed these drugs and the patient went along very well. Instead of being confined to her bed as previously, she was up and about. Later on she developed large bromid ulcers. I told her those would clear up. I afterward learned that at the end of the eighth month she had given birth to an anencephalic monster. There had been an inflammation of the amnion due to the bromid and this was the result. I gave no more bromid.

Dr. G. R. Neff, Farmington, Iowa: In a case I once had in which the patient was reduced almost to a skeleton, and in which I had tried all the known remedies, I found salted almonds and salted peanuts taken occasionally enabled the stomach to retain food.

Dr. Edwin O. Palmer, Los Angeles: I recall a case I had a year ago of nausea and vomiting in the third or fourth month. After using all the usual methods in meeting the condition, including the three routes of elimination, and having emptied the uterus, the nausea continuing in spite of rectal feeding, a consultant advised the use of thin shaved bacon, fried crisp. This was the first food retained by the stomach and no further vomiting occurred.

Dr. J. L. Lamb, Watts, Cal.: About two months ago I had a case similar to the one just mentioned. There were symptoms of toxemia but the neurotic element was especially marked. I tried everything that I ever heard of or read, including "crisp fried sliced bacon," just recommended, and salted peanuts. Everything failing, I called a physician from Los Angeles in consultation, who advised producing an abortion, which was done, but the neurotic condition continued, with vomiting and stomach trouble, for a month or six weeks before recovery, due, as I believe, to a hysterical neurosis.

Dr. C. B. Ingraham, Denver: In regard to Dr. Polak's suggestion, that there is a reflex vomiting, I think there can be no doubt. Yet we have many retroversions in which there is no nausea and even twin pregnancies and hydramnios without pernicious vomiting. The neurotic element, while not a distinct cause, I think is an important adjunct. I would like to believe that pernicious vomiting is due to a derangement of hormonic equilibrium. While ideas are too vague to be in any way positive, there are many factors pointing to this possibility. Silvestri has relieved symptoms of hypoparathyroidism by extirpation of the ovaries. During pregnancy the hypertrophy of the ovary and presence of corpus luteum cells is evidence of stimulation from the fetal tissue. If the internal secretion from the corpus luteum is a depressor of parathyroid function, and the placenta (which from its structure must be considered an organ of internal secretion) can be shown to be a stimulator of ovarian secretion, this interrelation would be of great significance in pernicious vomiting of pregnancy.

CACODYLATE OF SODA IN THE TREATMENT OF RECURRING ERYTHEMA MULTIFORME (ERYTHEMA PERSTANS)

REPORT OF A CASE

WILLIAM CUTHBERTSON, M.D.
CHICAGO

Patient.—Miss P., a young woman aged 27, with good family history, presented herself suffering from recurring erythema multiforme which had afflicted her since childhood. It reappeared every year, reaching its greatest intensity during August and September, and then almost disappeared during the winter. The disease started with papules scattered over various portions of the body, being worse on the arms and legs, next on the buttocks, and lastly on the trunk. These papules would rapidly form vesicles and bullæ, then, breaking down, would coalesce in large patches, leaving a moist, ulcerated surface, which would finally dry up, leaving a brown stain. This process was accompanied by a most intense itching and burning, disturbing the sleep and impairing the general health.

Treatment and Course.—When I first saw her, Aug. 5, 1911, she had a small papular eruption on the arms, principally, with a few scattered spots over the body generally. I gave her an intramuscular injection of ¾ gr. of cacodylate of soda (P. D. & Co.'s ampoule), and told her to report on August 7, when she received another injection. As she lived about 30 miles from Chicago, she could come in only twice a week to receive treatment. She kept this up until Sept. 30, 1911, since which time she has had no further trouble. She went through her two worst months without any serious outbreak. On two occasions during September she missed her appointment by three days on one occasion and four on another. At both these times when she came to the office the eruption had reached the vesicular stage once and the bullous stage the second time. An injection immediately arrested the eruption, and it disappeared. She stated she had never been so free from the trouble since it first started as she had been since being under treatment, and that during the two worst months of her disease.

In view of the futile efforts at treatment hitherto accorded this skin lesion, it would seem that in cacodylate of soda we may have a valuable therapeutic agent. The arsenic acts essentially on the epidermal structures;

and whether the etiology of erythema multiforme lies in a trophic disturbance or some toxic irritation, the physiologic action of the cacodylate of soda remains the same.

From the failure of Fowler's solution of arsenic to affect the lesion favorably, and the success of the arsenic treatment in the form of cacodylate of soda injected intramuscularly, it would be reasonable to suppose that Fowler's solution undergoes some chemical change in the stomach, while the cacodylate is absorbed directly into the blood-current.

I received a letter from the patient on Oct. 30, 1911, saying that she was still free from the eruption.

From my experience in this case I would commend cacodylate of soda for trial in all cases of erythema, more especially of the angioneurotic type.

122 South Michigan Boulevard.

OBSTETRIC EXPERIENCES AMONG THE AMERICAN INDIANS

F. SHOEMAKER, M.D.
Special Physician, U. S. Indian Service
DENVER

The generally accepted opinion that obstetrics among the American Indian women is always a simple matter is, I think, hardly a true concention of the subject, as shown by the several cases cited below. The majority of labors are, of course, conducted without trained medical care, but the women nearly always have the assistance of native midwives, and it is now growing daily more common for them to call on the nearest white physician for aid.

I have prepared brief notes on a few cases which have come under my observation during a residence of several years among the Indians of southwestern Oklahoma, and which may prove of interest.

CASE 1.—A primipara, aged 16, only a short time out of one of the government schools on the reservation, was attended by an old woman who enjoyed an enviable reputation among her people as a midwife. The patient came under my care a few days after she had been relieved of a dead fetus and presented a pitiable condition. The placenta remained within the uterus, a putrid, decomposing mass; there was a rise in temperature, a burn of the third degree covered almost the whole of the abdomen, an area 8 or 10 inches in diameter; this had been produced by a hot, flat stone placed there by the midwife in the hope of stimulating uterine contractions. The perineum was somewhat torn, though not badly, and there was also a urethrovaginal fistula, through which the urine constantly dribbled and kept up a foul, urinous odor. After the uterus had been emptied and washed out, the patient was removed to the hospital at the Fort Sill Military Post, where, with the assistance of Assistant Surgeon Cloud, she was operated on for the urethrovaginal fistula. The first operation not proving a complete success, a second one was performed at a later date. The patient remained under my care for several weeks, the incontinence and abdominal burn both proving to be very persistent and troublesome, but finally made a complete recovery and has since borne children.

CASE 2.—The patient was a young woman, the mother of three children, fairly well educated and the wife of one of the most prominent and enlightened of the younger members of the Kiowa tribe. Her case appeared to be progressing normally when, about the end of the seventh month, I was hurriedly sent for; she was about to be confined. Her labor lasted several hours, when she was delivered of a fetus that appeared to have been dead for some time. The most interesting feature of this case was the condition of the placenta, which was much atrophied, small, quite hard and on section was found to be granular and of a whitish color. It had undoubtedly undergone calcareous degeneration, which, I find, on referring to the literature, is rather an uncommon condition. There were no evidences of either syphilis or tuberculosis.

CASE 3.—A full-blood Indian woman was brought to my office from a long distance in the country on the third day after her confinement. On arrival she had a temperature of 105 F. and appeared very ill. After a rest she was brought to my office and prepared for operation. The uterus was carefully and thoroughly evacuated of its contents by means of a rather large, dull curet, followed by a thorough irrigation with sterile normal salt solution. Her temperature came down promptly after this, showing it to be a case of localized infection only. She was kept under observation for several days, the case soon ending in complete recovery. This woman was confined without medical care and surrounded, no doubt, by the most insanitary conditions possible for such cases, which resulted in a severe infection. The case is somewhat unusual on account of the curettement, without accident, so early post partum.

CASE 4.—This case was one of multiple pregnancy. The patient, also a full-blood Indian woman, was quite well advanced in age and the mother of several children. I was not called until she had been in labor four days. When I arrived, which was early in the day, I found the patient kneeling on the floor of her tent (it having been erected for the occasion near her house) with her hands grasping an upright pole in front of her that had been driven securely into the ground and fastened to the top of the tent. On examination I found one of the heads presenting within reach of the examining finger. She was given several rather large doses of quinin sulphate at regular intervals, and strychnin hypodermically, and by afternoon she was delivered of two healthy though somewhat undersized babies. She passed through her puerperium successfully. This woman seemed to be unable to complete her labor without assistance.

I might mention other cases of a similar nature, but those above recorded will suffice to show that the Indian woman, like her white sister, is frequently subject to serious accidents and complications attending the function of parturition.

ANEURYSM OF THE PALMAR ARCH

DAVID B. ROBINSON, M.D.
KANSAS CITY, MO.

The following case may prove to be of interest because of its extreme rarity. In looking up the literature on the subject, as far as I have been able to find, there are no similar cases on record.

History.—T. D., a switchman, aged 35, entered the Swedish Hospital, Sept. 2, 1911, complaining of dull pain in the palm of the hand, which was increased by pressure and radiated toward the fingers. His past history was negative, with the exception of a possible history of syphilis fifteen years previously. He had always been in railroad employ since he was 14 years of age, but had trained for prize-fights on the side, and had been in several professional fights.

In May, 1911, he hit the angle cock of an air hose, while trying to shut it off, with the palm of his right hand. His hand pained him considerably at this time, and the pain continued off and on for several months. In June, one month later, he noticed that a small tumor had developed in the palm of the hand; it could be moved very easily and throbbed after extra exertion. This tumor continued to enlarge for the next few months, until it was the size of a hickory-nut. His hand would be swollen after a day's work and the pain steadily increased. An examination showed a small tumor lying deep in the palm of the hand. No pulsation was perceptible.

Operation.—Sept. 2, 1911, the patient was given ether and a tourniquet applied at the wrist. A curved linear incision was made in the palm of the hand and the small tumor was found at the center of the deep palmar arch. On loosening up the tourniquet the tumor could be seen to pulsate plainly, and to increase to more than twice its size in the collapsed state. It was an aneurysm with a small pedicle, which was easily ligated, and the whole sac removed.

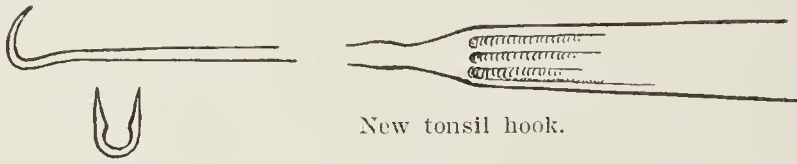
The patient made an uneventful recovery, and now has no difficulty at all in using this hand.

A NEW TONSIL HOOK

L. F. LONG, M.D.
ZANESVILLE, O.

I have devised a new tonsil hook which seems to me an improvement over any that I have used. Its advantages are the following:

A snare can be slipped on or off the tonsil without changing the hold on the tonsil after the hook is once placed.



New tonsil hook.

The hook, once placed, will stay in place and not drop out when pressure is relaxed, as the slight thickening on the lower two-thirds of the inner surface of the prongs holds it in place.

601 Market Street.

KNEE-JOINT AMPUTATIONS

REPORT OF A NEW METHOD

CHARLES EATON PHILLIPS, M.D.
ANCON, CANAL ZONE

To overcome the disadvantages of the thigh amputation, and to combine the good points and disadvantages of disarticulation with those of the osteoplastic operation, I have devised the following operation:

An oval anterior and posterior flap are turned up, the former line of incision extending from the lower portion of the internal condyle downward, and anterior as far as the tuberosity of the tibia. The patella tendon is cut without dissecting the skin from the patella and also leaving a portion of the patella tendon attached to the patella. The posterior flap is cut off approximately equal length or a little longer, if possible. The hamstring muscles are cut long. Disarticulation is then completed by cutting the remaining structures. Vessels are ligated, nerves pulled down and cut short, and allowed to retract.

The anterior flap is next turned up and the posterior surface of the patella sawed off. This is easily done by grasping the patella tendon by a pair of strong holding forceps when the patella can be sawed without difficulty, care being taken to remove as small a part of the patella as possible, so as to preserve nearly its original thickness.

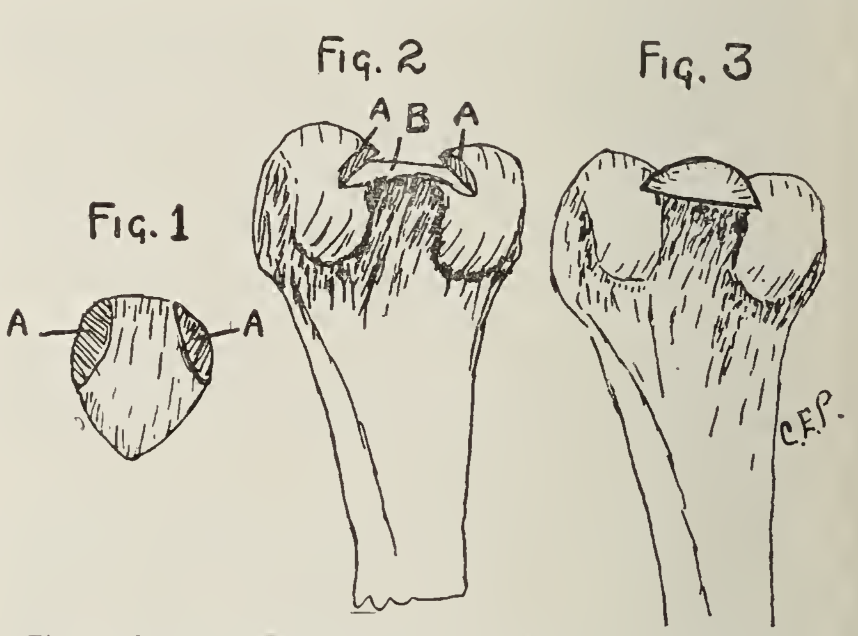
Next, a small piece is sawed off each side (Fig. 1 A A) in such a manner as will leave the patella narrower toward the upper end, or quadriceps attachment, and also narrowed toward the anterior surface.

If it has been possible to preserve sufficient skin flaps to cover the stump, the next step is to saw into each side of the intercondyloid notch (Fig. 2 A A) in such a manner that, when the piece of bone has been removed by means of a mallet and chisel (Fig. 2 B), there is left a depression, or modified intercondyloid notch, which is broader at the bottom and also toward the popliteal space, or, in other words, narrower at the end of the bone and also toward the anterior surface. The bevel of the notch is made to conform as nearly as possible to the bevel of the patella, but as there is of necessity a slight error, our aim should be to make the bevel of the patella greater, or that of the notch less, so as to insure good apposition when the patella is fitted into position.

The patella is next grasped by a pair of strong bone-holding forceps and drawn down forcibly until it slips into the place prepared for it and dovetails into it (Fig. 3). The greater the muscular pull, the more firmly it holds its place.

Next, the hamstring muscles are sutured to the patella tendon. The skin is sutured, a small drain inserted and the leg put up in dressing. It will be found that the forcible drawing down of the patella brings the line of skin suture well to the popliteal space and away from all pressure.

If, however, it is impossible or inexpedient to save enough skin to cover the stump without too great tension —and this can be determined by grasping and drawing the patella down before anything has been done toward preparing the notch—equally good results may be obtained by sawing through the condyles and then cutting out a notch in the sawn condyles so that the patella will dovetail into it as before. Nearly 2 inches may be gained in this way without sacrificing any of the advantages of the operation.



Figs. 1, 2 and 3.—Diagrams of patella and joint, illustrating new method of knee-joint amputation.

In either case we get a stump that is very satisfactory. The patella forms the center of it, and laterally the two condyles share their portion of the weight in such a manner that the normal distribution of weight, as in the flexed knee, is preserved.

The large bearing surface formed by the tough skin taken from the anterior aspect of the knee is able to take the full weight of the body without abrasion or discomfort.

Another advantage, which it shares in common with disarticulation, or amputations below the knee, is the enlargement furnished by the condyles, or even portions of the condyles. With the enlargement, an artificial leg can be adjusted so that it will not slip up and down when walking or sitting.

Still another advantage which this operation possesses is the short flap which is sufficient to cover the stump;

this gain is made by forcibly drawing down the patella. bringing with it the skin fascia and muscles, which, if allowed to retract, would fail to cover a stump several inches shorter.

A representative of one of the largest artificial limb manufactories in the country remarked, after careful examination of one of these amputations, that the stump was ideal for the fitting and wearing of an artificial leg, and that it was by far the best end-bearing stump he had ever seen, and urged its adoption in suitable cases, from a prosthetic standpoint.

The operation is not at all difficult and requires very little additional time. The first time I ever attempted the operation it took about a half hour with closure and dressing.

The limits of usefulness of this operation, as with any, are narrow. No one would sacrifice 1½ or 2 inches of tibia needlessly, but where it is impossible to save the knee, by this amputation all the benefits of a knee-bearing stump may be preserved.

Ancon Hospital.

CASE OF INTUSSUSCEPTION COMPLICATED BY VOLVULUS

C. S. LAWRENCE, M.D.
WINSTON-SALEM, N. C.

A careful search of the literature at my command has failed to reveal a case of intestinal obstruction in which the symptoms and pathologic findings coincide with the following case:

Aug. 21, 1911, I first saw Mr. B., white, aged 22, laborer. Family history was negative. Patient had had usual diseases of childhood. He had had attacks of severe pains in abdomen with nausea and vomiting at intervals of from one to six months for the past six years. Four years ago his appendix was removed, but this gave him no relief, and one of his attacks came on a few days after the operation. For the past six months these attacks have increased in frequency and severity.

Present Illness.—About 9 a. m. Aug. 20, 1911, while at breakfast, he was taken with one of his usual attacks of abdominal pain, he did not eat much breakfast, thinking the pain would pass off, as usual, but it grew worse. He became nauseated and vomited. A physician was called and gave morphin to relieve the pain, but it failed; chloroform was given, but as soon as the effect of the chloroform would wear off, the pain would come on again with great severity. An enema of soap and water was given with no result. The pain, vomiting and constipation continued all that day and the next until 10 p. m., when I saw him in consultation with Dr. V. M. Long. His condition was as follows: He was lying in bed, on his right side, thighs flexed on abdomen, anxious facial expression, pulse 110, temperature 101 F.; abdomen rigid, slightly distended in upper part. On palpation a mass could be felt below and slightly to the left of the umbilicus. On rectal examination the mass could be felt at the brim of the pelvis, but it was not in the rectum. The patient had had large quantities of castor oil during the day, and an enema in the evening, which was returned with a large quantity of blood, but no fecal matter or flatus. The patient had also vomited a dark fluid, which the father said smelled bad. He had voided a small amount of urine before I saw him.

Treatment.—Operation was decided on at once. Under ether anesthesia a median incision about three inches long, between the umbilicus and symphysis, was made. On opening the peritoneal cavity a large quantity of seropurulent fluid escaped. On passing the finger down to the brim of the pelvis a mass could be felt attached by what seemed to be a hard cord, the mass hanging over the pelvic brim. There were a few soft adhesions which were separated with the finger, and the mass delivered, together with several coils of distended ileum. On examination, the mass was found to be an iliac intussusception which had become twisted on its mesenteric axis. The involved intestine was very black, so that it was considered unsafe to leave it. The entire mass was resected and an end-to-end anastomosis made with the Murphy button, reinforced by silk Lembert sutures. Gauze drains were placed in the upper and lower ends of the incision. The patient left the table in about thirty minutes; pulse 160.

Postoperative History.—He received strychnin, gr. 1/20, and 700 c.c. normal salt solution under the skin while on the table. After being placed in bed morphin, gr. ¼, and atropin, gr. 1/150, was administered. One hour later the pulse was 140, respiration 34. The pulse gradually came down to 110 at 6 a. m., temperature 99 F. Both began to rise; morphin, gr. ¼, atropin, gr. 1/150, was given and proctolysis started. Patient passed gas. The stomach was distended and patient vomited a dark fluid. The stomach-tube was passed and a large quantity of gas and dark fluid mixed with oil was removed. The patient continued to improve from this time on, the stomach being washed at intervals of from six to eight hours for the first forty-eight hours. The bowels moved freely thirty-six hours after the operation. The patient voided urine freely and never had to be catheterized. Everything went smoothly until the fifth day when I dressed the wound and removed the drain from the upper part of the incision and placed in a fresh piece of gauze in a very small opening. In the afternoon the patient complained of pain in the abdomen and his temperature was found to be 103.2, pulse 120. On removal of the gauze a small quantity of purulent material was found. A small rubber tube was inserted and the temperature promptly returned to normal. When the dressings were removed from the abdominal wound sixteen days after operation they were completely saturated with a dark fluid, due to a fecal fistula discharging from the upper drainage tract. The small tube was removed; the fistula discharged profusely all day, but soon closed and by the third day there was not enough discharge to soil the dressing through more than four layers of gauze. On September 18 patient went home and was up and about the house; September 26 he passed the button. At present, September 28, he is about, looks well and feels well.

208 Masonic Temple.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

PROPAESIN—Propylis Aminobenzoas.—Propyl Aminobenzoate.—Paramidobenzoic Acid Propyl Ester.—Propaesin, $C_6H_4.NH_2COO(C_3H_7)$ 1:4, is the propyl ester of paraminobenzoic acid, $C_6H_4.NH_2.COOH$,1:4.

Propaesin is prepared by esterification of paraminobenzoic acid with propyl alcohol.

Propaesin is a fine, white or colorless, odorless, nearly tasteless powder, which produces numbness when placed on the tongue. Propaesin is very slightly soluble in water and is not readily wetted by this solvent. It is soluble in alcohol, benzene, chloroform and ether. Propaesin melts at 73° C. (163.4° F.).

When heated on platinum foil Propaesin burns without leaving any ash; when heated with an excess of potassium hydroxide test solution it melts before boiling, forming an oily layer. By boiling this mixture the melted Propaesin is saponified with the formation of propyl alcohol, which may be recognized by its odor. A clear, nearly colorless solution results, which, when neutralized with hydrochloric acid and cooled, gives a white precipitate of paraminobenzoic acid; the addition of a small quantity of ferric chloride test solution to the acidified solution gives a reddish brown color.

Actions and Uses.—Propacsin is a local anesthetic and analgesic, said to be stronger than ethyl aminobenzoate. It is astringent and is said to be practically non-toxic. It is said to be useful in the treatment of gastralgia, gastric ulcer and other painful diseases of the mouth, esophagus and stomach. Externally it is said to be useful to reduce the sensibility of the mucous membranes of the nose, ear and larynx and to produce local anesthesias. It is claimed to be of value in all painful wounds and ulcers of the mucous membranes and of the skin. It is said to be useful for relieving pain in dental operations.

Dosage.—0.25 to 0.5 Gm. (4 to 8 grains) per dose, 2 to 3 Gm. (30 to 45 grains) per day alone or mixed with sugar or other medicament or vehicle.

Externally it may be used in ointments of from 1 to 20 per cent.

Manufactured by Franz Fritsche & Co., Hamburg, Germany (Parmele Pharmacal Co., New York). U. S. patent. U. S. trademark No. 74,856.

LACTAMPOULE.—Lactampoule is a pure culture in ampoules, of the selected *Bacillus bulgaricus*, each ampoule containing about 12 Cc.

The bacilli are obtained by the usual bacteriologic method, the growth of the bacilli on modified Cohendy peptone-sugar-broth medium.

Actions and Uses.—Lactampoules are designed to afford a pure culture of the Bulgarian bacilli for the inoculation of milk or other culture medium, or for direct applicaton in the treatment of affections of the body cavities.

Dosage.—The ampoules must be kept in a cold place and are not guaranteed beyond the date stamped on the package.

Manufactured by Fairchild Bros. & Foster, New York. Not patented or trademarked.

BACILLARY MILK.—Bacillary milk is a sterilized fat-free milk fermented by the action of a pure culture of *Bacillus bulgaricus* containing over 2 per cent. of lactic acid.

Bacillary milk is said to contain the Bulgarian bacilli in pure culture and has the marked acidity characteristic of milk soured by the oriental milk-souring bacilli and is free from sliminess or bitterness. It is said that in a cold place it may be kept for a long time without impairment of its qualities.

Actions and Uses.—Bacillary milk is used as a means for the ingestion of the Bulgarian bacilli and for its lactic acid as well as for its nutritive value.

Dosage.—Where the acidity is distasteful the portion of the milk directed to be taken may be rendered palatable by mixture with milk or water or by addition of sugar. Bacillary milk is put up in glass bottles, each containing 1 pint and should be kept on ice.

Manufactured by Fairchild Bros. & Foster, New York. Not patented or trademarked.

DEXTRI-MALTOSE, Mead's.—Mead's Dextri-Maltose is said to contain approximately: maltose 52.0 per cent., dextrin 41.7 per cent., sodium chloride 2.0 per cent. and moisture 4.3 per cent.

It is prepared by the action of diastase on starch.

Mead's Dextri-Maltose is a pale yellowish-white, granular, odorless powder, having a faintly sweetish taste. It is somewhat deliquescent on exposure to the air. It is soluble in water.

If a few drops of iodine test solution be added to an aqueous solution of Mead's Dextri-Maltose (1 to 10) a reddish violet but not a blue color should be produced.

The maltose in Mead's Dextri-Maltose is determined by the Fehling volumetric method as described in Leach's "Food Inspection and Analysis," Ed. 2, p. 591.

Actions and Uses.—On the claim that maltose is more readily assimilated than other forms of sugar, Mead's Dextri-Maltose is proposed to supplement the carbohydrate deficiency of cows' milk. The nutritive value of 500 Gm. of dextri-maltose corresponds to approximately 1,850 calories. The same quantity of milk represents 360 calories.

Dosage.—It may be used in all milk mixtures in the same proportions—by weight—as sugar of milk—i. e., 1 ounce of Mead's Dextri-Maltose (2 tablespoonfuls) to a 20-ounce mixture.

Manufactured by Mead, Johnson & Co., Jersey City, N. J. Not patented or trademarked.

Therapeutics

PRESCRIPTION NONSENSE

The following criticisms are not intended to apply to a recent brief, but quite complete, paper on the treatment of gastric ulcer in which the prescriptions appeared. The general acceptance of the prescriptions of men of renown which were quoted by the author is, however, to be deplored. These prescriptions are neither advisable nor valuable. The same deplorable prescriptions were copied semi-editorially by another journal, the quotation not giving the valuable parts of the original paper.

The fact that a man is of great ability and of great reputation is no proof of his ability to write sensible prescriptions or to treat a disease or condition scientifically. Able practitioners are many times divided into two classes: those who are drug nihilists (and yet some of the worst mixtures are often used by them), and those who believe in the pharmacologic and chemical action of drugs and yet ridicule the art of good prescription-writing as beneath their dignity. Such men often write the most uncouth prescriptions and the most absurd combinations in order to get the desired action of one drug. There is a large number of practitioners who never analyze, but believe anything a man of renown says, and copy his prescriptions verbatim and repeatedly. Such prescriptions are perpetuated by authors, writers and editors. It is the object of this article to urge an analytical spirit of criticism of each and every prescription.

It is the educated physician who is driving the laity to seek drugless treatments to their frequently serious detriment and often hopeless neglect, because he will not endeavor to find a simple drug, administered in a pleasant manner that will help the patient's troublesome symptom without injuring some other part of him. Also, as the layman hates more and more to be "drugged," as he terms it, and dislikes multiple mixtures, and dislikes to pay for a large bottle of some proprietary mixture, he often neglects to seek scientific advice.

The following prescriptions are examples in point. Their authors are good men, some of them of world-wide reputation.

"To Reduce Acidity in Gastric Ulcers: Credited to Matthes of Cologne.

"℞	Gm. or c.c.	
Infusi radicis rhei................	150	℥ v
Sodii bicarbonatis	6	ʒ jss
Olei menthæ piperitæ..............	3	♏ xlv

Misce. S.: A teaspoonful twice daily."

Criticism.—1. An infusion of rhubarb root is too disagreeable to administer to anyone. In the next place, it could have no action whatsoever on gastric ulcer or gastric acidity. Its action is that of a bitter laxative.

2. Theoretically, oil of peppermint should not be administered in gastric ulcer, as the stimulation of a carminative can do nothing but cause the outpouring of more gastric juice, even if menthol directly applied to the ulcer might, in some instances, help it to heal.

3. The only object of this prescription, then, is the bicarbonate of soda, which would act chemically to temporarily diminish the gastric acidity, and might therefore stop pain.

4. It is utterly absurd to order such a prescription administered twice daily without specifying the time in relation to meals, to pain, or to any action of the bowels which might occur from the rhubarb.

Credited to Ewald

“℞

	Gm. or c.c.		
Magnesiæ ustæ			
Sodii carbonatis			
Potassii carbonatis, ãã	5		gr. lxxv
Pulveris radicis rhei	10		ʒ ijss
Sacchari lactis	25		ʒ vi

Misce. S.: Half a teaspoonful every hour.”

Criticism.—1. There is no difference of any importance in the action of sodium carbonate and potassium carbonate; therefore there is no object in using both.

2. Sodium carbonate is more or less irritant: sodium bicarbonate is hardly irritant at all. There is therefore no reason for using sodium carbonate in place of sodium bicarbonate.

3. Powdered rhubarb root is intensely disagreeable to take, and cannot help in reducing the acidity of gastric juice; in fact, any bitter will increase the outpouring of gastric juice. If a laxative is desired, it certainly should not be administered in this manner.

4. Any sugar, even sugar of milk, is better not given to a patient in whom one is attempting to reduce hyperacidity.

5. The only satisfactory action from this prescription must come from the heavy magnesia, but even its gentle alkaline action would be overcome by the combination in which it finds itself.

6. Half a teaspoonful of a powder containing rhubarb, administered every hour without a definite limit, certainly seems bad therapy.

The following three prescriptions are supposed not only to “reduce hyperacidity,” but also “to relieve pyloric spasm”:

Credited to Elsner

“℞

	Gm. or c.c.		
Extracti belladonnæ		1	gr. jss
Sodii bicarbonatis			
Magnesii phosphatis, ãã	10		ʒ ijss

Misce. S.: A teaspoonful three times a day.”

Criticism.—1. The extract of .belladonna should be the extract of the leaves. The official extract is a sticky mass. Powdered extract of belladonna is kept in stock by druggists, and would be used in this prescription. The only action of the belladonna is that of the atropin, and the action of atropin is to dry up secretion and dull the ends of the peripheral nerves so as to stop spasm. If such an activity was desired, it seems better to give a definite dose of atropin, or a definite dose, alone, of tincture of belladonna, rather than to surround an active drug of this character (and, by the way, the extract of belladonna may not always be of standard strength) with other drugs that may not allow it to be absorbed or to act until it gets well down in the intestine, or, on the other hand, may be absorbed very rapidly. In other words, a drug that is a poison should be given in such a manner that each dose positively represents a definite quantity of the drug. The combination ordered above would make the dose in each teaspoonful very indefinite.

2. Magnesium phosphate is not official. Its activity is very doubtful. There seems to be no good reason for expecting it to do any good in hyperacidity. It is exceedingly rarely used as a drug.

3. Therefore, the best action of this prescription for hyperacidity is the sodium bicarbonate, and it is better to give it alone, or perhaps with magnesia, and the atropin or belladonna should be given separately, as suggested above.

Credited to Trousseau

“℞

	Gm. or c.c.		
Extracti belladonnæ			
Foliorum belladonnæ, ãã	0	33	gr. v
Extracti gentianæ, q. s.			

Misce; Fiant pilulæ, No. xxx.

S.: One pill before breakfast. Increase slowly to five pills.”

Criticism.—1. Extract of belladonna, which is made of belladonna leaves, and then belladonna leaves, made up into pill form, is almost too absurd to need discussion. As above stated, the action of belladonna is atropin, and if belladonna is indicated, either atropin, or tincture of belladonna, or a fluidextract of belladonna is much the better treatment.

2. Extract of gentian is used here only as a menstruum or excipient. There certainly is no sense in taking an official extract of a drug and using it as a simple excipient for a pill mass. In other words, there is no action from the gentian that is desired, and gentian would have no action in pill form under any circumstances. Therefore, some other excipient selected by the druggist and left to the druggist’s decision is better than ordering extract of gentian.

3. The directions of “one pill before breakfast, and increase slowly to five pills” means that there is a desire to administer all of the atropin the patient will tolerate. It is so uncertain how much belladonna or how much atropin action will be obtained from the above pill that it is very careless prescribing. An active substance like belladonna should not be increased in dosage unless in a very soluble form.

Credited to Cohnheim

“℞

	Gm. or c.c.		
Tincturæ belladonnæ	5		gr. lxxv
Olei amygdalæ dulcis (olei amygdalæ expressi)	30		℥ i
Vitellum ovi unius			
Aquam destillatam ad	200		℥ vi, ʒ v

Misce; Fiat emulsum.

S.: Two teaspoonfuls three times a day.”

Criticism.—1. No active drug like belladonna should be administered in an emulsion. It is impossible to guarantee that each two teaspoonfuls, the dose, represents every other two teaspoonfuls throughout the mixture. As above stated, uncertain dosage of belladonna is inexcusable.

2. It is uncertain whether the author of this prescription desired to make an emulsion with the egg to administer the oil of sweet almonds, or whether he desired the two teaspoonfuls of egg stuff to give a raw egg treatment to the ulcer. At any rate, the oil of sweet almonds certainly is not a specific treatment for ulcer of the stomach, and the raw egg treatment of ulcer of the stomach is not furthered by this prescription.

3. The question might arise how long the yolk of this egg would remain fresh in this distilled water emulsion. In other words, this prescription is absolutely footless.

A SUGGESTION FOR HYPERACIDITY AND ULCER OF THE STOMACH

To further the objects aimed at by the above prescriptions atropin given alone, or tincture of belladonna given alone is good treatment.

To stop the pain of the ulcer and to overcome the hyperacidity temporarily, nothing is more simple or more effective than milk of magnesia (magma magnesiæ, N. F.), in one or two teaspoonful doses, administered in warm water.

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[*For other information see second page following reading matter*]

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THE CONSPIRACY OF SILENCE

One of the most powerful chapters in the Great American Fraud series was that entitled, "The 'Patent-Medicine' Conspiracy Against the Freedom of the Press,"[1] by Mr. Mark Sullivan. Therein it was shown that the twenty millions or more dollars spent annually by the "patent-medicine" manufacturers of the United States was expended not merely for what went into the newspapers as advertisements, but for what was kept out of the newspapers as news. Stated more baldly, the advertising contract was the price of silence. Nor was this a mere tacit understanding—a "gentlemen's agreement," so to speak—but a part of the advertising contract. As one contract read in part:

> "It is agreed that the J. C. Ayer Co., may cancel this contract, pro rata, . . . in case any matter otherwise detrimental to the J. C. Ayer Co's. interests is permitted to appear in the reading columns or elsewhere, in this paper."

Would the death of a child due to an overdose of Ayer's Cherry Pectoral be reported in a newspaper that advertised this product? Would the public be warned of the dangers of certain headache remedies by those newspapers that carried advertisements of these deadly medicaments? Hardly. And so a "conspiracy of silence" was maintained and even to-day a large number of newspapers are still so recreant to their trust to the people as to eliminate from all their news any reference that may directly or indirectly injure their advertisers' business. Fortunately for the public a number of weekly and monthly lay magazines have been outspoken in their denunciation of the "patent-medicine" evil and have thrown the light of publicity in the dark places of charlatanry and quackery. Their lead has been followed by some of the more progressive and enlightened newspapers and the work of education goes forward.

So much for the lay press. Exactly the same conditions exist in medical journalism as have obtained in lay journalism. Not altogether the same either. Possibly because the sums of money involved are not as large or for some other reason, the "silence clause," as such, has not, we believe, been brought into use in making advertising contracts with medical journals. But so far as the actual working of the matter is concerned it might as well have been. For although the fraud and chicanery connected with the so-called ethical proprietary business have been repeatedly exposed, practically none[2] of the self-styled independent medical journals have given their readers any information regarding the matter. In the medical field, then, the conspiracy of silence has been just as effective as in the non-medical—and the injury to the public probably almost as great.

The attitude taken by proprietary manufacturers toward free and unrestrained discussion of scientific therapeutics was well illustrated in the protest of the M. J. Breitenbach Company to The Journal of the American Medical Association. Briefly, the facts were these: In December, 1904, the government of Porto Rico published a report of its "Commission for the Study and Treatment of Anemia in Porto Rico." This splendid scientific work was commented on editorially in The Journal, in the course of which the following statement, based on the findings of the Porto Rico commission, was made:

> "The day of blind reliance on iron, quinin and tonics in general in the treatment of anemic conditions in tropical countries is past, never to return."

Surely a mild and conservative statement of scientific fact; but the M. J. Breitenbach Company thought otherwise. The company, which at that time was advertising its product, Pepto-Mangan, in The Journal, wrote as soon as the editorial just referred to appeared, protesting that the editorial sentiments were a direct slap at the company's product. The Breitenbach company further stated that it could not see any advantage in advertising in a journal that would editorially contradict the statements that appeared in its advertising pages. In a way, the company was right. It was inconsistent for The Journal, which was exposing mendacity, editorially, to accept the advertisement of a preparation that was sold under mendacious claims. This incident is recalled, however, merely to make evident the uselessness of expecting medical journals whose very existence — in some instances—practically depends on advertising contracts of proprietary manufacturers to tell the truth in their reading pages when such truth is against the interests of their advertisers.

The history of the propaganda against fraudulent proprietary medicines has proved the futility of expecting a free discussion of scientific therapeutics in any case in which proprietary interests are directly or indirectly involved. For example, the widely advertised Anasarcin was shown to be a secret nostrum of the insidious kind—one of those silly, simple mixtures—exploited under false and dangerous claims. These and other damaging facts were detailed at some length in THE JOURNAL, but so far as we know not a single independent medical journal gave its readers the benefit of this information. The Anasarcin Company is a heavy advertiser!

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[1] We have a few reprints of this chapter. As long as they last, one will be sent on receipt of a stamped addressed envelope.

[2] An exception should be made in this connection to the *Medical World* of Philadelphia. While this journal advertises some preparations that are open to criticism, it has not hesitated to copy our reports even when, in some instances, they reflected on its own advertisements. It should also be said that this criticism does not apply to two other independent journals, the *Cleveland Medical Journal* and the *Southern Medical Journal*, which accept advertisements of only such proprietaries as have been approved by the Council on Pharmacy and Chemistry.

Tyree's Antiseptic Powder was shown in THE JOURNAL to be essentially a mixture of zinc sulphate and boric acid, falsely labeled and sold under fraudulently mendacious claims. Was the medical profession given the benefit of this information by the medical press? No, indeed. Tyree advertised liberally and the medical journals were discreetly silent.

An examination of Campho-Phenique by the Council on Pharmacy and Chemistry showed that the product was sold under a fake formula and fraudulent claims and was marketed by a man who was making and selling such products as "Smith's Bile Beans," "Swain's All-Healing Ointment" and several other "patent medicines." Campho-Phenique was exposed in detail in THE JOURNAL—but the exposé was carefully ignored by the hundreds of medical journals that an over-trusting profession believes exist for its benefit. Campho-Phenique is advertised, and advertised extensively!

Phenalgin was long advertised (1) as a synthetic, (2) as requiring special skill in its preparation, (3) as having therapeutic values which it did not possess, and (4) as being non-toxic—four definite and inexcusable falsehoods. It was shown in THE JOURNAL to be a mere acetanilid mixture and the viciousness of its method of exploitation was more than once declared. Was this matter reprinted or abstracted in the so-called independent medical journals? Hardly; the makers of this headache cure spend many thousands in advertising!

Papine has long been sold to the medical profession as a peculiarly efficacious and valuable form of opium and as one that would not "create a habit." Examined by the Association's chemists it was reported to be morphin dissolved in a watery-alcoholic solution containing glycerin, flavored to imitate cherry and colored with cochineal. Did the medical press of the country enlighten its readers on this damnably vicious fraud? Not at all; were its half-page advertisements the price of silence?

Antikamnia, one of the most impudent frauds ever foisted on the medical profession, has been repeatedly exposed in THE JOURNAL. In this instance, the proposition was so rank, the fraud so evident, the deception so transparent that some of the more consistent journals threw out the Antikamnia advertisement. It is still carried, however, by more than fifty American medical journals, ranging from the New York *Medical Record* and the *Annals of Surgery* down. Naturally, the "conspiracy of silence" in favor of the Antikamnia fraud is still maintained.

And so we might go on, naming preparation after preparation that has been proved beyond the peradventure of a doubt to be fraudulent, worthless, dangerous, or all three, and against which the bulk of the medical press of this country has raised no protest, but, on the contrary has, by accepting their advertisements, tacitly endorsed and invested with the badge of presumed respectability. How much longer will the "conspiracy of silence" be maintained? Just so long as an easy-going profession tolerates medical journals whose owners are rendered aphasic by their advertising contracts.

POSITIVE WASSERMANN REACTION IN NON-SPECIFIC TUMORS OF THE CENTRAL NERVOUS SYSTEM

Recently several reports have appeared in the medical literature announcing positive Wassermann reactions in non-specific affections of the central nervous system, especially in tumors of the brain and cord.[1] Our present knowledge of the nature of the substances which interact in complement-deviation would seem to enable us, however, to find satisfactory explanations for these occurrences; hence the pathognomonic significance of the Wassermann reaction may not have to be questioned:

1. Extracts prepared from syphilitic livers may contain bacterial antigens as well as syphilitic, and the presence of the corresponding bacterial antibodies in the patient's serum may produce a positive reaction not due to syphilis. This factor is a source of error which applies not only to tumors of the central nervous system, but also and especially to neoplasms of the various organs and to tuberculosis, affections in which secondary infection plays so important a part.

2. The inhibition of hemolysis in non-specific affections is, almost always, incomplete. In many such cases a larger amount of amboceptor, three to five times the simple hemolyzing dose, will produce complete hemolysis, whereas the specific, control serum will not be influenced by this increase of hemolysin.

3. Whereas in general an alcoholic extract is permissible, in diseases of the central nervous system a specific watery extract is essential. There is no doubt that, besides the specific antigen-antibody mixture, a high amount of lipoids (cholesterin, lecithin, saluidin) contained in antigen and in serum may suffice to absorb the total quantity of complement. This fact explains the behavior of some icteric and chylous serums, which alone without the addition of antigen fix the complement and can therefore not be used for the Wassermann reaction with the usual technic. Since lipoids are insoluble in water but soluble in alcohol, the alcoholic extract differs vitally from the watery in its high content of lipoids, whereas the specific antigenetic substances are not readily soluble in alcohol. The lecithin content in the serum and cerebrospinal fluid of syphilitic, tabetic and paralytic patients is usually increased, which explains why in all affections of this nature a positive result is so frequently obtained.

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[1] See Newmark, THE JOURNAL, this issue, p. 11.

If now we consider the important rôle which the phosphatids play in the composition of nervous substances, it may be possible that also in other affections of the central nervous system, as disseminated sclerosis or tumor, an impoverishment of lipoids is brought about, in all the organs, especially in bone-marrow, which secondarily may lead to a lipoid accumulation in the blood-serum. By the summation of the lipoids contained, on the one hand in the antigen, and on the other in the serum, the complement may become absorbed. This error may be excluded by the use of a watery extract, for whereas the lipoid content in the serum alone will be insufficient to hinder hemolysis, which of course will be manifested by controlling the serum without addition of antigen, the addition of lipoids contained in the alcoholic extract may be sufficient to cause a complete inhibition of hemolysis.

Only after considering all these possibilities of error, and excluding them by the use of a technic answering these indications, are we justified in refuting the specificity of Wassermann's reaction.

ANOTHER INDUSTRIAL DISEASE: SHUTTLEMAKERS' DISEASE

The careful investigation of industrial diseases, regarding which some comment was offered in a recent number of The Journal,[1] has usually led to results that have been of direct value to science as well as to the workers involved. This has been conspicuously true in the study of a rather baffling ailment found among workmen engaged in the manufacture of shuttles, in Lancashire and Yorkshire, England. Numerous cases of illness among those handling the wood in these factories led to the belief that the timber used possessed a property injurious to health; and the impression went abroad that the sickness was due to some poison given off by the wood during the process of manufacture of the shuttles. The symptoms complained of were "headache, sleepiness, running at the nose and eyes, chronic sneezing, giddiness, faintness, loss of appetite, shortness of breath, nausea, etc." The patients exhibited a pale, yellowish or greenish color of the skin, accompanied by a peculiar "camphor" or "Turkey rhubarb" odor from the breath and skin. Deaths were reported as due to "cardiac asthma" and "cardiac incompetence."

An inquiry into the details of the industry developed the fact that various woods have been used for the manufacture of shuttles, namely, Persian box, persimmon, cornel, etc. These timbers have certain peculiarly suitable properties as cabinet woods and are capable of taking on a high polish, thus becoming especially suited for the purposes involved. It appears, however, that more recently certain other imported woods known under the names of West African boxwood, South African boxwood, West Indian boxwood, and East London boxwood have entered into use partly because of technical advantages, and in part because of comparative cheapness. They go through various processes of sawing, trimming and sandpapering, partly by machinery and partly by hand. The sickness was most prevalent among those men who were exposed to the fine smoke-like dust given off by the saws or lathes where the inhalation of the dust or absorption in other ways was almost unavoidable, especially as the men are lightly clad and often naked from the waist up.

At the instance of the professor of botany at the University of Liverpool, Mr. R. J. H. Gibson, an examination of the sawdust of supposedly toxic wood was made in the university laboratories.[2] As a result it has been shown that an alkaloid present in the "West African boxwood" is a cardiac poison, inducing experimentally a gradual slowing of the heart-beat, with a cumulative effect after long exposure to its influence. The alkaloid is very soluble and probably easily absorbed.

Further examination[3] disclosed the fact that the toxic wood variously termed West African or East London boxwood is not "boxwood," i. e., a species of *Buxus,* and not identical with the South African or West Indian boxwood. It is a native of the Congo basin and the Cameroons; and Professor Gibson has at length identified it as a species of *Gonioma* which belongs to a poisonous order of tropical or subtropical plants. Thus joint clinical, chemical, physiologic and botanical investigations have made the means of relief of a most objectionable industrial danger obvious.

OATMEAL IN DIABETES

Of the various dietetic types of treatment suggested for diabetes in recent years probably none has aroused an equal degree of interest or remained in vogue to the same extent as the oatmeal "cure" introduced by von Noorden. Essentially this consists in feeding daily a mixture of 250 grams of oatmeal, 100 grams of protein, preferably of vegetable source, and 300 grams of butter, prepared in the form of a soup or porridge, at frequent intervals, along with an occasional allowance of beverages—cognac, wine, or black coffee.[1]

Everyone acquainted with the history of the therapy of diabetes mellitus knows how warmly numerous drugs and procedures have been recommended and how disappointing these have generally been. Little reliance can be placed on any reports in which, as so often has been the case, the diet factors are imperfectly controlled; but aside from this, a marked temporary improvement and increased carbohydrate tolerance not infrequently follows the more careful attention to the details of diet and the habits of life; and the benefits are then falsely ascribed to some inconsequential accompaniment of the new routine. Despite all these considerations, it must be admitted at the present moment that there is a large body of clinical evidence indicating that even in severe cases of diabetes a considerably larger utilization of ingested carbohydrate is observed on an oatmeal régime than is the case with carbohydrates from other sources. It should be clearly emphasized that von Noorden himself pointed out that the oatmeal feeding is without influence in very many cases and may even be detrimental in some instances. It is more particularly indicated in glycosurias of the severe type, with attendant acetonuria.

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[1] The Journal A. M. A., Dec. 2, 1911, p. 1841.

[2] Gibson: The Physiologic Properties of "West African Boxwood," Biochem. Jour., 1906, i, 39.

[3] Gibson: Note on the Synonymy and Histologic Characters of East London Boxwood (*Gonioma Kamassi*), Biochem. Jour., 1911, vi, 127.

[1] Strauss, H.: Diätbehandlung innerer Krankheiten, Berlin, 1908, p. 141.

Granting the validity of some of the reported evidence both from Europe and this country, the explanation of the good results achieved is far from apparent. Why should the utilization of starch by the diabetic become conspicuously favorable when this carbohydrate is derived from a special cereal, the oat? This pertinent question was debated by a number of the prominent European clinicians at the last annual meeting of German internists in Wiesbaden.[2] Several possibilities have been advanced and experimentally investigated. For example; oat starch may possess special chemical structural characteristics which render it unique and specific in this direction, in distinction from the starch of wheat or barley. This can by no means be regarded as evident from comparative feeding trials. It should be stated, however, that Magnus-Levy, among others, believes in a peculiar transformation of oat starch by microorganisms in the alimentary canal, whereby it is converted into fermentation products rather than into simple sugars, as is ordinarily the case with starches. Naunyn early offered a similar explanation for the failure of oatmeal feeding to increase the sugar output in diabetics, by assuming that it is not utilized as sugar.

Other investigators have attributed the superiority of the oatmeal diet to some non-carbohydrate component in the cereal; but attempts to extract such an accessory product (perchance some enzyme, hormone, or antiketogenic compound) have not been very successful. Without denying for the present some specific virtue of the oatmeal itself, it seems as if the preponderance of present opinions is in favor of what may be termed the "negative" virtues of the dietary. By this we may understand the removal or lack of certain objectionable elements pertaining to the usual dietaries (meat and fats) which the oatmeal gruels replace. The latter are above all comparatively low in protein, with an abundance of fat amounting to as much as 2,500 calories (300 grams of butter). The reduction in protein metabolism and the incident replacement of animal by vegetable protein are quite in line with current tendencies and may offer an adequate explanation. It is essentially a fat-carbohydrate diet which is thus instituted.

The complicated nature of the matter is further evidenced by Minkowski's statement that the oatmeal diet is attended by a tendency towards retention of water and edema formation. Competent observers, such as Minkowski and His, incline to the belief that the conflicting views can best be reconciled by the assumption of more than one effective factor in the problem. It may not be amiss to remark that the possibility of a wide-spread employment of oatmeal in the diabetic dietary through layman's advice or careless advertising presents a danger which should be strenuously guarded against. The proper management of diabetes is characterized by an appropriate dietotherapy applied to individual cases. Every patient needs the conscientious advice of a competent observer.

DEATHS OF PHYSICIANS IN 1911

During 1911, the deaths of 2,145 physicians in the United States and the Dominion of Canada were noted in THE JOURNAL. Reckoning on a conservative estimate of 140,000 physicians, this is equivalent to an annual death-rate of 15.32 per 1,000. For the nine previous years the death rates were as follows: 1910, 16.96; 1909, 16.26; 1908, 17.39; 1907, 16.01; 1906, 17.2; 1905, 16.36; 1904, 17.14; 1903, 13.73, and 1902, 14.74. The average annual mortality for the period from 1902 to 1911 inclusive was therefore 16.11 per 1,000. The age at death varied from 23 to 99, with an average of 59 years, 10 months and 5 days. The general average age since 1904 is 59 years, 7 months and 3 days. The number of years of practice varied from 1 to 76, the average being 32 years, 10 months and 9 days. The general average for the past eight years is 31 years, 5 months and 23 days. The chief death causes in the order named were cerebral hemorrhage, "heart disease," senility, pneumonia, external causes and nephritis.

CAUSES OF DEATH.—There were 343 deaths assigned to general diseases; 314 to diseases of the nervous system; 301 to diseases of the circulatory system; 209 to diseases of the respiratory system; 149 to diseases of the digestive system; 162 to diseases of the genito-urinary system; 161 to external causes; 207 to senility; 2 to diseases of bones and 4 to other causes. Among the principal assigned causes of death were cerebral hemorrhage,- 237; "heart disease," 225; senility, 207; pneumonia, 183; external causes, 161; nephritis, 158; accidents, 109; cancer, 94; tuberculosis, 82; after surgical operations, 80; typhoid fever, 38; appendicitis, 37; septicemia and suicide, each 34; diabetes, 33; angina pectoris, 25; arteriosclerosis, 24; gastritis, 23; homicide, 18; cirrhosis of liver, 16; influenza and anemia, each 15; locomotor ataxia, 13; cholecystitis and general paralysis, each 12; meningitis, 11; gastric ulcer and intestinal obstruction, each 10; endocarditis, 9; bronchitis, 8; alcoholism and prostatitis, each 7; erysipelas, rheumatism, drug addiction, mental alienation and pleurisy, each 5; enteritis and peritonitis, each 4; dysentery and paralysis agitans, each 3; anterior poliomyelitis, malaria, embolism and mastoiditis, each 2, and diphtheria, cholera nostras, tetanus, pellagra, scarlet fever, epilepsy and pericarditis, each 1.

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[2] Verh. d. deutsch. Kongresses f. inn. Med., 1911, xxviii, 246.

The causes assigned for the 109 deaths from accident were automobiles, 21; falls, 20; poison, 15; railway casualties, 13; by animals, 8; heat exhaustion, 7; asphyxia, 6; firearms, 5; drowning and street cars, each 4; burns, 2, and mines, runover, crushing and freezing, each 1. The 34 physicians who ended their lives by suicide selected the following methods: firearms, 15; poison, 11; cutting instruments, 4; strangulation, 2, and asphyxia and jumping from high places, each 1. Of the 18 homicides 15 were due to firearms; 1 to cutting instruments and 2 to crushing injuries from blunt instruments. Of these 4 occurred in feuds or affrays.

Ages.—Of the decedents 26 were between the ages of 91 and 99; 183, between 81 and 90; 390, between 71 and 80; 475, between 61 and 70; 423, between 51 and 60; 304, between 41 and 50; 222, between 31 and 40, and 74, between 23 and 30. The greatest mortality occurred at the age of 69 when 69 deaths were recorded; at 65 with 61 deaths; at 62, with 56 deaths; at 55 and 58, with 55 deaths; and at 73 when 54 died. There were 9 deaths at 91; 4 at 93; 3 each at 92 and 94; 2 each, at 96, 97 and 99, and one death occurred at 95 years of age.

Years of Practice.—By periods of ten years the deaths were as follows: In the first decade 201, of whom 6 died after having been in practice less than a year; in the second decade, 317; third decade, 438; fourth decade, 499; fifth decade, 372; sixth decade, 258; seventh decade, 76, and eighth decade, 7, one of whom had been in practice for more than 75 years.

Military Service.—During the year, 344 died who had served in the Civil War, and of these 94 served under the Confederate flag, and 103 were medical officers of United States Volunteers. There were 5 veterans of the Mexican War; 17 had served in the Spanish-American War; one had been a surgeon in the early campaigns against Indians on the western frontier, and 8 had seen service in foreign wars. The Army lost 13 medical officers, past and present, and in addition, 8 officers of the Medical Reserve Corps on the active and inactive lists, and 25 acting assistant or contract surgeons. The Navy lost 15 officers, and the Public Health and Marine-Hospital Service, 11, including its surgeon-general. The death loss of the Organized Militia was 26, of whom 4 had attained the grade of surgeon-general.

Medical Positions.—Medical colleges sustained the loss of 157 professors, lecturers, instructors and demonstrators; hospitals lost 334 members of staffs; municipalities, townships and counties, 185 health officers or physicians, and boards of education and school boards, 92 members. There were 45 deaths of members of state boards of health and medical registration and examination; 56, of coroners and medical examiners, and 124 of railway surgeons.

Of those who died, 1 had been a governor; 19 had been members of state senates, and 48 members of houses of representatives; 41 had been mayors; 31 aldermen or councilmen; 52 had served as civil officers; 12 as postmasters; 30 as editors, medical or lay; 19 were also clergymen, of whom 8 were or had been medical missionaries; 2 had been attorneys; 6 were consuls, and 15 had been medical directors of life insurance companies or fraternal insurance societies.

Current Comment

EFFECTS OF STRENUOUS ATHLETICS IN THE NAVY

An interesting pronouncement concerning the effects of competitive athletics, as carried on in schools and colleges for the training of young men, is contained in the report of the Surgeon-General of the Navy for 1911. With an unparalleled opportunity for observing, during their school course and in their subsequent careers, large classes of young men in the navy, the Bureau of Medicine and Surgery has formed the opinion that competitive and spectacular athletics are undesirable. The prolonged rigorous course of physical exercise necessary to excel in physical sports is believed to be dangerous in its after-effects. As applied to the navy, it is said that under the conditions of service at sea it becomes impossible to continue rigorous exercise, the individual falls prey to degenerative changes, tends to become obese and to lose physical stamina and fails in the end to render as many years of efficient service as does his less athletic but more symmetrically developed classmate. Undoubtedly, similar conditions prevail in civil life among former athletes who cannot or do not keep up in considerable measure their former habits of exercise. The physical records of 625 former athletes of the Naval Academy classes from 1891 to 1911 were examined to determine the bearing of early overtraining on physical efficiency in after-life. Of these, nine have died and twelve have retired. Of the twenty-one fatalities, six have been due to tuberculosis, eight to mental and nervous diseases, two indirectly to alcoholism and one death each to acute dilatation of the heart and valvular disease of the heart, both directly attributed to track- and crew-racing. One was due to an injury received in playing foot-ball. Of the remaining 604 athletes in the service, 198 have disabilities which have been noticed in the official records and to which athletics stand in a possible or probable causal relation. These have not resulted in total disability, but in impaired service. Of these 198 in whom subnormal conditions are present, in forty-eight the conditions are referable to the heart or blood-vessels, such as arteriosclerosis, organic heart disease, heart murmurs, irregular and rapid heart action and hypertrophied and dilated heart. In sixteen, the joints or motor apparatus are involved; in eleven, the kidneys; seventeen are either frankly tuberculous or have had symptoms indicative of tuberculosis; in sixteen there is neurasthenia associated with gastric complications; there were twenty-five cases of appendicitis and fifteen of hernia, the latter two troubles appearing to be associated particularly with a foot-ball record. The opinion is also expressed that long distance crew- or foot-racing is productive of serious harm. The opinion in regard to this form of exercise is shared by school authorities in civil life best qualified to judge. The figures quoted constitute a severe arraignment of strenuous competitive athletics as carried on in our schools and universities, and corroborate the observation said to be made that prize-fighters, as a rule, succumb early, frequently to tuberculosis or to other degenerative diseases, though in the latter instance dissipation may have a determining influence. It is not, of course, to be understood that the Surgeon-General or the Bureau of Medicine and Surgery believes that athletics in the navy or anywhere else should be abandoned entirely; it is, in their view, the strenuous competitive form which is deleterious. The indulgence in moderate athletics is always to be encouraged, and in the Naval Academy the Swedish system of exercises is now being tried and is giving satisfactory results.

MEDICAL EDUCATION AND MIDWIFERY

There has been most gratifying progress in medical education in this country during the last seven years. Standards of admission to medical schools have been advanced so that, instead of three schools in 1904, which were requiring one or more years of collegiate work for admission, now forty-seven colleges are exacting that requirement. And medical education generally has undergone much improvement. New buildings have been erected, new laboratories established, better equipment furnished, better hospital facilities added, large endowments secured and more expert, full-time teachers employed. Furthermore, there has been a great deal of study and discussion of methods of teaching and of the subjects to be included in the medical curriculum. But in spite of all this, one of the most important departments of the medical course, one of the major branches, seems to have been neglected or overlooked. In what subject is the young physician more in need of thorough training than in obstetrics? Maternity cases are sure to form a large portion of his earlier professional calls and even complicated cases requiring the skill of experts often come in the young physician's practice. Again, it is well known that puerperal infection and infant mortality are due, to a certain extent, at least, to ignorance and lack of skill on the part of the midwife or the physician. Nevertheless, it is an astounding fact that only a few of the medical schools in this country have adequate facilities or make ample provision for a thorough training in this important branch. In fact, investigations have shown that a large number of the medical schools in this country have very few or no maternity clinics. Most important and timely, therefore, is the article we publish this week from Dr. J. Whitridge Williams on "Medical Education and the Midwifery Problem." It is to be hoped that this article will stimulate a constructive study and discussion of this subject so that long-needed improvements may be made. Dr. Williams' criticisms offset to some extent the congratulations which are due for the great improvements made in other lines of medical education. In fact, the defects are made the more glaring in contrast with the marked improvements in other departments of medical teaching. So, in the efforts to keep up the splendid progress recently made in medical education, the need of well conducted maternity hospitals in connection with our medical schools should not—must not—be overlooked.

JUDICIAL WISDOM!

Indiana has a good pure food law and, more important still, it has efficient and active officers to enforce it. One of the valuable provisions of the Indiana act was designed to protect the public from the sale of impure milk. The newspapers have recently chronicled the fact that an Indiana dairyman was found by the state inspectors to be selling dirty milk. The officers purchased some of this milk for the purpose of securing evidence against the dairyman. They found the dirt and the dairyman was prosecuted for selling a filthy product. When the case came into court, the attorneys for the milk dealer maintained that their client was not guilty of violating the law because it must be shown that the milk was purchased for human food, when, as a matter of fact, it was purchased in this instance for purposes of analysis. The judge before whom the case came sustained the motion of the defendant's attorneys and held that the dairyman was not guilty of an offense under the Indiana Food and Drugs Act! We refrain from commenting on this example of judicial wisdom for fear of violating the postal laws.

A PSYCHIATRIC OPPORTUNITY

At a recent meeting of the Board of Trustees of Bellevue Hospital, New York, a long-discussed amalgamation was finally effected, whereby the alcoholic, prison and psychopathic wards were made an administrative unit, under the care of the resident alienist of the hospital. This movement is in accordance with the best teachings of modern neurology and psychiatry, and in the formation of such an administrative unit the trustees are showing a clear-headed appreciation of modern trends in the care of this class of patients. These patients belong together; their requirements are such that the neurologic and mental sides of the problem stand out in sharp relief on a background of surgery or internal medicine. With this amalgamation of services the necessity for more hospital interns is made evident, and Bellevue now offers a special opportunity for four resident interns. Such an internship should appeal to hospital graduates who are seeking advanced work in medicine. Just how important the service is, becomes apparent when one reads in the yearly reports that over 10,000 patients enter the Bellevue alcoholic and prison wards yearly, and that there are at least 4,000 additional admissions a year to the psychopathic wards. It is only a short time since the trustees enlarged the psychopathic wards by the erection of separate wards for disturbed patients. The enlargement of the staff of interns, the development of an autonomous service, with resident interns continuously on service, is one of the most important advances in hospital administration in the City of New York, and the gain to the individual student of medicine, who seeks a thorough grounding in this very important branch of medicine, is great. No such opportunity for the study of neurologic and psychiatric material can be found elsewhere. Furthermore, the numerous medical and surgical complications, the rarer forms of poisoning, suicidal and homicidal accidents, offer ample occasion for thorough preparation in internal medicine as well as in advanced psychiatry, and the prison wards enlarge the medicolegal horizon of the man anxious to improve his chances of getting acquainted with world-wide questions.

THE WORLD'S PROGRESS IN 1911

The *New York Times* inquired of a number of famous personages what they considered the five most notable achievements of the year just passed; and forty-four groups of answers were received.[1] It is of interest to consider to what extent the science and art of medicine received recognition in them. Progress in our profession was noted not at all in thirty-four of the groups of answers. Among the remaining ten opinions was that of President Taft, who gave as the second of his answers "the demonstration of the complete success of the prophylactic in typhoid fever, as shown by the fact that in the mobilization of 15,000 troops in Texas for three months there was only one case of typhoid." Count Bernstorff, the German ambassador, noted among the five greatest achievements of 1911, Ehrlich's salvarsan and "Wassermann's progress in cancer research." President Thwing, of Western Reserve University, emphasized the growth of medical education and research exhibited in the strengthening of medical schools and research institutes. President Wheeler, of the University of California, noted "Ehrlich's discovery in specific chemotherapy." Booker T. Washington noted "the discovery of Dr. Simon Flexner, of the serum for the cure of spinal meningitis." The Rev. Dr. Henry Van Dyke commented on "the advance made in restoration surgery." James Bryce, the British ambassador, observed: "In modern times most of the events of the highest ultimate significance have been discoveries in the realm of nature, or inventions in the realm of industry; and their magnitude is seldom known at first. Little was said of the discovery that mosquitoes are the carriers of yellow fever and of the intermittent fevers; yet what immense consequences are already seen to flow from the determination of that fact. In science when a stone is started down a hill, no one can tell how far it will go." Dr. Ehrlich modestly makes no comment on his own epochal work, but considers "the greatest achievement of the past decade the knowledge that has been gained incidental to the discovery of radium with regard to the transformation of matter." Senator Williams, of Mississippi, applauds the practical application of vaccination methods to prevent typhoid fever. Professor Osgood, of Columbia University, finds among the world's five greatest achievements the year's advance in curative and preventive medicine. The forty-four answers were from as diverse viewpoints as those of Pope Pius X, the King of Italy, Carmen Sylva, Lieutenant Peary, governors of states, economists, writers in fiction as well as in science, playwrights, editors, noblemen and "Darwinites," besides those of the notable men quoted; the recognition accorded medical achievements was therefore not so scanty as would on first thought appear. For every man will naturally give paramount position to the progress in his own field.

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[1] New York Times, Dec. 31, 1911, and Jan. 1, 1912.

Medical News

ILLINOIS

Further Donation to Medical Library.—In addition to the medical library donated to the Burnham Atheneum, Champaign, by Dr. Hartwell C. Howard, the medical library of the late Dr. Levi S. Wilcox has been donated by his heirs to the Atheneum.

Decision Regarding Medical Department Postponed.—The Supreme Court, on the final day of its fall term, failed to hand down a decision in the case involving the validity of an appropriation for the Medical School of the University of Illinois. It is probable that no decision in this case will be rendered before the end of March.

Chicago

Memorial Tablet Unveiled.—A bronze tablet in memory of those who lost their lives in the Iroquois Theater fire and which is to be placed in the waiting room of the Iroquois Memorial Hospital, was unveiled last week.

Personal.—Dr. John S. Nagel, who was operated on recently for appendicitis, is reported to be convalescent.——Dr. William S. Sadler has returned from Europe.——Dr. George F. Sorgatz has been appointed bacteriologist of the State Board of Health.——Dr. Cornelius Gunderson was overcome by gas while attempting to resuscitate seven persons who had been asphyxiated.——Dr. Samuel Willard celebrated his ninetieth birthday, December 31.

INDIANA

Health Officials' Status.—According to a decision of the Indiana Appellate Court, in affirming the decision of the Gibson Circuit Court, the members of the board of health of a city are governmental officers and not employees. Dr. Edwin Watts has sued the city of Princeton, for pay for services on the board of health, and although he had been promised $100 per year by the mayor and city council, yet no ordinance had been passed, the court holding that until such ordinance is passed defining such salary, he has no cause of action for such services, which he can force in the courts.

Personal.—Dr. Augustus L. Marshall of Indianapolis, has been appointed superintendent of the Deaconess Hospital, in that city, vice John Aldag, resigned.——Dr. Israel S. Millstone has been elected president, Dr. Winfield S. Faulds, secretary and executive officer, and Dr. W. P. Laue, treasurer of the Gary Board of Health.——Dr. Edward F. Wagner, Fort Wayne, who was operated on recently on account of malignant disease, is reported to be improving.——Dr. John R. Pearson, Bedford, is reported to be seriously ill with septicemia and was taken to St. Vincent's Hospital, Indianapolis.——Dr. James McCall, Terre Haute, has been placed in charge of the department of diseases of the eye, ear, nose and throat in the Rose Dispensary.

MICHIGAN

Public Health Committee Appointed.—The State Medical Society, at its annual meeting in Detroit, authorized the formation of a new committee on public health. The duty of this committee is to extend throughout Michigan work similar to that done by the Public Education Committee of the American Medical Association. The committee is made up as follows: chairman, Dr. Francis A. Rutherford, Grand Rapids, and Drs. Jean Solis, Ann Arbor; Blanch N. Epler, Kalamazoo, and Rhoda Grace Hendricks, Jackson.

Personal.—Dr. Arend Van Der Veen, the oldest practitioner of Grand Haven, was the guest of honor at the meeting of the Ottawa County Medical Society, December 15, and was presented by the members of the organization with a gold-headed ebony cane.——Dr. George L. Chamberlain, medical superintendent of the Michigan Home for the Feeble-Minded and Epileptic, Lapeer, has resigned and will practice in California. Dr. Harley A. Haynes, for five years assistant at the home, has been selected to fill the vacancy.——Dr. Sharon J. Thoms and family, Grand Rapids, have arrived at their new field of duty in Muscat, Arabia.

MISSISSIPPI

Physicians' League Formed.- Physicians of Charleston have organized a Physicians' League in Tallahatchie County to give aid and encouragement to the public health and sanitation campaign now being waged by the State Board of Health. The members of the league will give their services to the community as a local board of health without remuneration and will give their time, attention, advice and personal service at all times in matters pertaining to the cause of sanitation and the public welfare.

New Officers.—The following recent elections are reported: East Mississippi, Four-County Medical Society, at Tupelo, December 19-20—president, Dr. Woodie N. Reed, Tilden, Itawamba County; vice-presidents, Drs. Sam. Nabors, Evergreen, Itawamba County; William J. Grady, Amory, Monroe County; Charles Edwin Spencer, Verno, Lee County, and James A. Donaldson, Okolona, Chickasaw County; and secretary, Dr. Felix Joel Underwood, Nettleton, Lee County (reelected).——Hinds County Medical Society—president, Dr. Benjamin L. Cully, and vice-president, Dr. Walter B. Lobson, both of Jackson.——Tri-County Medical Society, at Brookhaven, December 6—president, Dr. John T. Butler, Brookhaven; vice-presidents, Drs. D. W. Magee, Caseyville, Lincoln County; William P. Patterson, Beauregard, Copiah County; S. Paul Klotz, McComb, and Dr. Dudley Watson Jones, Brookhaven, Lincoln County, secretary.

NEW YORK

Hempstead Hospital Sold at Auction.—The Hempstead Hospital which was given to that place by Mrs. O. H. P. Belmont, on condition that the town should support the institution, was sold at auction for $10,000 because the residents of the town have failed to fulfil their agreement.

Military Surgeon to Retire.—Colonel Albert H. Briggs, Buffalo, chief surgeon of the Fourth Brigade, N. G. N. Y., gave a farewell dinner to his brethren officers, December 19. Under the law Colonel Briggs retires in a short time from the service on account of attaining the age limit.

Local Medical Society Election.—At the annual meeting of the Yorkville Medical Society, December 18, the following officers were elected: President, Dr. Sidney D. Jacobson; vice-presidents, Drs. Otto Glogau and Jacob Heckmann; recording secretary, Dr. Herman Schwarz; corresponding secretary, Dr. Friedrich Grosse, and treasurer, Dr. Anton Schoen.

Local Medical Societies Meet.—At a dinner given in Little Falls, December 19, an organization was effected and the following officers were elected: president, Dr. William D. Garlock, and secretary-treasurer, Dr. George H. Smith.——The Dunkirk-Fredonia Medical Society held its annual meeting December 13 in Dunkirk and elected Dr. George E. Smith, Fredonia, president; Dr. Walter H. Vosburg, Dunkirk, vice-president, and Dr. William J. Sullivan, Dunkirk, secretary-treasurer.

Elections.—The following elections of officers of medical societies have recently occurred: Chemung County, at Elmira, December 19; vice-president, Dr. William Brady; secretary, Dr. Charles F. Abbott, and treasurer, Dr. George V. R. Merrill, all of Elmira.——Wayne County, at Lyons, December 18: president, Dr. Jason N. Robertson, Wolcott; vice-president, Dr. Alexander Walker, Macedon; and secretary-treasurer, Dr. Major A. Veeder, Lyons.——Otsego County, at Oneonta, December 19; president, Dr. Arthur H. Brownell, Oneonta; vice-president, Dr. Willis S. Cooke, Otego; secretary, Julian C. Smith, Oneonta, and treasurer, Dr. Frank L. Winsor, Laurens.——Franklin County, at Malone, December 12; president, Dr. Elisha A. Rust, Moira; vice-president, Dr. Frank F. Finney, Burke, and secretary-treasurer, Dr. George M. Abbott, Saranac Lake.——Tioga County at Owego, December 12; president, Dr. Harry T. Dunbar, Candor (reelected); vice-president, Dr. William A. Moulton, Candor; secretary, Dr. Sidney W. Thompson, Owego, and treasurer, Dr. James M. Barrett, Owego.——Chautauqua County, at Dunkirk, December 12; president, Dr. Henry A. Eastman, Jamestown; vice-presidents, Drs. Nelson G. Richmond, Fredonia, and George F. Smith, Falconer; secretary-treasurer, Dr. Josiah W. Morris, Jamestown.

New York City

Regiment Inoculated Against Typhoid.—Four hundred men and officers of the Seventy-First Regiment, N. G. N. Y., were inoculated with typhoid serum by the regimental surgeon, Dr. Karl A. Connell and the hospital corps at the armory on December 28. All those who received the treatment did so voluntarily.

Trinity Hospital Opened.—On December 24 the dedication exercises were held of Trinity Hospital in East New York. This is a private institution equipped and maintained by Dr. William Frances Campbell, as a memorial to his mother. The hospital is intended for use by people in moderate circumstances and moderate fees will be charged. The institution will accommodate about fifty patients.

Personal.—Dr. Philip F. O'Hanlon, coroner's physician, was operated on for abdominal abscess on December 29 and his condition is reported as favorable.——Dr. Peter K. Olitsky has been appointed assistant adjunct to the gynecologic department of the Har Moriah Hospital.——Dr. George Victor Hudson was assaulted and robbed by five young men in his home, December 19.——Dr. Morris Friedman, East New York, underwent operation on the index finger of his right hand for septicemia, December 15.

Antivivisectionists Plan New Campaign.—An organization calling itself the Vivisection Investigation League held a meeting on December 16 at the home of Mrs. Stuyvesant Fish. On this occasion John Sherwin Crosby urged them to endeavor to have a bill passed establishing a commission for the investigation of vivisection which should see that it was carried out under proper conditions. This organization recently gave a benefit performance in one of the theaters for the purpose of raising funds to further its work.

The Doty Case.—A meeting of New York physicians was held at the Academy of Medicine, December 13, to pass on the petition to Governor Dix, asking for the reappointment of Dr. Alvah H. Doty as health officer of the port of New York. Dr. Abraham Jacobi presided at the meeting and Dr. R. Mitchell Prudden was secretary. Resolutions were unanimously adopted, stating that the public confidence in Dr. Doty has been well merited by sixteen years of skilful health protection; that Dr. Doty had devised and perfected new methods for the detection and prevention of disease, now generally in use; that his wide knowledge of practical sanitation, his exceptional personal familiarity with the nature and control of communicable diseases, his long experience in quarantine service, his successful control of serious emergencies, the close touch and cordial relationship which he has maintained for many years with the federal and other quarantine authorities have given steadfast assurance of safety to the personal and commercial interests which are subject to disquiet and damage in the face of threatened epidemics.——On December 28 it was reported that Governor Dix had sustained the report of Commissioner Bulger, who recommended that Dr. Doty be dismissed as health officer of the port and had asked for Dr. Doty's immediate resignation.——The Academy of Medicine of North Jersey, has joined in the protest against the demand of Governor Dix that Dr. Doty resign as health officer and has voted not only to appeal to Governor Dix, but also to Governor Woodrow Wilson to use his influence in behalf of Dr. Doty. The academy also declared that Governor Dix's letter asking for the resignation of Dr. Doty was the "most brutal and unsubstantiated letter ever written by a state executive."

NORTH CAROLINA

About Hospitals.—The physicians of Hendersonville have headed a movement to construct and equip a local hospital, which they hope to have ready to open this year.——Physicians of Asheville, at a meeting held December 16, passed a resolution favoring the establishment of a municipal and county hospital in Buncombe County to be under the control of the local authorities.

Requires President to State Policy.—At the annual meeting of the Robeson County Medical Society, December 20, a resolution was adopted requiring the president-elect to deliver at the first meeting after his election an annual address in which he is to set forth and pledge himself to certain policies for the coming year and requiring further, at the end of the year, a report from the secretary of the society as to the manner in which the president has fulfilled his pledges.

New Officers Elected.—The following reports of elections in county medical societies have been received: Davidson County, at Lexington, December 5; president, Dr. Charles A. Julian, Thomasville; vice-president, Dr. David J. Hill, Lexington, and secretary, Dr. R. J. Terry, Lexington.——Buncombe County, at Asheville, December 18; president, Dr. Henry H. Briggs; vice-president, Dr. Paul H. Ringer, and secretary-treasurer, Dr. Gaillard S. Tennent, all of Asheville. One hundred members were present at the annual banquet at which Dr. J. Howell Way, Waynesville, president of the State Board of Health, Dr. Alfred A. Kent, Lenoir, president of the Medical Society of the State of North Carolina, and others were guests of honor.——Mecklenburg County, at Charlotte, December 16; president, Dr. Thomas F. Costner, Charlotte; vice-presidents, Drs. Leighton W. Hovis, G. McD. Armond and John K. Ross; and secretary-treasurer, Dr. Harry A. Wakefield (reelected), all of Charlotte.——Robeson County, at Maxton, December 20; president, Dr. A. Bascom Croom, Maxton; vice-president, Dr. Benjamin F. McMillan, Red Springs, and secretary, Dr. John Knox, Lamberton.——Wake County, at Raleigh, December 14; president, Dr. Albert Anderson, Raleigh; vice-president, Dr. B. W. Burt, Enno; secretary, Dr. C. W. Horton, and treasurer, Dr. Kemp P. Battle, Raleigh.——Guilford County, at Greensboro, December 14; president, Dr. John W. Long, Greensboro; vice-president, Dr. William J. McAnally, High Point, and secretary-treasurer, Dr. J. Parran Jarboe, Greensboro.——Durham County, at Durham, December 8; president, Dr. Robert L. Felts; vice-president, Dr. George H. Ross, East Durham, and secretary-treasurer, Dr. S. L. Booker (reelected).——Gaston County, at Gastonia, December 5; president, Dr. James W. Reid, Lowell; vice-presidents, Drs. David A. Garrison, Gastonia, and Cyrus J. McCombs, Kings Mountain (reelected); and secretary and treasurer, Dr. Thomas C. Quickel, Stanley.

Personal.—Drs. J. Howell Way, Waynesville; Watson S. Rankin, Raleigh; Clarence A. Shore, Raleigh, and John A. Ferrel of the State Board of Health have returned from the meeting of the American Public Health Association in Havana. ——Dr. John M. Blair, Monroe, is reported to be seriously ill with cerebral hemorrhage.——Major Robert S. Woodson, M.C., U. S. Army, retired, has located in Tryon.

PENNSYLVANIA

Stewart Speaks Before Biologic Research Society.—The Society for Biological Research of the University of Pittsburgh, held the first of its special meetings for the year 1911-12, December 14, at which time Dr. George Neil Stewart, professor of experimental medicine and director of the Cushing Laboratory at Western Reserve University, Cleveland, presented to the society the results of some of his recent work on the rate of blood-flow in man.

Jefferson Alumni Meeting.—The third annual meeting and banquet of the Jefferson Medical Alumni Association of Northeastern Pennsylvania was held in Scranton, November 25, and the following officers were elected: president, Dr. Harry W. Albertson, Scranton; vice-presidents, Drs. Edward R. Gardner, Montrose, John T. Howell, Wilkes-Barre, and Henry M. Neale, Upper Lehigh; secretary, Dr. James Norman White, Scranton, and treasurer, Dr. John E. Schiefly, Ashley.

To Investigate Matter of Fees.—The Shamokin Medical Association, claiming that fees have been demanded from workingmen at the Fountain Springs State Miners' Hospital, have furnished Governor Tener with several affidavits, the chief one being from James J. McCall, a Shamokin miner, alleging that Dr. Jonathan C. Biddle, Fountain Springs, surgeon-in-chief, charged $100 for treating his child brought to public ward. Governor Tener has requested Thomas M. Richter, president of the hospital, to investigate the matter and make a report to him.

Elections of Officers.—At the annual meeting of the Cambria County Medical Society held in Johnstown, December 14, the following officers were elected: president, Dr. Sylvester S. Kring, Johnstown; vice-presidents, Drs. John L. Sagerson, Johnstown, and Harry M. Stewart, Ehrenfeld; secretary, Dr. Henry J. Cartin, and treasurer, Dr. Francis Schill, Jr., both of Johnstown.——Berks County Medical Society, at its annual meeting, December 12, elected the following officers: president, Dr. Henry W. Saul, Kutztown; vice-presidents, Drs. William S. Bertolet and James R. Gerhard; secretary, Dr. Henry P. Brunner; corresponding secretary, Dr. Ralph A. Harding, and treasurer, Dr. Rufus E. Le Fevre, all of Reading.

Personal.—Dr. William H. Kohler has resigned as resident physician of the York Hospital and will practice in Middleton. ——Dr. John D. Carr, Merrittstown, slipped on an icy pavement in front of his office, December 5, and suffered severe injuries.——Dr. Harvey T. Billick, Monongahela, has been appointed a member of the board of managers of the Morganza Reform School.——Dr. James Earl Ash, pathologist of the Norristown State Hospital, has resigned and will teach in Harvard Medical School.——Dr. Frederick H. Evans, Chester, was given a leather satchel and a pocket case of instruments by the firemen of the city, at the annual banquet given by the Firemen's Relief Association, November 22.——Dr. George M. Studebaker has resigned and is succeeded by Dr. David V. Reinoehl as a member of the health board of Erie.——Dr. George C. Reese, of Mahanoy City, was elected superintendent and surgeon-in-chief of Trevorton, Shamokin and Mount Carmel Miners' Hospital, at Shamokin by the trustees of that institution on December 27.

Philadelphia

Hospital Contract Awarded.—On December 28, a contract was awarded for the erection of two additional ward buildings and a connecting corridor at the Philadelphia Hospital for Contagious Diseases. The bid accepted was $122,680.

Hospital Fund Growing.—The Douglas Hospital fund received a Christmas gift of $1,000 and with cash contributions of $298 had on December 30, a total of $11,590.57, leaving only a balance of $3,409.43 to pay off the builder's mortgage of $15,000.

Personal.—Dr. Roland G. Curtin was unanimously elected first vice-president of the General Alumni Society of the University of Pennsylvania, December 15.——Alexander M. Wilson, director of sociology in the Phipps Institute, has been appointed assistant director of the Department of Health and Charities.

Pediatric Society Offers Prize.—The Philadelphia Pediatric Society offers a prize of $100 to be known as the Philadelphia Pediatric Society Prize, for the best paper pertaining to pediatrics. The competition is open to members of the society only and the prize will be awarded at the June meeting of the society.

City Death-Rate Reduced in 1911.—The city's death-rate during 1911 was materially reduced, the rate having been lowered to 16.50 per 1,000 of population. The total number of deaths this year is 26.092, as compared with 26,879 in 1910. The campaign to prevent infant mortality resulted in reducing the number of deaths of babies, from 5,232 last year to 4,604 this year.

Typhoid Epidemic.—During the week ended December 30, there was a great increase in typhoid fever, the number of cases jumping from twenty-one the previous week to 126. Of these sixty-six were reported from the Twenty-Second ward. This outbreak has been traced to the break in the big distributing main of the Upper Roxborough filter plant on November 28 last.

Children Raise Money for Jewish Sanatorium.—The Junior Auxiliary of the Philadelphia Jewish Sanatorium for Consumptives, at Eagleville, held a meeting in the Benjamin F. Teller Memorial School, at Broad and Jefferson Streets, and several hundred dollars were turned over to the fund raised annually for this institution. Last year, the children raised $500, which was used in endowing a bed in the children's pavilion of the sanatorium.

Arrests in Cocain Crusade.—On December 29, John Henderson is said to have been held in $1,500 bail for court by Magistrate Beaton, charged with the illegal sale of cocain. Henderson's place was raided December 27 by a special detective of the State Pharmaceutical Board, and a number of police. Three other men were caught in the raid and a large quantity of cocain, apparatus for crushing and weighing the crystals, and account books, showing that Henderson's profit had been about $20 a day, and other incriminating records were found in the room and on Henderson's person. John Hanlon, who lives at the same house was also held in $1,000 bail for court.

VIRGINIA

Institution Needed for Feeble-Minded Women.—When the legislature convenes, it will be asked to appropriate several thousand dollars for the establishment of a state institution for feeble-minded women.

Hospital Nears Completion.—The Rockingham Memorial Hospital, Harrisonburg, is nearing completion and will be opened by the first of March. The late W. S. Leake left $20.000 toward the hospital and the remainder has been raised by subscription.

Progress in the Elimination of Hookworm.—The local inspectors of hookworm in the state under the Richmond Sanitary Commission met for a conference in Richmond and made their field reports to Assistant State Health Commissioner

Dr. Allen W. Freeman. The work of locating the disease and educating the people is progressing rapidly, and the inspectors find, from time to time, that certain localities are entirely free from the disease.

Needs of Hospital Board.—The General Hospital Board estimates that it will need $1,200,000 for the care of the four state hospitals for the insane and the epileptic colony during the next two years. Of this amount, $210,000 is the estimate for the State Epileptic Colony, and this will provide not only for 300 patients, but also for buildings and equipment to care for the full number of patients for which the institution was intended. This will also provide for the completion of the ward for the criminal insane at the Marion State Hospital.

Personal.—Dr. George R. Cottingham, Remington, while dressing a few days ago, put a scarf pin in his mouth and accidentally swallowed it and has had to be taken to Johns Hopkins Hospital, Baltimore, for treatment.——Dr. John W. Brodnax, South Richmond, has been appointed coroner of the district south of the James River, for a period of four years. ——Dr. Robert L. Corbell, Norfolk, has been reelected health officer of Norfolk County.——Dr. Herbert K. Drewry has been reelected assistant health officer; Dr. William G. Ashburn, Norfolk, assistant in the health department and Dr. LeRoy L. Sawyers, Great Bridge, has been reelected physician to the almshouse.——Dr. Lawnsdale J. Roper, Norfolk, has been recommended by the board of supervisors as coroner of Norfolk County.——Dr. James F. Hubbard, Jr., Esmont, has qualified as physician for the Second District of Richmond, vice Dr. Alick T. Smith, resigned.——Dr. Ashley P. Cutchin, Franklin, is reported to be seriously ill at Sarah Leigh Hospital, Norfolk, with typhoid fever.

WISCONSIN

Personal.—Dr. J. B. Hayes, Palmyra, fell on the porch of the Oconomowoc Sanatorium, December 16, and injured his arm. ——Dr. Frederick A. Kraft, health commissioner of Milwaukee, has, it is said, announced that he will resign if his salary is reduced to $5,000 from its present figure of $6,600.

Elections.—The following elections of officers of county medical societies are announced: Shawano, at Shawano, December 12—Dr. Edward Puchner, Wittenberg, president (reelected); Dr. William F. Baker, Birnamwood, vice-president, and Dr. Carl E. Stubenvoll, Shawano, secretary-treasurer.—— Milwaukee, at Milwaukee, December 14—Dr. John J. McGovern, president; Dr. Charles H. Lemon, vice-president; Dr. Daniel Hopkinson, secretary, and Dr. William Thorndike, treasurer, all of Milwaukee.——Green County, at Monroe, December 12—president, Dr. Lewis A. Moore, Monroe; vice-president, Dr. Edward Blumer, Monticello; secretary and treasurer, Dr. George S. Darby, Brodhead.——Kenosha County, at Kenosha, December 14—president, Dr. Herbert A. Robinson; vice-president, Dr. John H. Cleary, and secretary-treasurer, Dr. Curtis H. Gephart, all of Kenosha.——La Crosse County, at La Crosse, December 7—president, Dr. Charles H. Marquardt; vice-president, Dr. Gregor Smedal, and secretary and treasurer, Dr. George W. Lueck, all of La Crosse.—— Douglas County, at Superior, December 6—president, Dr. Thomas J. O'Leary; vice-president, Dr. Royal K. Lohmiller, and secretary and treasurer, Dr. W. E. Hatch, all of Superior. ——Juneau County, at Camp Douglas, December 5—president, Dr. Charles O. Cron, Camp Douglas; vice-president, Dr. Thomas S. Lawler, Lyndon Station; secretary-treasurer, Dr. Arthur T. Gregory, Elroy.——Dodge County, at Juneau, November 20 —president, Dr. Jesse A. Clason, Neosho; vice-president, Dr. Harry B. Sears, Beaver Dam, and secretary and treasurer, Dr. Guy W. Henika, Beaver Dam.

The Tuberculosis Question.—At a meeting of the Sheboygan Medical Society, December 15, the president of the County Antituberculosis Association delivered an address on "The Duty of the Medical Profession and the Antituberculosis Crusade," and the society unanimously adopted resolutions approving the object and aims of the association and recommending that the board of supervisors take the necessary steps toward the establishment of a county sanatorium.——John McCarthy, Reedsville, has offered a 5-acre tract in the town of Cato as a site for the proposed Manitowoc County Tuberculosis Sanatorium.——The county board of Racine County has appropriated $10,000 to be used in the erection of a sanatorium for the treatment of patients in advanced stages of tuberculosis.——The Marinette Antituberculosis Association was organized on December 8, with Dr. George Frederick Colter as president.——The DePere Public Health Association was organized November 24 to promote public health and cooperate with the Wisconsin Antituberculosis Association in the eradication of consumption. Dr. Norbert M. Kerston was elected president.——Dr. Henry Paul Rhode, Green Bay, has converted the top floor of the City Isolation Hospital into a sanatorium for the care of consumptives.——The Oconomowoc Branch of the Wisconsin Antituberculosis Association was recently organized with Dr. Michael R. Wilkinson, president, and Dr. Henry A. Peters, as secretary and treasurer.——The county board of Manitowoc County has ratified its original action appropriating $15,000 for the establishment of a county tuberculosis sanatorium.——Ontagamie County has voted to establish a tuberculosis sanatorium to cost $5,000.——The report of the State Tuberculosis Sanatorium, Wales, shows that during the four years the institution has been open, 74 per cent. of the patients treated in all stages of the disease have been improved and that 45 per cent. of the incipient consumptives have been discharged apparently cured. Altogether 655 patients have been treated, of whom ninety-five remained in the institution less than one month. Of the ninety patients in far advanced stages of the disease, only one patient has been discharged as apparently cured, but in six cases the progress of the disease was apparently arrested, and twenty-six were reported as improved.

GENERAL

Bequests.—The following bequests and donations toward hospitals have been recently announced:

Women's Hospital of Pittsburgh, about $2,000,000, by the will of Thomas N. Miller.

Douglas Hospital, Philadelphia, subscriptions of $8,328 toward the fund of $15,000 required.

Wills Eye Hospital, Philadelphia, and St. Agnes' Hospital, Philadelphia, each $500, by the late Patrick Gibbons.

Meetings to Come.—The Northern Tri-State Medical Society of Ohio, Michigan and Indiana will hold its annual meeting in Fort Wayne, Ind., January 9. The society will be the guest of the Allen County Medical Society.——The eleventh semi-annual meeting of the Chattahoochee Valley Medical and Surgical Association will be held in La Grange, Ga., January 16 and 17.

New Congress Officers.—At a meeting of the executive committee of the Congress of American Physicians and Surgeons, held recently, the following officers were elected for the next congress, which is to be held in Washington, D. C., in May, 1913: president, Col. William C. Gorgas, M. C., U. S. Army, Ancon, Canal Zone; secretary, Dr. Walter R. Steiner, Hartford, Conn., and treasurer, Dr. Newton M. Shaffer, New York City.

Local Symposiums on Hygiene.—The secretary of the Association of Military Surgeons of the United States announces that in accordance with a resolution passed at the recent meeting of that organization, it is proposed to hold local symposiums on military hygiene and sanitary organization and supplies during the present winter. The purpose of these courses would be patriotic in that they would attempt to show the physicians of the country how they could render efficient service in time of war. If those interested in the organization of such courses will communicate with the secretary, Maj. Charles Lynch, M. C., U. S. Army, 716 Union Trust Building, Washington, D. C., he will endeavor to make the necessary arrangements for instructors.

CANADA

Canadian Public Health Association.—The first annual meeting of the Canadian Public Health Association was held in Montreal, Dec. 13-15, 1911. Dr. Starkey, professor of hygiene at McGill University and president of the association, presided. He mentioned that Lord Strathcona had written wishing the efforts of the association in the interests of public health every success and enclosing his check for $2,500. The Duke of Connaught made an excellent speech dealing with public health matters. The Honorable R. L. Borden, Premier of Canada, said, in part, that in the past the government had somewhat neglected public health but that in the future a different course would be pursued. The Honorable Mr. Burrell, Minister of Agriculture, announced that it had practically been decided to establish a department of health of the National Government, that it might not be a separate department but would probably be under the jurisdiction of the department of agriculture. Sir Lomer Gouin, Premier of Quebec, announced that the province had decided to divide Quebec into ten sanitary districts, an expert reporting directly to the government for each district. These hygiene experts were to be appointed by competitive examination from the universities of McGill and Laval.

More than fifty papers were contributed. Among the papers read at the first general session were "Military Aspects of Sanitation," by Colonel Jones, Ottawa. "Conservation of Food by Cold," by Dr. P. H. Bryce, Ottawa, and "Medical Inspection and Care of Immigrants on Shipboard," by Dr. J. D. Pagé, Quebec. Dr. Pagé dealt with the necessity for a stricter and more efficient examination by ship surgeons of immigrants to Canada. Every day when navigation is open, between two and three thousand persons are examined at Quebec, and the entire responsibility rests on the medical inspectors of the port. Dr. Pagé pointed out that medical examination on shipboard was frequently more or less perfunctory. It is true that the regulations impose on ship surgeons the duty of careful examination of immigrants but these medical men do not live up to their obligations. No one has better opportunities for judging whether a person is mentally and physically fit than the ship surgeon and it would be in the interests of all concerned if he fulfilled his obvious duty. According to Dr. Pagé, the main reason that ship surgeons shirk their responsibility is that they are generally young men who take the position merely for a change and a cheap trip and they do not regard their duties very seriously. The real fault, however, lies in the fact that they are underpaid and thus the steamship companies are to blame. No inducement is offered to able medical men to become ship surgeons, and therefore it has come to pass that the position is taken only *pour passer le temps*. Dr. Pagé said that he had spoken to ship owners on the subject and their reply had been that so long as they could obtain an unlimited supply of surgeons at a small remuneration they saw no reason why they should increase their salaries. Dr. Pagé suggested that $1,000 a year would be a fair initial salary for a ship surgeon.

The papers read in the section concerned with social workers were chiefly contributed by women. Miss Ethel Hurlbatt, principal of the Royal Victoria College, read a paper on, "Work for Women as Sanitary Inspectors." She said, in part, that Canada was beginning to realize that the health and well-being of the individual involved that of the community, and that the latter was coming to see its duty in enforcing proper precautions for the care of individual lives. Miss Hurlbatt suggested that there was need of women sanitary inspectors in factories in which women were employed as well as in many homes.

In the section of medical officers of health, Mr. P. B. Tustin, Chief Food Inspector, Winnipeg, Man., called attention to the fact that food inspection to be efficient should cover the inspection of the raw material to the finished product, sanitation of premises and the cleanliness and personal habits of the people preparing the food. The general sentiment of those attending this section appeared to be in favor of government food inspection. The second general session was devoted to a symposium on town planning and housing. Dr. Charles A. Hodgette, medical advisor to the Canadian Conservation Commission, was especially severe on the housing and building methods which have been pursued in many Canadian cities. All the new and older cities, he declared, are, from the town-planning and housing standpoint, monstrosities. He also noted the tendency, which is in evidence in all these cities, of the method of warehousing humanity in apartment houses of all grades. Dr. Charles T. C. O. Hastings, city medical officer of health of Toronto, described the insanitary conditions present in the slum districts of New York, Milwaukee and Toronto. In Toronto, there are 919 families living under distinctly insanitary conditions, some only in one room, in tenements or in cellars. The view of those present seemed to be that large apartment houses and jerry buildings were detrimental to health and unesthetic in appearance. In place of these, garden cities and model dwellings, situated in the suburbs, were advocated with cheap and rapid means of transit. In fact, the plan now generally followed in Great Britain appeared to meet with most favor.

In the last general session, a symposium on biologic sewage disposal, Dr. P. H. Bryce, Ottawa, dealt with the physical and economic aspects of the subject. Dr. G. G. Nasmyth, Toronto, read a paper on the chemical problem involved in methods of sewage disposal. He stated his belief that the trickling filter system, from the point of view of economy and success, had come to stay, for the reason that this system was in line with the methods of Nature. Dr. J. A. Amyot, professor of hygiene at Toronto University, discussed the bacterial problems involved in biologic methods of sewage disposal. He pointed out that only by bacteria was it possible to dispose of sewage properly. Two methods were ordinarily employed for the purpose, the anaerobic and the oxidation. The oxidation method was more satisfactory by far, but even with it, it was utterly impossible to secure any system in the results. The engineer must decide the exact way in which the system should be worked. Slow sand filtration was not enough to depend on. Disinfection must also be employed. The new officers elected were: president, Dr. Charles A. Hodgette, Ottawa; vice-president, Dr. M. M. Seymour, Regina, Saskatchewan; Dr. I. W. C. McCullough, Toronto; Dr. G. B. Bayard Fisher, Fredericton; general secretary, Major Lorne Drum, and treasurer, Dr. G. D. Porter, Toronto. The next place of meeting is to be Toronto.

LONDON LETTER

(From Our Regular Correspondent)

London, Dec. 16, 1911.

The Working Conditions of Telephonists

A circular of instructions to postoffice surveyors and heads of departments, covering the report of the committee of medical officers appointed to inquire into the working conditions of telephonists, has been issued as a parliamentary paper. In the opinion of the medical officers the work of telephonists is not in itself unduly trying to girls and women, provided that due care is taken to select candidates of suitable physique and temperament. The rule prohibiting all unnecessary noises in the switch-room should invariably be strictly observed. The head and breast gear should be personal to the operator, who should be permitted to wear it in the manner most comfortable to herself, consistent with efficient working, and where this is not done care should be taken in cleaning the gear. Steps are being taken to improve the construction and to reduce the weight of the receiver and transmitter, so as to render their removal unnecessary during working hours. The provision at large exchanges of sick-bays for the sole use of operators who may be temporarily indisposed and of rest or sitting rooms for operators who are off duty is recommended.

The Tsetse Fly and Game

A deputation representing eight missionary societies working in Nyassaland, Central Africa, waited on the Secretary for the Colonies and pointed out that the population of districts infected with sleeping-sickness were brought into contact with the inhabitants of a large area of Central and South Africa, thus increasing the risk of the spread of the disease and that evidence indicated that the tsetse fly fed on and was maintained by wild game. They thought therefore that the government was incurring great risks in the policy of preserving game. They pressed on the secretary the urgency of removing the restrictions on the hunting of game in Nyassaland. The secretary assured the deputation that he was ready to take every possible step on proof received, but the relation of the tsetse fly to game was obscure still. The British South Africa Company had sent out a scientific commission under Dr. Kinghorn and the government another commission under Sir David Bruce, at a cost of $25,000 a year. The deputation was asking him to prejudge the result of the commission. He objected to the use of the word "game" and preferred to use "fauna," which were being preserved for the sake of science, but if the evidence made clear the danger of any one species to the human race science must give way.

The "Victim of 200 Accidents"

A man, aged 37, pleaded guilty to obtaining money by false pretences from tradesmen. His method was most ingenious. He would fall down and claim to have been injured through the negligence of the persons whom he made his victims. His deception was favored by a malformed wrist which he represented as due to the accident. As he generally claimed only a modest amount his victims paid rather than fight the case, which even if they were successful, would have involved them in much greater cost. If the cases had come into court he would soon have been detected. As they did not the deception continued. During three years he successfully made about 200 such claims. He was arrested through playing the same trick on two butchers on the same morning, alleging that he had fallen on pieces of fat outside their shops. The fact that both at once sought the assistance of the Incorporated Society of Meat Traders led to detection of the fraud. A confederate accompanied him, making notes on his behalf of the incident with particulars of the name and address of those from whom the money was to be obtained. He was sentenced to eighteen months' hard labor.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Dec. 15, 1911.

Disturbances at the Paris Medical School—Discussion Over Professor Nicolas

The Council of the Université de Paris has just acted on the cases of the five students who participated in the recent disorders at the Faculté de médecine. One of these students was acquitted. The four others were suspended, one for six and three for three months. Moreover, in consequence of the persistent serious disorders at the anatomy course, the minister of public instruction, on the advice of the council of the Université de Paris, has decided to close the medical school for the students of the first and second year until Jan. 5, 1912. If, after the reopening of the school, there are fresh disorders in any part whatever the school will be closed until the end of the first semester of the school year and in any case the students will not be permitted to make up the time lost.

A group of former pupils of Professor Nicolas at the Faculté de médecine de Nancy—professors, physicians and interns of the hospitals—have just offered their testimony in favor of their old teacher. They declare that many practitioners who have benefited by his instruction and his indefatigable devotion and who have now the necessary experience to judge a professor are moved to protest against the outbreaks which tend to discredit him in public opinion. The well-merited reputation which Professor Nicolas has acquired in France and abroad is moreover an irrefutable proof of his professional worth, and to this his appointment in the Université de Paris testifies further. The signers of this testimonial express the desire to see the speedy termination of a ridiculous campaign which can only produce serious injury to the prestige of the school and the real interests of the students.

Servetus' Study of Dissections

A passage in my letter of October 20 (THE JOURNAL, Nov. 11, 1911, p. 1627) surprises Dr. A. H. Burr of Chicago (THE JOURNAL, Nov. 18, 1911, p. 1713), who finds it strange that Prof. Charles Richet declared that Servetus had done no dissections. It goes without saying that, since I reported them, these were really Dr. Richet's words; and, moreover, five days after I dispatched my letter the same expressions were reproduced by the *Presse médicale* of October 25. With others, I can only share Dr. Burr's astonishment. The *Presse médicale* of December 29, for instance, publishes a letter from Dr. Léon Corral of Valladolid, who requests Professor Richet to state the grounds he has for thus revising this interesting point in the history of the unfortunate Spanish martyr. Professor Richet replies, "In saying that Michael Servetus had done no dissection, I exaggerated, but only slightly, for he cannot have done much dissection. It is indeed alleged that he studied anatomy as a pupil of Gunther, but for how short a time! He can have studied the cadaver only in the second half of 1535 and the first half of 1536; perhaps the whole year of 1536. It must be admitted that this is a short time in which to gain knowledge enough to reverse the doctrines of the masters and to establish what Vesalius himself, in spite of his long studies, was not able to ascertain, the non-perforation of the interventricular septum." M. Richet believes, moreover, that instead of diminishing the glory of Servetus, this fact increases it. In any case he considers Servetus' discovery—and he insists on this—as a veritable miracle.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Dec. 15, 1911.

Personal

Professor Uhthoff has accepted the call to succeed v. Michel in the chair of ophthalmology at Berlin.

State-Aided Insurance Against Sickness

According to the official statistics just published there were at the end of 1910 in the German empire 23,188 krankenkassen with 13,069,375 members. In the year 1910, 5,197,089 cases of sickness occurred among the members, amounting to 104,708,105 days of illness. The income amounted to $94.875,000 (379.500,000 marks) and the ordinary disbursements to $87,512,500 (350,500,000 marks). Among the latter is included the cost of illness, $80.000,000. The disbursement for illness included $19,100,000 for medical services, $12,050,000 for medicines and other remedies, $33.975,000 for sick money, $1,612,500 for the aid of pregnant and lying-in women, $1,875,000 for death benefits, $11.325,000 for hospital care and $50.000 for the care of convalescents. The expenses of management amounted to $5.100,000. The excess of assets over liabilities, i.e., the property of the krankenkassen, amounted to $74,100,000.

Further Reduction of Birth-Rate in Germany

From a summary by the imperial bureau of statistics we learn that the births for 1910, including still births, amounted to 1,982,836, as compared with 2.038.357 in 1909, and 2,076,660 in 1908. While the births fell in 1909 by 38,300 the reduction in 1910 was 55,000 more. For the first time since 1897 the number of births has fallen below two million. In 1910 there were 30.7 births per 1,000 inhabitants; the rate has never been so small in the last sixty years; it has been sinking for a long time after reaching its highest point in the seventies. From 1851 to 1860, the birth-rate for the present area of the German empire was 36.8 per 1,000 inhabitants, from 1861 to 1870, 38.8, from 1871 to 1880, 40.7 (with a maximum of 42.6 in the year 1876), from 1881 to 1890, 38.2, from 1891 to 1900, 37.4, from 1901 to 1910, 34.0. It is evident that the reduction in the last decade has been very marked. In 1908 the rate was 33, in 1909, 31.9. The rate of illegitimate births as compared with the entire number of births has been rising since 1903 following a previous fall; in 1903 there were in 100 births, 8.3 illegitimate, in 1909, 9 and in 1910, 9.1. With the reduction in births there has also been a reduction in deaths; in 1910 there were 1,103,723 as compared with 1,154,296 in 1909 and 1,197.098 in 1908. We have to go back to 1864 to find as low a number of deaths for the present area of the German empire. As compared with the population the mortality of 17.1 per 1,000 has never been so low as in the last year. In 1909 the rate was 18.1, in 1908, 19 and in the decade from 1901 to 1910 it was 19.5 as compared with 23.5, 26.5, 28.8, 28.4 and 27.8 in the preceding five decades. The natural increase of the population, that is, the excess of births over deaths amounted in 1910 to 879,113, as compared with 884,061 for 1909 and 879,562 for 1908 and shows in the last few years only a slight absolute increase. In comparison to the population it has undergone a slight reduction, being 13.6 per 1,000 persons as compared with 13.8 for 1909 and 14.0 for 1908. In the decade from 1901 to 1910 it amounted to 14.3 (with the maximum of 15.6 in the year 1902) as compared with 13.0, 11.7, 11.9, 10.3 and 9.0 with the previous decade. In spite of the reduction in births the increase in population in the last decade and also in the late years has been considerably higher than in the previous decade.

Issuing of Reprints for Advertising Purposes

The authorities in medicine have repeatedly protested against the distribution by manufacturers to the medical or lay public of medical articles containing pharmaceutical or other matter for advertising purposes. As a result the German medical press association (Deutsche medizinische Fachpresse) at its last general session took up this question and announced the following principles:

1. To hinder the unauthorized and uncontrollable reprinting of articles the editors are requested on the receipt of a manuscript to require a surrender of authorship rights. (According to Section 42 of the copyright law.)
2. There is no objection to a propaganda by special reprints, either in the interests of the author or of physicians and patients in case the following conditions are fulfilled:
3. The special reprint must be an unchanged reprinting of the original article. For advertising purposes single parts must not be made prominent by special type and no additions must be made or portions left out.
4. The distribution of reprints by an industrial firm may only be permitted on their promise not to allow distribution to the laity.
5. Special reprints furnished to a firm must not be used longer than to the end of the following calendar year without the renewed permission of the author. In order to secure the carrying out of this rule every special reprint shall bear the following printed statement on the title page: Distributed with the permission of the author until ....

It was further agreed: In case principles of this sort are finally adopted a formula must be determined on by the executive committee which all of the editors included in the association shall use when they inform an author that his article has been accepted for publication. With regard to the further treatment of these principles it was resolved: The executive committee is requested as soon as possible to inform the industrial association of the principles and request their opinion. The editors are then to be thoroughly informed as to the significance of the principles and requested as soon as possible to take up the matter with their publishers and to secure an agreement with them by which the publishers shall promise to maintain the principles. As soon as this is accomplished a later meeting of the members, if necessary, a special meeting, shall reach a final conclusion.

Premature Publication of Medical Articles in the Daily Press

It has happened several times that the daily papers have published abstracts of articles from the medical press, even before they had appeared in the medical journal. This was especially the case in the early development of salvarsan therapy. In some cases it could be definitely assumed that the daily papers could only have become acquainted with the matter through the authors themselves. The general session of the German medical press association has consequently declared it not to be permissible to accept articles from authors who have communicated the substance of their articles to the daily press previous to their publication.

Prussian National Conference for the Protection of Infants

The first Prussian national conference for the protection of infants met in Berlin, December 9, and took up the subject of the organization of the homes for children in Prussia, with especial reference to regulations for infants and small children. Experience has shown that mortality among the children in homes is quite large, especially because they have usually to do with illegitimate children who are more endangered *per se* than the legitimate. In addition it has happened that such children are often badly treated and suffer in health as well as in their moral development. For some years attention has been called to this abuse by various parties, especially physicians and in different cities an organization of these institutions has been effected. The organization secured in Leipsic by Dr. Taube has served as a model. The meeting called here took up the question of securing a uniform organization for the whole of Prussia. The city physician of Halle, Professor v. Drigalski, read a report regarding the medical requirements in this field. According to him the establishment of offices for the care and instruction of helpless mothers and stations for receiving them with the child or for the child alone must be recognized as necessary. Such a bureau (*Fürsorgeamt*) aids the mother in her rights with reference to the father of the child by a professional guardian; it conducts the correspondence with other officials and care taking offices. All illegitimate births must be immediately reported to it, with the place where they occur. This office furnishes permission for the adoption of foster children and investigates the care taking stations. Fraudulent adoption requires special attention. Medical and nursing supervision of the resting women is secured by the care taking office. Changes in the care taking stations, deaths of foster children and unsuitable nursing places are reported to this office. The women inspectors, nurses and those in care of orphans, the assistants, the district, municipal and communal sisters, etc., work according to the local conditions, either for a salary (as in large cities) or voluntarily; in addition to these in the country districts single salaried nurses (district nurses) or several, paid for their special activity (midwives), cannot well be dispensed with. Also the physician must stand in a close relation by appointment (official or honorary) to the municipal or district authorities, and police supervisory authority must be conferred on him and on the nurses. A combination with other hygienic institutions (infancy, tuberculosis, inebriety) can only be effected where the assistance of the voluntary activity of women can be made available as in country districts, without too many patients with open tuberculosis. With an accumulation of tuberculous cases, as for instance in large cities, the nurses of orphans should not at the same time undertake the care of tuberculosis cases. Under like circumstances the medical control should not be simply left to a municipal infant's care station or one conducted by an association. On the other hand, it is very suitable that the conduct of the infant's care station should be committed to a pediatrician devoted to the care of foster children. The introduction of an inspection of corpses, at least for all small children, is to be sought for.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Dec. 12, 1911.

Personal

Professor Salzmann, for some years extraordinary professor of ophthalmology in the University of Vienna, has been appointed ordinary professor in this branch at Graz. He is a former assistant of Fuchs and is well known among the American colony in Vienna for the excellent work done in his English classes, both as regards diagnostic and laboratory work. Professor Chvostek, who only a few weeks ago had assumed charge of the fourth medical clinic, has been operated on for cholecystitis and is said to be progressing favorably. Also Professor von Neusser is said to be on the road to improvement, although it transpires that his kidney disease was malignant.

Decrease in the Number of School Children

The official municipal periodical *Amtsblatt der Stadt Wien* contains in its last issue an article on the decrease in the number of school children, from which the following interesting figures are taken: During the year 1900 there were born in Vienna 52,346 infants (31 per thousand inhabitants); in 1905 the figure was 49,538 (27 per thousand); in 1910 it stood at 42,336, or 22 per thousand. This year the number till October is already 1,000 less than for the corresponding part of last year. Although the death-rate has fallen too, this item offers no compensation. As regards the school children in Vienna, for the years 1908, 1909 and 1910, we find the following figures: 1908, 237,641 or 5,445 than in 107; for 1909 the figures were 241,180, an increase of 3,539; for 1910 they were 242,386, or 1,206 more than the previous year. For 1911, however, the figures are 240,870, showing 1,516 less than in 1910. A welcome feature about this phenomenon is that fewer pupils are allotted to each teacher (61 in 1891 against 49 at present) and that the air-space in the class-rooms is larger for each individual.

Dichotomy in Austria

The abuse known as dichotomy, or division of fees, has within the last few years been observed here in increasing frequency. The honest elements—it may be said safely that the overwhelming majority of our confrères justly claim this epithet—are brought into very unpleasant conditions by such disloyal methods. An action by the former president of the medical council was directed against such dishonest dealings, but its effect was practically nil. A private understanding among all surgeons, as well as among specialists, is now aimed at, so as to prevent in the future the existence of similar conditions. The sanatoriums are also urged to stop bribery— for it is nothing else—of the profession by offering a certain percentage to the doctor who sends a patient thereto.

An Unusual Accident

Some days ago a man was killed in an electric power station by touching two live wires with his head and left arm. He was penetrated by a current of 5,000 volts and was found dead soon afterward, while on the floor near his head were found a number of small pear-like rolls. The origin of these rolls was first discovered at the post-mortem table, one such roll being found lodged between the scorched, black bone of the skull and the ruptured dura mater. It was recognized that the current had melted or vaporized the bone, and that the pear-like rolls consisted of calcium phosphate, melted into balls by the enormous heat. Another remarkable finding was marked edema of the lungs and aspiration of stomach contents into the bronchi, showing that the injured man must have lived a short time after having touched the wire.

Marriages

I. Hope Alexander, M.D., Pittsburgh, to Miss Mabel Merrick Mendenhall of Mendenhall, Pa., at Philadelphia, December 21.

Norman Spear Dudley, M.D., Church Hill, Md., to Miss Clara Elizabeth Walls of Wilmington, Del., December 21.

John Francis Lewis, M.D., Depue, Ill., to Miss Ida Samuelson of Princeton, Ill., at Ottawa, Ill., December 14.

Capt. Mahlon Ashford, M. C., U. S. Army, to Miss Elizabeth Beale of Washington, D. C., December 20.

Conrad F. Sayre, M.D., Mason City, W. Va., to Miss Charlotte Burnell of Syracuse, O., December 23.

Charles Ginsberg, M.D., New York City, to Miss Mabel Goodman of Philadelphia, January 1.

James Albert Morgan, M.D., Philadelphia, to Miss Elsie Johnson of Media, Pa., December 20.

Samuel Metcoff, M.D., to Miss Ella Felicitas Rappaport, both of Chicago, December 31.

Henry G. Pieper, M.D., to Miss Ida C. McCullough, both of St. Louis, December 14.

Max Biesenthal, M.D., to Miss Claudine Bacharach, both of Chicago, December 20.

Deaths

Joseph Edward Janvrin, M.D., a widely known specialist in gynecology and one of the founders of the International Congress of Gynecology and Obstetrics in 1893; died in Roosevelt Hospital, New York City, December 21, five days after an operation for appendicitis, aged 71. He was born in Exeter, N. H., and commenced his medical studies at the College of Physicians and Surgeons in New York City, but discontinued them to go to the front as assistant surgeon of the Fifteenth New Hampshire Volunteer Infantry. Later he completed his studies and was graduated in 1864. He located in New York City and began work at once in his chosen field of gynecology. From 1872 until 1882 he was assistant surgeon in the Woman's Hospital in the state of New York and since 1883 had been gynecologist and consulting surgeon to the New York Skin and Cancer Hospital and St. Elizabeth's Hospital, New York City, and consulting gynecologist to the Muhlenberg Hospital, Plainfield, N. J. He was a member of the American Medical Association for many years; president of the American Gynecological Society in 1902-1903; of the New York Obstetrical Society in 1890-1891, and of the New York County Medical Society in 1896-1897. Dr. Janvrin made many contributions to the literature of gynecology. Among those of special interest were the monographs on tubal pregnancy and carcinoma of the uterus.

LaFayette F. Rinkle, M.D. University of Michigan, Ann Arbor, 1874; Long Island College Hospital, Brooklyn, 1874; a member of the American Medical Association; died at his home in Boonville, N. Y., December 6, from heart disease, aged 60. At a special meeting of the Oneida County Medical Society, the committee appointed to prepare a tribute to Dr. Rinkle, reported the sorrow and regret of the members at the death of Dr. Rinkle, eulogizing him for his clean and useful life, his intelligence, his faculty of accurate observation and his willingness to sacrifice himself to the interests of his patients under all circumstances.

David Richard Wallace, M.D. New York University, New York City, 1854; surgeon in the Confederate service throughout the Civil War; one of the founders and an early president of the State Medical Association of Texas, and president of the Waco Medical Society; superintendent of the State Insane Hospital, Austin, from 1874 to 1879, and superintendent of the North Texas State Hospital, Terrell, from 1883 to 1891, and since that time a specialist on nervous and mental diseases; died at his home in Waco, November 22, aged 86.

Peter David Hughes, M.D. Fort Wayne (Ind.) College of Medicine, 1884; a member of the American Medical Association; clinical professor of surgery in the School of Medicine of the University of Kansas, Topeka, and the College of Physicians and Surgeons, Kansas City; founder and chief of the medical staff of Bethany Hospital; who was operated on in Rochester, Minn., in June last for abdominal disease; died at his home in Kansas City, Kan., December 11, aged 56.

Jephtha W. Harris, M.D. Tulane University, New Orleans, 1861; a member of the Florida Medical Association; assistant surgeon in the Confederate Army and later in the Confederate Navy during the Civil War; a member of the state legislature in 1877; superintendent of public instruction of Monroe County for ten years; collector of customs from 1855 to 1859; health officer of Key West for four years; died at his home in Key West, recently, aged 72.

Thomas D. Berry, M.D. University of Texas, Galveston, 1898; of Manor, Tex.; a member of the American Medical Association, and Association of Military Surgeons of the United States; from 1900 to 1907, an officer of the U. S. P. H. and M.-H. Service and on "waiting orders" since that time; died in the Austin Sanitarium, December 18, from the effects of a gunshot wound, accidentally received while hunting, aged 35.

Rhett Goode, M.D. University of Alabama, Mobile, 1871; dean and professor of anatomy and operative surgery in his alma mater; a member of the Medical Association of the State of Alabama, and president of the American Association of Railway Surgeons; health officer of Mobile, chief surgeon of the Mobile and Ohio, New Orleans, Mobile and Chicago, and Southern railroads; died in Mobile, December 23, aged 58.

Andrew Benedict Yard, M.D. College of Physicians and Surgeons, New York City, 1896; a member of the American Medical Association; a specialist in diseases of children and chief of the department of pediatrics in the Vanderbilt Clinic; died at his home in New York City, December 14, from appendicitis, aged 38.

William J. H. Bellamy, M.D. New York University, New York City, 1868; a member of the Medical Society of the State of North Carolina; formerly president of the New Hanover County Medical Society; one of the managers of the James Walker Memorial Hospital, Wilmington, N. C.; formerly a member of the State Board of Medical Examiners; died at his home in Wilmington, November 17.

William A. Atchison, M.D. University of Louisville, 1852; a member of the American Medical Association and one of the oldest physicians of Nashville, Tenn.; died at his home, December 18, from heart disease, aged 80. The honorary pallbearers included the officers and members of the Nashville Academy of Medicine, of which Dr. Atchison had been a member for many years.

Summerfield Berry Bond, M.D. University of Maryland, Baltimore, 1883; a member of the American Medical Association; for a time associate professor of genito-urinary diseases in his alma mater; chief medical examiner of the relief department of the Baltimore and Ohio Railroad; died at his home in Baltimore, December 21, from carcinoma of the liver, aged 50.

Josiah Bassett Trudgian, M.D. George Washington University, Washington, D. C., 1887; a member of the medical staff of the First District of Columbia Infantry, U. S. V. during the Spanish-American War, and later an employee of the Government Printing Office, Washington; died at his home in Washington, November 26, from angina pectoris, aged 55.

Homer Sanford Medford, M.D. George Washington University, Washington, D. C., 1895; a member of the Medical Association of the District of Columbia and until recently a member of the faculty of his alma mater, physician to the poor of the District; died in Providence Hospital, Washington, December 16, from typhoid fever, aged 38.

John Theodore Harding Slayter, M.D. University of Vermont, Burlington, 1885; contract surgeon U. S. Army and assistant surgeon U. S. V. during the Spanish-American War, and for seven years thereafter in the Philippine Islands; later a practitioner of Helena, Mont.; died at his home in Watertown, Mass., November 24, aged 49.

Thomas Sudler (license, Maryland); formerly sheriff of Queen Anne County; a member of the Baltimore City Council from 1889 to 1891 and thereafter an official of the health department until 1903 when he was appointed coroner of the Eastern District of Baltimore; died at his home in that city, November 14, from heart disease, aged 62.

James Wilson Hannum M.D. College of Physicians and Surgeons, New York City, 1877; a member of the American Medical Association; for several years president of the Ludlow (Mass.) Savings Bank; one of the founders of the Ludlow Hospital and first president of the Ludlow Hospital Society; died at his home, December 9, aged 60.

Ray F. Whetstone, M.D. Minneapolis College of Physicians and Surgeons, 1897; of Minneapolis; was killed in a collision between an express train on the Chicago, Milwaukee and St. Paul Railway, on which he was a passenger, and a special freight train running as a second section of the train, at Odessa, Minn., December 18, aged 39.

Bruno Jaehnig, M.D. University of Michigan, Ann Arbor, 1865; assistant surgeon of Volunteers during the Civil War; since 1869 a practitioner of Red Wing, Minn.; health officer of that city from 1898 to 1907, and physician to the State Training School since 1892; died at his home, December 22, from heart disease, aged 70.

Oswald A. Lett, M.D. University of Louisville, 1893; formerly a member of the American Medical Association and for several years a practitioner of Newburg, Ind.; died at his home in Corydon, Ky., December 11, from the effects of morphin, self-administered it is believed with suicidal intent while despondent, aged 43.

John Cole Graham, M.D. Western Reserve University, Cleveland, 1873; Bellevue Hospital Medical College, 1874; a member of the American Medical Association; for several years health officer of Laporte City, Ia., and local surgeon to the Rock Island system; died at his home, December 15, from heart disease, aged 61.

Eugene A. Curtis, M.D. Bennett Medical College, Chicago, 1873; formerly of Chicago, but for the last four years a resident of Dowagiac, Mich.; died in the Kalamazoo State Hospital, December 9, from pulmonary edema, aged 56.

Andrew Edmund Macdowell, M.D. New York University, New York City, 1849; since 1851 a practitioner of Galesburg, Ill.; died at his home in that city, December 15, from pneumonia, aged 86.

Dennis Patrick Wims, M.D. Dartmouth Medical School, Hanover, N. H., 1897; a member of the American Medical Association; demonstrator of anatomy in his alma mater; for fourteen years a practitioner of Providence; died in the Rhode Island Hospital, December 8, from pneumonia, aged 42.

Joseph Gaunt Edwards, M.D. Bellevue Hospital Medical College, 1878; a member of the American Medical Association; president of the Gloucester County (N. J.) Medical Society, and coroner of Gloucester County; died at his home in Williamstown, December 21, from heart disease, aged 62.

Reuben De Jernett, M.D. Medical College of Georgia, Augusta, 1857; division surgeon in the Confederate service during the Civil War, and later a practitioner of Jefferson, and Greenville, Tex.; died at the home of his son in Peniel, Tex., November 12, from senile debility, aged 87.

John Campbell Fleming, M.D. University of Michigan, Ann Arbor, 1880; of Shirleysburg, Pa.; a member of the Medical Society of the State of Pennsylvania and president of the Huntingdon County Medical Society; died during a surgical operation in Philadelphia, December 10, aged 60.

Nevin Blank Werst, M.D. Jefferson Medical College, 1902; formerly a member of the staff of Atlantic City (N. J.) Hospital, and later a practitioner of Egg Harbor City, N. J.; died at the home of his parents in Parkesie, Pa., December 2, from tuberculosis, aged 33.

Charles Fague Sterne, M.D. George Washington University, Washington, D. C., 1906; who entered the U. S. Navy in 1908 as assistant surgeon, lieutenant (junior grade); recently on duty with the Pacific Torpedo Fleet; died in Asheville, N. C., December 7, aged 31.

David Henson Coombs, M.D. Louisville (Ky.) Medical College, 1894; a member of the American Medical Association; one of the best known of the younger physicians of Southern Indiana; died at his home in Charlestown, December 8, from pneumonia, aged 41.

James Sumner Greene, M.D. Harvard Medical School, 1863; a member of the Massachusetts Medical Society; a veteran of the Civil War and for forty years a practitioner of Dorchester Lower Mills, Boston; died at his home, December 14, from pneumonia, aged 77.

George William Winterburn, M.D. Eclectic Medical College of the City of New York, 1875; of New York City; a medical editor and teacher in medical Colleges for several years; died in the New York Hospital, November 19, from cerebral hemorrhage, aged 66.

Charles J. C. Fischer, M.D. Washington University, St. Louis, 1877; a member of the American Medical Association and Mississippi Valley Medical Association; alderman, and in 1887, mayor of Carlinville, Ill.; died at his home, December 15, aged 57.

Fabius Julius Haywood, M.D. Bellevue Hospital Medical College, 1868; a member of the Medical Society of the State of North Carolina, and a Confederate veteran; died at his home in Raleigh, December 14, from cerebral hemorrhage, aged 71.

Benjamin B. Singletary, M.D. Tulane University, New Orleans, 1862; a Confederate veteran and for many years a practitioner of Port Vincent, La.; died at the home of his daughter in Prairieville, La., November 20, aged 74.

Jefferson Scoonover, M.D. College of Physicians and Surgeons, New York City, 1869; a veteran of the Civil War; postmaster of Greenville, Texas, for fourteen years; died at his home in Berkeley, Cal., November 14, aged 78.

Charles Barton Allen, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1881; local surgeon of the Burlington, Cedar Rapids and Northern Central Iowa railroads, at Morning Sun, Ia.; died at his home, December 13, aged 61.

John William Arnold, M.D. Central College of Physicians and Surgeons, Indianapolis, 1885; formerly of Shideler, Ind.; died in Sts. Mary and Elizabeth Hospital, Louisville, Ky., December 12, from pneumonia, aged 59.

William Rider Page, M.D. Rush Medical College, 1868; a veteran of the Civil War and for many years a practitioner of Washington, D. C.; died at his home in that city, November 26, from valvular heart disease, aged 65.

Henry Clary Hart, M.D. University of Louisville, Ky., 1865; for many years a member of the Winchester Board of Education; died at his home in Winchester, Ky., December 11.

Lucius Deyampert Webb, M.D. New York University, New York City, 1870; died at his home in Greensboro, Ala., December 1, aged 64.

Sylvester S. Smith, M.D. Rush Medical College, 1869; a member of the Medical Society of the State of Pennsylvania and formerly coroner of Cameron County; died at his home in Emporium, November 22, aged 66.

Oscar Lyndon, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1899, of Athens, Ga.; visiting surgeon to the Hospital for Incurables, at that place; died in Atlanta, November 19, from heart disease, aged 35.

William H. Willett, M.D. Vanderbilt University, Nashville, Tenn., 1891; of Adams, Tenn.; formerly an attorney; a veteran of the Civil War; died at an infirmary in Nashville, December 6, aged 70.

John Warren Thorp, M.D. New York University, New York City, 1871; a member of the American Medical Association; died at his home in Oxford, N. Y., December 15, from pneumonia, aged 72.

Joseph V. Milton, M.D. University of Maryland, Baltimore, 1901; of Hamilton, Va.; a member of the Medical Society of Virginia; died in Harrisonburg, Va., December 16, from pneumonia, aged 35.

Bisland Shields, M.D. Tulane University, New Orleans, 1860; a member of the Jefferson County (Miss.) Medical Society; died at his home in Church Hill, October 7, from gastritis, aged 73.

John Walter Flatley, M.D. Jefferson Medical College, 1903; physician to the out-patient department of Jefferson Hospital; died at his home in Philadelphia, December 12, from pneumonia, aged 30.

Jens P. Sonnickson, M.D. Medical College of Ohio, Cincinnati, 1875; for many years a practitioner of Blair and Whitehall, Wis.; died at his old home in Christiania, Norway, October 22, aged 76.

George W. Roberson, M.D. Bellevue Hospital Medical College, 1893; a member of the Medical Association of Georgia; formerly of Louisville; died at his home in Macon, December 7, aged 42.

O. E. Bingham, M.D. New York Homeopathic Medical College, New York City, 1867; of Omaha; died at the home of his daughter in Lincoln, Neb., December 11, from pneumonia, aged 85.

Asa Dennis Smith, M.D. Boston University, School of Medicine, 1877; a veteran of the Civil War; died at his home in Dorchester, Boston, November 26, from heart disease, aged 76.

Fairfield Snyder, M.D. University of Buffalo (N. Y.), 1872; of Corunna, Ind.; died in the Richmond State Hospital, November 10, from cerebral hemorrhage, aged 64.

George Wellesley Gates, M.D. Harvard Medical School, 1884; a member of the American Medical Association; of Los Angeles, Cal.; died at Pomona, Cal., December 13.

John W. Edwards, M.D. University of Louisville, Ky., 1869; formerly of Courtland, Ala.; died at his home near Hillsboro, Ala., recently, from heart disease, aged 66.

John A. Callen, M.D. Homeopathic Medical College of Missouri, St. Louis, 1875; died at his home in Auburn, Cal., December 7, from pneumonia, aged 72.

William Fenton Millington, M.D. New York University, New York City, 1877; died at his home in South Brooklyn, N. Y., December 15, from nephritis, aged 56.

Frederick Charles Kyser, M.D. Eclectic Medical Institute, Cincinnati, 1905; died at his home in Grenola, Kan., December 3, from cerebral hemorrhage, aged 42.

Reuben Harrison Smith, M.D. University of Louisville (Ky.), 1860; died at his home in Fort Worth, Texas, November 3, from nephritis, aged 76.

Jacob R. Armstrong (license, Iowa, practitioner, 1886); a veteran of the Civil War; died at his home in Irvington, December 4, aged 63.

John Wesley Moore, M.D. Cincinnati Physio-Medical College, 1874; died at his home in Mexico, Ind., December 11, from tuberculosis, aged 63.

Robert J. Coffman, M.D. Hospital College of Medicine, Louisville, 1876; died at his home in Whiteville, Tenn., December 10, aged 62.

Alonzo F. Harris, M.D. Jefferson Medical College, 1860; died at his home in Opp, Ala., December 7, from senile debility, aged 71.

Alfred Gilmore Young, M.D. Jefferson Medical College, 1874; died at his home in Wilkinsburg, Pa., November 26, aged 63.

Sarah E. Wisner, M.D. Hahnemann Medical College, Chicago, 1876; died at her home in Sharon, Kan., October 7, aged 64.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

SURGERY, GYNECOLOGY AND OBSTETRICS

A Medical Periodical that is to be Clean from Cover to Cover

Two weeks ago, we commented editorially on the discouraging fact that the editor of a certain high-class surgical journal claimed to be unable to distinguish between proprietaries that have been shown to be fraudulently exploited, and those of presumable value that are advertised honestly. That the difference is recognized and understood by some editors is evident from the admirable letter which we are about to reproduce.

This letter has been sent out to a number of physicians over the country by the managing editor of *Surgery, Gynecology and Obstetrics*, a journal whose reading pages have always been high-class and whose advertising pages, while not free from criticism, have been far in advance of those of the average medical journal.

FAKER
DEATH
WE GUARANTEE TO CURE CONSUMPTION
CONSUMPTION CURED IN DAYS
FAKER AND DEATH DEALERS IN CURES FOR CONSUMPTION
TESTIMONIALS
TESTIMONIALS

AMERICAN MEDICAL ASSOCIATION CARTOON SERIES

PARTNERS

As will be seen by the letter, the editor recognizes the impossibility of any one man being able to determine whether or not certain proprietaries are worthy or unworthy additions to therapeutics. The American Medical Association recognized the same fact when it brought into existence the Council on Pharmacy and Chemistry for the purpose of subjecting to expert examination the various proprietary remedies on the American market. After Dec. 31, 1911, *Surgery, Gynecology and Obstetrics* will advertise no proprietary remedies that have not been examined and approved by the Council on Pharmacy and Chemistry.

The letter, announcing this fact, follows:

Dec. 20, 1911.

My Dear Doctor:—It may interest you to know that *Surgery, Gynecology and Obstetrics*, beginning with the January, 1912, issue, will be guided in its acceptance of advertising of pharmaceutical preparations by the rulings of the Council on Pharmacy and Chemistry of the American Medical Association.

For several years I have been attempting to regulate my advertising on my own arbitrary standards, and from time to time have refused or dropped the more objectionable advertisements. It has been difficult, however, to solve the intricacies of the problem and to adopt an arbitrary and independent standard; therefore, for the future, I have concluded to adopt the standard of the Council on Pharmacy.

Six months ago, after an interview with Dr. Simmons, at which time I was particularly impressed with his great work, I instructed Mr. A. D. Ballou, our advertising manager, to terminate all existing contracts inconsistent with the above policy and to institute the reform with the January, 1912, issue.

In accordance with this policy, the following advertisements will be terminated with our December, 1911, number:

Bovinine, Pepto-Mangan (Gude), Fellow's Syrup of Hypophosphytes, Listerine, Glycothymoline, Gray's Glycerine Tonic, Ergoapiol, Glycoheroin, Antiphlogistine, Cytone.

Yours very truly, Franklin H. Martin, Managing Editor.
31 North State Street, Chicago.

CONVICTIONS UNDER THE FOOD AND DRUGS ACT

More Frauds Exposed by the Bureau of Chemistry

Since the last series of abstracts of Notices of Judgment against "patent medicine" frauds appeared in The Journal the following have been issued:

SWEET'S HONEY VERMIFUGE

The Van Vleet-Mansfield Drug Company of Memphis, Tenn., sold a product which it claimed was "a dead shot for worms." It called its nostrum Sweet's Honey Vermifuge and sold it as a "perfectly harmless" preparation for children. While the name would naturally give the impression that Sweet's Honey Vermifuge contained some honey, no honey could be found in it. Instead the federal chemist declared that it contained the following drugs:

Santonin
Senna
Methyl salicylate
Water
Sodium salts
Sugar
Alcohol
Coloring matter

The stuff was declared misbranded because of false and misleading statements regarding the quantity of alcohol, because it contained no honey and, further, because any preparation containing santonin is not "perfectly harmless" especially for children. The manufacturer pleaded guilty and was fined $10.—[*Notice of Judgment No. 1113.*]

DR. TOWNS' EPILEPSY CURE

The Dr. Towns' Medical Company of Fond du Lac, Wisconsin, is one of the numerous epilepsy cure fakes. It is advertised by methods common to concerns of that type. Towns sends out a leaflet giving what he calls an "endorsement" of his nostrum "from the highest authority known." The "highest authority" referred to is Willard H. Morse, M.D., F.S.Sc. (Lond.). Morse seems to make a practice of furnishing write-ups for quacks and medical fakers and, consistently enough, he is a "fellow" of that serio-comic humbug, the "Society of Science, Letters and Art" of London. These fellowships cost $5.00. Towns also publishes an "editorial" entitled "Plain Truth About Proprietary Remedies" from the *American Journal of Health*. It is, of course, laudatory of Towns' remedy. Such "editorial" endorsement means little to those who know that the *American Journal of Health* was a publication that would endorse any fake or quack that would pay the price. When the Epileptic Institute Company of Cincinnati was put out of business by the government, the proprietor of this fraud said that his concern purchased the names of possible victims from Dr. Towns of Fond du Lac, Wis. (see "Nostrums and Quackery," page 295).

Towns' nostrum was analyzed by the federal chemists who reported it to consist of:

1. A watery solution of ammonium bromid and sodium chlorid (salt) with valerian, flavored and sweetened.
2. A sugar-coated pill of sulphonal mixed with talcum and tolu.
3. Black pills composed of charcoal, sugar, phosphorus and inorganic matter, with a small amount of strychnin-bearing material.

The stuff was declared misbranded because of the ridiculously false claim that it would "cure" epilepsy. The case was brought to trial before the Supreme Court had decided that lies such as Towns printed were not contrary to the spirit of the Food and Drugs Act. Towns pleaded guilty and was fined $25.—[*Notice of Judgment, No. 1170.*]

DIXIE FEVER AND PAIN POWDER

These "headache powders" were prepared and sold by the Morris-Morton Drug Co., Fort Smith, Ark. The following claims were made for them:

> "Useful in all cases of fever to lower the temperature and relieve pain."
>
> "A positive and immediate relief for headache, neuralgia, catarrh, la grippe, cold in the head, rheumatism, sleeplessness, and all nervous conditions."
>
> "It relieves all pains in the Head, Face and Body, which are caused by Cold, La Grippe, Neuralgia, Exposure or Dissipation."
>
> "If suffering from periodical attacks of the above troubles (Headache, Neuralgia, La Grippe, Cold in Head, Earache, Toothache, Pains over Eyes, Rheumatism), they will grow less frequent and less severe by using these powders."
>
> "For Insomnia or Sleeplessness, one powder taken on going to bed will produce a natural and healthy sleep."

As these claims were severally and individually false and misleading the nostrum was declared misbranded. The company pleaded guilty and was fined $10.—[*Notice of Judgment, No. 1178.*]

STELLO'S ASTHMA CURE

Stello's Asthma Cure was a product of one W. H. Muller, New York City, and was sold under the following preposterous claims:

> "It is entirely vegetable."
> "Everyone is promised a cure."
> "A permanent cure is assured to all."
> "A proven radical and permanent cure."

This "entirely vegetable" product was found to contain, according to the government chemists, the following drugs:

Potassium iodid
Glycerin
Cannabis indica
Alcohol

It was declared misbranded because the quantities and proportions of cannabis indica and of alcohol were not stated on the label. Muller pleaded guilty and was fined $50.—[*Notice of Judgment, No. 1179.*]

Correspondence

Rural Sanitation Again

To the Editor:—I was very much interested in the editorial (The Journal, Oct. 7, 1911, p. 1214) on sanitation in rural districts and the letter elicited by it from Dr. Dorety (The Journal, Oct. 28, 1911, p. 1473). I have for the past few years been secretary of the territorial board of health in a territory having no large cities, and the problem of the small town and the village has been of particular interest to me. I wish what I say to be understood as applying only to that part of a state lying outside towns of 50,000 or more inhabitants.

In my opinion, the divorcement of public health work from private practice (or other interests) is quite as important as its divorcement from politics. Accepting this premise, it follows that in order to obtain competent full-time men, with the consequent increases in salaries, the local taxes must be increased or the sanitary unit must be enlarged to include several counties. The latter should, on account of its economy, be more acceptable.

This enlargement of the area of the sanitary unit necessitates either the cooperation of the constituent counties in the matter of raising funds for the assumption of this function by the state. The latter would be much the simpler and, aside from eliminating local disputes over pro rated expenses, would render possible the coordination of the public health work of the state. It would also, presumably, avoid any constitutional difficulties, and some promise of promotion might be held up as an incentive for those in less important districts. I feel quite certain that direct *control* by the state department should result in far greater efficiency than does *supervision.* That has been the experience with the registration of vital statistics and the cases seem analogous. The counties or towns should bear the expenses of quarantines, but these can be maintained quite as effectively by the police or a lay inspector if supervised by a qualified superior.

Essentials of rural sanitation are pure water-supplies and sewerage. These also make cooperation desirable if not necessary. Many small places could afford public water-supply systems if it were possible for them to incorporate without the necessity of burdening themselves with the expense of an ordinary town government, and if they could compel all households of the corporation to connect with the system. By permitting the incorporation of such sanitary areas, by having at their service a state sanitary engineer to advise, and by having a state health department to educate the people to take advantage of their opportunities, most of the defects of rural sanitation would be eliminated. As stated in the above-mentioned editorial, most of the sanitary advances have been made in the cities. (The vital statistics of the registration area show a practically straight line for the rural death-rate from 1900 to 1908.) It is seemingly necessary, therefore, that the methods of the city should be adopted in the country, and not the least among these methods is the character of the public health organization.

The cities have largely done away with their boards of health and substituted departments under control of commissioners, with the employees under civil service rules. Executives are employed for executive work, technicians for technical work, clerks for clerical work and laymen for lay work. That is the logical way, and, if local control be abolished and the state properly districted, I think it is applicable to the rural areas of our states.

Edward S. Godfrey, Jr., Phoenix, Ariz.

Loose-Leaf Medical Books

To the Editor:—Those of us in moderate circumstances find it a considerable drain on our resources to keep our libraries up to date. For instance, a work on practice composed of several volumes necessitates quite an outlay, and it is a hardship under present conditions to pay for a work of this kind when in five or six years it will be obsolete. I have wondered why some publisher has not issued this class of books in loose-leaf bindings, selling them on the condition of keeping them revised up to date by issuing new loose leaves when necessary, these to be slipped into place and the old leaves to be removed. Of course, this would call for a greater initial cost and a yearly assessment for keeping the work revised but it would be cheaper in the end, and we would have a work up to date as long as the assessment was kept paid. I think that there is none of us who would not be glad to pay more to have the satisfaction of knowing we were buying something that could be used permanently.

C. M. Chilton, Gunnison, Miss.

Subnitrate of Bismuth in Pruritus Ani

To the Editor:—In your Therapeutic Department of The Journal for December 30, p. 2138, I noticed an article on pruritus ani, in which a variety of remedies were mentioned, all undoubtedly good in conditions named, but I failed to see mention of one application which has always been a favorite with me, especially in such cases as are associated with an excess of moisture about the anal region, and where a due attention is not paid to absolute cleanliness of the parts. My remedy is subnitrate of bismuth, and is used as follows: After thoroughly cleansing the surface with water, and a bland soap if necessary, I follow with a weak solution of phenol (carbolic acid) and dry thoroughly. I then take a square piece of gauze, one thickness only, about 4 or 5 inches square, lay it on the table and put 1 or 2 ounces of bismuth in the center, gather the edges together and tie in such manner as to make a loose bag, and direct the patient to "spat" the surface freely, while in squatting position, until the skin is thoroughly dusted over, this dusting to be repeated as often as the part becomes moist enough for more to adhere, but the washing only once a day or after defecation.

Many old men are greatly annoyed by fast accumulating smegma under the prepuce, if long enough to cover the glans, and if not often cleaned away it becomes offensive and produces the condition of balanitis and extreme discomfort. If the above treatment is made use of in such cases prompt and permanent relief is most positive.

G. W. JOHNSON, Savanna, Ill.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE COMPOSITION OF BAKING-POWDER

To the Editor:—1. What is a good formula for the compounding of non-injurious, efficient baking-powder?

2. What harmful substances are present in baking-powders now on the market? L. L.

ANSWER.—1. In general, baking-powders consist of a carbonate or bicarbonate from which carbon dioxid is liberated by the action of a second substance, the so-called "acid" ingredient, when the powder comes in contact with moisture. For the carbonate, sodium bicarbonate (baking soda) is used and for the acid constituent one of three substances is used, viz., (1) potassium acid tartrate (cream of tartar), (2) calcium acid phosphate, and (3) potassium aluminum sulphate (potash alum) ,or ammonium aluminum sulphate (ammonia alum). Baking-powders containing tartrate introduce sodium potassium tartrate into the bread; those containing phosphate introduce calcium phosphate and sodium phosphate; and those containing alum introduce aluminum hydrate, sodium sulphate and either potassium or ammonium sulphate, according to whether potassium or ammonium alum was used. Considerable has been written on these residual substances left in bread by baking-powders, and especially, pro and con, regarding the harmfulness of alum; but up to the present, the question is still an open one, although alum is either prohibited or required to be especially declared on labels in some states.

In Bulletin 13, Bureau of Chemistry, Department of Agriculture, formulas are given for preparing efficient and harmless baking-powders. The following is the formula for the powder containing the greatest amount of available carbon dioxid:

"Cream of tartar................	6 ounces,
Baking-soda	3 ounces,
Corn-starch	1 ounce."

In commenting on the home manufacture of baking-powder, the bulletin directed attention to three requirements, viz., (1) purity of ingredients, (2) dryness of ingredients and (3) thorough mixing. If pure ingredients be purchased and these, with the exception of the baking-soda, be thoroughly dried, at a temperature of 221 F. (105 C) if possible, the chief obstacles to successful manufacture of baking-powder are removed.

2. Out of over 1,000 judgments issued by the government against adulterated foods and drugs only four were issued against baking-powders, and these on account of short weight. As was mentioned above, some evidence has been brought forward which indicates that alum is an undesirable and harmful constituent of baking-powder, but until more thorough investigations have been made, nothing more definite can be said.

THE WORDS SECRETE AND EXCRETE

To the Editor:—I wish to call attention to an error in expression in the editorial on "The Edema of Nephritis" (THE JOURNAL, Dec. 16, 1911, p. 1998). In speaking of the immediate cause of nephritic edemas you ask: "Is the inability of the kidneys to secrete water the fundamental feature, or their inability to secrete salts?" As the kidneys are organs of excretion and their products excretions, not secretions, the term "to secrete" is here decidedly incorrect. The correct term is to excrete. M. LEON, M.D., Mount Olive, Ill.

ANSWER.—We are glad to find that our pages are watched carefully, especially by persons who seek to use the English language with precision. It happens, however, that we used the term "secrete" in the editorial intentionally, desiring to avoid conveying the idea of throwing off involved in "excrete." It is, of course, to be regretted if in so doing we have caused confusion in the minds of any of our readers, but the justification for our use of the term is as follows: The kidneys cannot excrete until they have first secreted—using the verb in its primary meaning, "to separate from the blood-stream." Any up-to-date text-book of physiology will substantiate this use. For example, in Howell's work one may read about secretion of urine in the chapter on the kidney as an excretory organ. It is true that when the nouns "secretion" and "excretion" are applied to products instead of processes, the latter refers exclusively to products which ought to be thrown off, and the former usually to products which are of use in the animal economy. Hence it is natural, though not inevitable, to associate the corresponding verbs with the products so named, as our correspondent has done.

BEE-STINGS AND RHEUMATISM

To the Editor:—Please let me know the latest results obtained from using bee-stings hypodermatically for rheumatism.

H. G. WILLSON, M.D., Gallup, N. Mex.

ANSWER.—We presume that our correspondent refers to the practice of permitting bees to sting the patient. Some apparently remarkable results are reported in individual cases from this application, but the number of trials has been so small that some doubt may be entertained as to whether the benefits are to be ascribed to anything else than psychic influence or the idiosyncrasy of the patient.

The following articles may be referred to:

Walker, E. W. A.: Bee-Stings and Rheumatism, *Brit. Med. Jour.*, Oct. 10, 1908; abstr. in THE JOURNAL, Nov. 7, 1908, p. 1644.
Maberly, F. H.: The Treatment of Rheumatism by Bee-Stings, *Lancet*, London, July 23, 1910; abstr. in THE JOURNAL, Aug. 20, 1910, p. 721.
Knott, J.: Bee-Sting Treatment of Rheumatism, *Med. Press and Circular*, Sept. 28, 1910, p. 333.

HAIR'S ASTHMA CURE

To the Editor:—I have been asked for information regarding a "patent medicine" called Hair's asthma cure. Are the constituents of this compound known? R. R.

ANSWER.—Hair's Asthma Cure was analyzed by the federal chemists and its exploiters were convicted of misbranding under the Food and Drugs Act. A report of this conviction, together with the analysis, appeared in THE JOURNAL, June 24, 1911, page 1898, and the matter has been reprinted in "Nostrums and Quackery," page 406.

REPORT OF A CASE OF ACCUMULATION OF NUTSHELLS IN THE RECTUM

To the Editor:—A girl, aged 9, ate some hickory-nuts, swallowing not only the meats but also the shells. The mother gave the child castor oil on the night before I was called. When I reached there I found the child screaming with pain, trying to pass the nutshells. I found the external sphincter of the rectum partially dilated and some shells protruding. The rectum was dilated and impacted with shells. An anesthetic was given, the sphincter dilated and rectum irrigated, and one-half pint of shells of various sizes was removed. The following morning the operation had to be repeated and an equal amount removed, after which procedure the child made an uneventful recovery and promised never to eat hickory-nut shells again. H. A. THOMAS, M.D., Lake View, Ohio.

The Public Service

Medical Corps, U. S. Navy

Changes during the week ended Dec. 30, 1911.

Johnson, M. K., surgeon, detached from the *Tennessee* and ordered home to await orders.

Carpenter, D. N., surgeon, detached from the naval academy and ordered to the *Kansas*.

Win, C. K., P. A. surgeon, detached from the *Mississippi* and ordered to the *Dixie*.

Steadman, W. G., P. A. surgeon, detached from the *Dixie* and ordered to the *Kansas*.

Mann, W. L., P. A. surgeon, detached from the *Hannibal*, January 4, and ordered to the naval hospital, Boston, for treatment.

Robnett, A. H., P. A. surgeon, detached from the *Missouri* and ordered to the *Culgoa*.

Stoops, R. E., P. A. surgeon, detached from the *Culgoa* and ordered home to await orders.

McDonell, W. N., P. A. surgeon, detached from the *Kansas* and ordered to the *Tennessee*.

Stuart, D. D. V., asst. surgeon, detached from the *Idaho* and ordered to the *Hannibal*.

Longabaugh, R. I., P. A. surgeon, detached from the navy recruiting station, Des Moines, Iowa, and ordered to duty at the naval hospital, New York.

Pollard, J. B., asst. surgeon, detached from the naval hospital, New York, and ordered to the navy recruiting station, Des Moines, Iowa.

Medical Department, U. S. Army

Changes for the week ended Dec. 30, 1911.

Stallman, George E., dental surgeon, reports arrival at Fort Bliss, Tex., for temporary duty.

Feely, James F., acting dental surgeon, reports for duty at Fort Hamilton, N. Y. Left Fort Slocum, N. Y., same date.

McCord, Donald P., M.R.C., relieved from duty at Fort George Wright, Wash., and ordered to Fort William Henry Harrison, Mont., for duty.

Slater, Ernest F., M.R.C., leave of absence extended ten days.

Barber, John R., captain, ordered to Letterman General Hospital, San Francisco, for duty.

Morse, Arthur W., major, ordered to Fort Morgan, Ala., for duty.

Wilson, James A., lieut., ordered to Fort Slocum, N. Y., for duty.

McKinney, Garfield L., captain, relieved from duty at the Letterman General Hospital, San Francisco, and ordered to Fort Caswell, N. C., for duty.

Allen, William H., lieut., relieved from duty at Fort Slocum, N. Y., and ordered to the Army and Navy General Hospital, Hot Springs, Ark., for observation and treatment; thence to Fort Sam Houston, Tex., for duty.

Brown, Henry L., captain, relieved from duty at Fort Morgan, Ala., and ordered to Fort Slocum, N. Y., for duty.

Lynch, Charles, major, ordered to New York City and Poughkeepsie, N. Y., on official business pertaining to the American National Red Cross.

Napier, Edward L., lieut., ordered to temporary duty as surgeon, Transport *Sheridan*, during voyage to Manila, P. I., and on arrival at Manila to report for assignment to duty in the Philippines division.

Worthington, Joseph A., captain, orders assigning him to temporary duty as surgeon of the Transport *Sheridan* is revoked.

Carswell, R. L., captain, is detailed for duty in the bureau of navigation, Philippine Islands, relieving Captain Philip W. Huntington, medical corps.

Maguire, Daniel F., lieut., leave of absence extended twenty days.

Maynard, Edwin B., M.R.C., granted two months' leave of absence.

Borden, William B., M.R.C., orders to the Philippine Islands is revoked.

Miscellany

Symptoms Bred by the Medical Examination.—Bernheim in France and Buttersack in Germany have recently been emphasizing anew the danger of suggesting symptoms to the patient in making the examination. They also comment on the frequently striking similarity in the symptoms recorded at the individual clinics, the mode of examination suggesting a train of symptoms which are not encountered at other clinics. The Charcot syndrome of hysteria is a striking example of this suggestive endemic; the patients were educated into it, they think, by the routine method of examination. Instead of going directly to McBurney's point, for example, Bernheim has the patient palpate his abdomen himself, and discover casually the local pain at the typical point. Or Bernheim does the palpating, but commences on the side and works gradually over to the point. He auscults the heart from the rear, as much as possible, letting the patient think it is the lungs he is examining. Under all conditions he strives to divert the patient's attention from the examination, asking him about conditions in regard to urination, vision, pains in neighboring joints, etc. Disturbances in coordination can be best studied when the patient is asked to jump or do other gymnastic exercises for the alleged purpose of estimating their effect on the heart. The physician must bear in mind that the more zealously he seeks to elicit tenderness or defective functioning at a given point, the more zealously the patient will strive to feel pain there or impairment of function. Buttersack is particularly careful to refrain from attracting attention to the heart in cases of acute articular rheumatism, refraining from ausculting it much or referring to the heart in any way. He adds that it is astonishing how much the practiced eye can discern in regard to the heart action, without direct auscultation. Disturbances in the circulation can be detected more readily and more accurately by the trained eye than with the stethoscope, he declares; the latter is liable to give misleading impressions unless the auscultation findings are controlled and interpreted by the clinical eye. His article on the physician as an etiologic factor was published in the *Fortschritte der Medizin*, 1911, xxix, 1057.

Observation Plus Thinking.—Hippocrates looked at patients with keen eyes and a clear brain, and, as a product of his period, when the nature of Nature began to be recognized, he could not but deduce from his observations the naturalness of disease—that it was not an entity apart from man, but a part of man himself. And this was the great contribution of the Greeks, who first taught us to look with the seeing eye at disease. Observation plus thinking has given us the vast stores of knowledge we now possess of the structure of the bodies of living creatures in health and disease. There have been two inherent difficulties—to get men to see straight and to get men to think clearly; but in spite of the frailty of the instrument, the method has been one of the most powerful ever placed in the hands of man. It gave us Vesalius and the new anatomy, Newton and a new universe, Morgagni and the new morbid anatomy, Laennec and the new medicine, Virchow and the new pathology, Darwin and a new outlook for man on the world.—Osler in *Glasgow Med. Jour.*

Small Doses of Thymol for Hookworm.—In extra severe cases of hookworm infection, with a patient in a much weakened condition, Stiles has found that the usual method of giving thymol may be modified to some extent. Instead of giving a preliminary dose of magnesium sulphate, none is given, and, depending on the condition of the patient, a small dose (10 gr. or somewhat more) of thymol is given and this is repeated one or two or three times at intervals, the patient in the meantime gaining strength. Some of the hookworms are thus eliminated, and when the patient has gained sufficient strength, if necessary, the usual routine is carried out and the full dose given. By this method the element of safety for the patient is increased to the maximum by treating along very conservative lines.—*Public Health Reports.*

Psychoses from Chronic Ergot Poisoning.—A Russian journal reports seventeen cases of psychoses from this cause with necropsy in some of the cases. There did not seem to be any characteristic somatic feature of the ergot psychoses. The knee-jerk was variable, as also the sensory phenomena; exaggerated muscular excitability was more constant. As a rule the milder psychoses were not accompanied by any physical symptoms and in the severer cases the syndrome resembled actual tabes. The main cerebral features of the ergot psychoses were disturbances in consciousness and the emotional sphere, with more or less intellectual weakness and apathy. The report is by M. J. Gurewitsch and is summarized in the *St. Petersburg. med. Wochenschrift*, 1911, xxxvi, 434.

Life on a Physico-Chemical Basis.—Until comparatively recent times the processes going on in living plants and animals had been so little studied that the idea of life being dependent on external conditions was entertained by very few men. With the development of modern physics and chemistry, and with the application of the methods as well as of the results of these sciences to the study of living things, this idea rapidly spread, until it is now pretty generally accepted. Moreover, the strong tendency during the past two generations to unify all knowledge, and to extend the principles of one science to the problems of all others, have stimulated the search for the physical and chemical foundations for "vital" processes.—B. C. Gruenberg in *Scientific American.*

Scientific Inquiry.—The process of scientific inquiry, says Professor Cannon in *Science*, involves peculiar qualifications which cannot be disregarded by any one who thinks of trying it. Research implies in the first place seeking again over a region which has been previously traversed, in order to learn what other men have done and the point where their labors ended. To make progress sure, therefore, previous records must be carefully studied. The failure to pay this just tribute to those who have labored before, has not seldom led to fruitless effort or to vain repetition of work already well done. Marking the boundaries demands, then, a scholarly acquaintance with earlier discoveries, and the painstaking methods of the scholar must be used.

Public Health.—The servant of the public health is working on the lives of men and should be laying the foundation of national prosperity and happiness. He belongs to an order of sanitary priests and belies his vocation and destroys his trust if he does not use the material at his disposal fully and faithfully. He will reject no method of labor and spare no endeavor which offers the prospect of increased power over disease.—Newsholme.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

THE GOVERNOR OF NORTH CAROLINA AND PUBLIC HEALTH

Last week we quoted,[1] from the *Bulletin of the North Carolina Board of Health*, the report of the Buncombe County Medical Society, as an example for other county societies to follow. In the same number of the *Bulletin* (December, 1911) appeared an article by Governor Kitchin, on "The State's Duty to Public Health," in which the public health work of the state is discussed from the standpoint of an executive and a layman. The example of the governor is as worthy of imitation as is that of the Buncombe County Medical Society. Would that the governors of all of our states were as well informed and as interested in public health as is Governor Kitchin! The time will come when a record of sanitary administration and reduction of the death-rate during an executive officer's term of service will be regarded as the finest kind of political capital. In the meantime, North Carolina is to be congratulated in having such a man as its governor. Governor Kitchin said:

"The debt which humanity owes medical science is inestimable. The members of the medical profession not only by their daily ministrations relieve suffering and restore health, but by the most diligent and laborious scientific research they are locating the unseen enemies of man—more deadly than all the armies of the earth—and year by year they are conquering them. They are steadily lengthening the term of human life by more skilful treatment and scientific prevention of disease.

"Aside from the humane feature, the economic value of this work is incalculable. To aid and encourage the application of this scientific knowledge to the daily life of the people is a proper function of government, and what the state is doing in this direction cannot be too highly commended. Without such action by the state and without the hearty cooperation of the profession throughout the state we cannot fittingly take advantage of the discoveries of science.

"I rejoice to know that in this administration the state has marked its farthest advance in care for the public health, and to think that more and more of the state's wealth and power will be devoted to this great object. The money and energy expended for public health benefits all. It benefits even the wealthy and the well-to-do, who can, in a measure at least, protect themselves by change of locality and control of local conditions; but it benefits most the poor who are unable to protect themselves and their little ones. He who stays the hand of disease and death at poverty's door helps to drive away the wolf and closes the way to the orphan's home. He is indeed a benefactor to humanity.

"When I have visited the orphans' homes and looked into the faces of those in whose tiny lives the light of parental love has been quenched, and have considered that they are but a few of the vast army scattered throughout the state, and have realized that probably two out of five have been mustered into this army by disease which could have been prevented, I have been appalled at the magnitude of the responsibility shunned and duty neglected.

"I am glad to know that the state has at last taken hold of this subject in earnest. Prior to 1909 the state was expending for public health about $7,000 per annum; in 1909 and 1910 it spent $12,500 per annum for this purpose, and in 1911 and 1912 it is spending $26,500 per annum. While this state ranks twenty-third in wealth, it now ranks nineteenth in expenditures for this all-important object. I do not believe the state invests any money which will yield a richer return. One example will suffice. Prior to 1911 the price of antitoxin was from $2.00 to $7.50 per dose. To many this price was prohibitory, but still there was probably $35,000 worth of this wonderful medicine used in the state per annum. By the aid of a law passed by the last legislature the State Board of Health has been able to reduce the cost of the medicine to from 50 cents to $1.95 per dose, thus effecting a saving in money nearly equal to the entire state expenditure for public health. And yet this does not take into account the burial expenses saved, the lives spared and the suffering relieved.

"The State Board of Health and its efficient secretary are doing a great work, deserve the entire confidence of the public, and should have the hearty support of the physicians of the state. The county superintendents of health are the captains on the field, charged with the duty of conducting the fight for public health, and their services are becoming better appreciated—a noble band engaged in a worthy cause. Let me urge on the people the wisdom and the duty, public and personal, of giving all health officials, state, county and municipal, their active cooperation and support in all efforts to improve sanitary conditions, to prevent disease, to limit and destroy contagious disorders, and in every way to improve and conserve the health of individuals and communities.

"The sympathetic assistance of the people is essential to the best results. The profession stands ready, prepared, planning and leading the onward health improvement. We should with faith and loyalty follow and do our part."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Fifth Month—Second Weekly Meeting

FRACTURES

VARIETIES

(a) Describe stellate, comminuted, multiple, punctured, gunshot, transverse and oblique fractures.

(b) Complete, incomplete, greenstick, depressed, fissured, fracture.

(c) As to displacement of fragments, depressed, with over-riding, transverse, rotary, angular and longitudinal displacement. Impacted fracture.

(d) Simple, compound and complicated fracture.

(e) Differentiate traumatic and pathologic fractures.[1]

ETIOLOGY: Predisposing and exciting causes. Mechanism of each.

SYMPTOMS: Immediate symptoms, local and general. Mediate symptoms, local and general.

COMPLICATIONS: Disturbances of skin; thrombosis and embolism; fat embolism; injuries to blood-vessels; injuries to nerves; local and general infections; shock and hemorrhage; pulmonary complications.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Montgomery, Jan. 10. Chairman, Dr. W. H. Sanders.

DISTRICT OF COLUMBIA: Washington, January 9. Sec., Dr. George C. Ober, 125 B St. S.-E.

ILLINOIS: Coliseum Annex, Chicago, January 17-19. Sec., Dr. James A. Egan, Springfield.

INDIANA: State House, Indianapolis, January 9-11. Sec., Dr. W. T. Gott, 57 State House.

NEW HAMPSHIRE: State House, Concord, January 9-10. Regent, Mr. H. C. Morrison, State Library.

NEW MEXICO: The Capitol, Santa Fé, January 14. Sec., Dr. J. A. Massie.

NEW YORK: January 30-February 2. Chief of Examinations Division, Mr. Harlan H. Horner, Albany.

OKLAHOMA: Oklahoma City, January 9-12. Sec., Dr. John W. Duke, Guthrie.

SOUTH DAKOTA: Huron, January 10-11. Sec., Dr. L. G. Hill, Watertown.

VERMONT: Montpelier, January 8-11. Sec., Dr. W. Scott Nay, Underhill.

WISCONSIN: Milwaukee, January 9-11. Sec., Dr. John M. Beffel, 3200 Clybourn Street.

Georgia October Report

Dr. C. T. Nolan, secretary of the Regular Board of Medical Examiners of the State of Georgia, reports the written examination held at Atlanta, October 10-12, 1911. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 80. The total number of candidates examined was 41, of whom 25 passed and 16 failed. The following colleges were represented.

PASSED

College	Year Grad.	Per Cent.
Birmingham Medical College	(1907)	80.5
University of Georgia	(1909) 80; (1911) 82,	82.5
Atlanta School of Medicine	(1911) 80, 80,	80

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[1] THE JOURNAL A. M. A., Nov. 4, 1911, p. 1553.

[1] Progressive Med., December, 1905, p. 230.

Atlanta College of Physicians and Surgeons	(1911)	80, 85
Atlanta Medical College	(1895)	80
Chicago College of Medicine and Surgery	(1911)	90.5
Rush Medical College	(1901)	85.5
Tulane University of Louisiana	(1894)	80
Maryland Medical College	(1911)	80
Johns Hopkins University	(1909)	87
Columbia University, College of Phys. and Surgs.	(1894)	87.5
Jefferson Medical College (1898) 88;	(1911)	81
University of Nashville	(1911)	80
Meharry Medical College	(1911)	81.5
Vanderbilt University (1907) 84.5;	(1911)	84.5
University of the South (1902) 80;	(1907)	82.5
University of Virginia	(1910)	88

FAILED

Birmingham Medical College	(1911)	75.5
Maryland Medical College (1910) 70, 70, 74.5;	(1911)	74
Creighton Medical College	(1910)	70
Leonard Medical School (1910) 63, 67, 67.		
University of the South	(1905)	53
Chattanooga Medical College (1907) 75.5;	(1909)	57
University of West Tennessee	(1910)	72.5
Meharry Medical College	(1911)	75
Vanderbilt University	(1911)	74.5
Knoxville Medical College	(1908)	59

Arkansas November Report

Dr. F. T. Murphy, secretary of the State Medical Board of the Arkansas Medical Society, reports the written examination held at Little Rock, Nov. 14-15, 1911. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 33, of whom 13 passed and 20 failed. Twelve candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Columbian University, Washington, D. C.	(1899)	88.1
College of Phys. and Surgs., Keokuk (1880) 83.7;	(1893)	80
University of Louisville	(1911)	84.3
Tulane University of Louisiana	(1907)	79.3
University Medical College, Kansas City (1904) 76;	(1911)	85.2
St. Louis College of Physicians and Surgeons	(1909)	78
Memphis Hospital Medical College (1903) 85.3;	(1911)	75.5
University of Nashville	(1901)	78.3
Vanderbilt University	(1911)	88.1, 89.4

FAILED

College of Physicians and Surgeons, Little Rock (1910) 40.5 48.6, 66.1.		
University of Arkansas	(1911)	68.5
University of Louisville (1909) 70.7;	(1910)	64.5
Flint Medical College	(1906)	22.6
Barnes Medical College (1910) 61.8;	(1911)	56.7
Memphis Hospital Medical College	(1911)	53.5
Meharry Medical College (1909) 62.7, 67.2; (1910) 68.4; (1911) 47, 60.8, 66.2, 66.6, 69.5, 69.6, 70.9.		

LICENSED THROUGH RECIPROCITY

College.	Year Grad.	Reciprocity with
Georgetown University	(1908)	Dist. Colum.
College of Physicians and Surgeons, Chicago	(1893	Wisconsiu; (1893) Michigan.
Chicago College of Medicine and Surgery (1909)	(1911)	Illinois
Hospital College of Medicine, Louisville	(1904)	Kentucky
Tulane University of Louisiana (1895)	(1907)	Louisiana
Woman's Medical College of Philadelphia	(1904)	Dist. Colum.
Jefferson Medical College	(1907)	N. Dakota
Medico-Chirurgical College of Philadelphia	(1902)	Indiana
University of Vermont	(1884)	Illinois

Massachusetts November Report

Dr. Edwin B. Harvey, secretary of the Massachusetts Board of Registration in Medicine, reports the written, oral and practical examination held at Boston, November 14-16, 1911. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 72, of whom 47 passed, including 3 osteopaths and 1 non-graduate, and 25 failed, including 1 osteopath and 8 non-graduates. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Baltimore Medical College	(1911)	80.5
College of Physicians and Surgeons, Baltimore	(1907)	78.7
Maryland Medical College	(1911)	75
Harvard University Medical School (1910) 75, 75.7, 80.7; (1911) 75, 76, 77.1, 79.2, 80.3, 81.9.		
Boston University	(1911)	75, 78.7
College of Physicians and Surgeons, Boston	(1911)	76.7
Tufts College Medical School (1910) 75; (1911) 75, 75.2, 75.4, 75.7, 76, 76.5, 78.1, 78.6, 79.1, 79.5, 79.4, 80.1, 80.2, 80.4.		
University of Michigan, Dept. of Med. and Surg.	(1908)	75
Dartmouth Medical School	(1904)	79.4
Albany Medical College	(1894)	80
Long Island College Hospital	(1896)	79.4
Woman's Medical College of Pennsylvania	(1910)	79.5, 80.7
University of Pennsylvania	(1869)	90
University of Vermont (1882) 75; (1907) 77.9; (1910) 80.3, 83.2		
Medical College of Virginia	(1911)	75
University of Athens, Greece	(1903)	75

FAILED

Medical School of Maine	(1911)	65.3
College of Physicians and Surgeons, Baltimore	(1910)	65.4
Tufts College Medical School (1910) 68.9; (1911) 65.9, 69.3, 70.3		
College of Physicians and Surgeons, Boston (1908) 56.9, 64.6; (1911) 69.		
Albany Medical College	(1908)	73
University of Vermont	(1911)	67.9
University College of Medicine, Richmond	(1907)	63.6
Laval University, Canada	(1911)	57.9, 68.7, 69.6
University of Naples, Italy	(1907)	53.6

Louisiana Homeopathic November Report

Dr. Edward Harper, secretary of the Louisiana Homeopathic Board of Medical Examiners, reports that at the meeting held at New Orleans, November 6, 1911, 1 candidate, a graduate of the Chicago Homeopathic College, 1902, was licensed through reciprocity with Indiana.

Book Notices

A Manual of Surgery. For Students and Physicians. By Francis T. Stewart, M.D., Professor of Clinical Surgery, Jefferson Medical College. Second Edition. Cloth. Price, $4 net. Pp. 682, with 553 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

The first edition of this book was favorably commented on at the time of its issue. To make the second edition, many pages have been added, old illustrations replaced by new ones and a general revision made to keep pace with progress in surgery. The author has not lost sight of his original purpose, to prepare a book on surgery for the undergraduate and for the practitioner who seeks a guide to surgery. It is well written, well arranged and well illustrated, although the small type and close lines are tiring to the eye.

The Healer. By Robert Herrick, Author of "Together." Cloth. Price, $1.35 net. Pp. 455. New York: The Macmillan Co., 1911.

The hero of this novel is an uncompromising idealist physician, bred in the wilderness, but with city training. The reader infers—for it is not stated outright—that Holden, the healer, had become a morphin habitué, and to overcome this left the city and went back to the wilderness in the far north. He was unusually gifted for relieving the sick; he had great will-power, unusual compassion for humanity, and a personality that won the confidence of all. With these attributes, rather than with medicine, he attained great renown as a healer. In the course of events a rich, aristocratic family of New York went into this wilderness and established a summer residence. In this family was a beautiful girl, who, in an accident, had compression of the brain, which the healer relieved by an operation. Mutual love, ending in marriage, was the result. The new life had its romantic attractions for the young wife for a while, but romance finally vanished, and separation followed.

The various aspects of the medical profession are viewed from what would be imagined a socialist's viewpoint. In any event certain aspects of the medical profession are held up to be about as bad as they can be. The present system of individual fees for medical work, Herrick says, "forces the profession to exploit the human body and the human soul for private profit." The practice of medicine is "a trade like any other." According to the author, there is necessity for a thorough reformation, if not a revolution. "The whole profession should be institutionalized—all medicine, all attempted healing. The state should control the school and the hospital and regulate the number and the work of the doctors, and should establish public dispensaries as their headquarters. No doctor should be permitted to receive fees from his patients. . . . That is the root of the monstrous ignorance and malpractice of the profession—the private fee. And the best doctors are beginning to realize this and prefer to work for a salary in an institution." "Medical service should be free for all and compulsory, provided by society as a whole for its own preservation and betterment."

Herrick's picture of the defeated idealist, of the emergency decompressive trephining in the wilderness, of the way in which the world troops to the door of "the true healer who can arouse the will, stimulate it, train it, perfect it, increase its force"—all this is excellently woven into an interesting story. In spite of the fact that the author gives expression to views that are not altogether flattering to the medical profession, the novel is a fascinating one.

Diseases of the Digestive Canal (Esophagus, Stomach, Intestines). By Dr. Paul Cohnheim, Specialist In Diseases of the Stomach and Intestines in Berlin. From the Second German Edition. Edited and Translated by Dudley Fulton, M.D., Assistant Professor of Principles and Practice of Medicine, University of California College of Medicine, Los Angeles Department. Second Edition. Cloth. Price, $4. Pp. 383, with 431 illustrations. Philadelphia: J. B. Lippincott Co., 1911.

In this second English edition the translator has assumed the position of editor of the work and has included recent advances in the study of stomach and intestinal conditions as revealed by the *x*-ray, improvements in methods of diagnosing lesions of the esophagus, a discussion of gastric and duodenal hemorrhage, the technic of sigmoidoscopy, etc. New cuts and *x*-ray plates have been supplied by the editor for this edition, and throughout the new matter conforms in its practical, clinical character and value to that of the author's original work.

Practical Pathology. A Manual of Autopsy and Laboratory Technic. For Students and Physicians. By Alfred Scott Warthin, Ph.D., M.D., Professor of Pathology and Director of the Pathologic Laboratories in the University of Michigan, Ann Arbor. Second Edition. Cloth. Price, $3. Pp. 321, with 55 illustrations. Ann Arbor: George Wahr, 1911.

This is a valuable book for the student of pathology as seen in the necropsy room. The author has sufficient experience as a teacher to prepare a work of this kind, and, while a considerable portion of the book is devoted to the methods of examination of tissues in the necropsy room, the actual teaching value of the work is great. The book is purely pedagogic in character and is not a reflection of personal opinions.

Medicolegal

Suffering of Pain by the Semiconscious—Damages Allowed for Death of Brother

(Underwood vs. Gulf Refining Co. (La.), 55 So. R. 641)

The Supreme Court of Louisiana first set aside, but now, on a rehearing, affirms a judgment in favor of the plaintiffs for damages for the death of their brother, who, while in the employ of the defendant, was killed by a gear chain snapping and one of its ends whipping around and striking him on the head, crushing his skull. Still the court reduces the amount of the judgment from $5,000 to $1,000 on account of his physical suffering, plus $50 for the mental suffering inflicted on the plaintiffs by reason of the untimely death of their brother. The brother lived for several weeks after the accident, and was, at times, semiconscious, and so far conscious as to respond to calls made on him by smiling and attempting to speak. A witness, who was with him day and night, testified to the effect that he appeared, at times, to suffer intensely. That, taken in connection with an admission that experts, if sworn, would differ on the question whether a person in a semiconscious state can suffer pain, the court holds authorized the conclusion that the patient did suffer physical, though not, perhaps, mental, pain, and this notwithstanding that he did not appear so to suffer at any time when he was visited by the attending surgeon.

The court says that it can conceive of no reason why, if one be semi, or half, conscious of anything, he should not be semi, or half, conscious of pain. However, it appears to the court that, though one may be semiconscious of other things, that term can hardly be applied to the physical suffering, resulting, for instance, from acute indigestion or colic, which compels a man to roll and toss about in his sleep and finally awakes him, or to the mental suffering, superinduced by the same physical cause and which may consist of an agony of apprehension lest one fall down an imaginary precipice or be crushed by an imaginary weight.

Concerning the attitude of the courts toward allowing damages for mental suffering, the court says that it is not so much that the courts have not felt that mental suffering, as well as physical suffering and pecuniary loss, is an element of damage for which the sufferer should be compensated, but the idea was that, if every one who might be made to suffer mentally, by reason of an injury to, or the death of, another, were to be allowed to recover for such suffering, the courts would be crowded with the relatives, direct and collateral, of the party injured or killed, and, perhaps, by the friends also, and that, as between the wife and children, and grandparents, and uncles, and aunts and cousins, near and remote, it would be impossible to apportion any amount for which the wrongdoer could reasonably be condemned. But those difficulties do not appear to the court to stand in the way of a recovery in such a case as this, in Louisiana, where, by Act. No. 120 of 1908, brothers and sisters, in default of child, widow, or parent, succeed to the right of action which a person who dies from an injury had, at the moment of his death, against him by whose fault the injury was received, and they (the brothers and sisters) have also a right of action on their own account for the recovery of damages for the injury, moral or mental, as well as material, sustained by them by reason of such death.

Evidence of Mental Condition—Waiver of Privilege by Heirs

(Fish vs. Poorman (Kan.), 116 Pac. R. 898)

The Supreme Court of Kansas holds that where the issue to be determined by the jury is the mental condition of a person at a certain time, it is always competent to show previous acts of insanity, delusion or mental derangement, unless the previous conditions are excluded because they appear to be disconnected and remote. Where the mental derangement or its cause is continuing or permanent in character, the objection of remoteness will not apply. Proof of a taint of insanity in the family of a person is competent, when there is other proof of the insanity of the person in question.

The heirs at law of one who has been treated by a physician may waive the provisions of the statute making a physician incompetent to testify to any knowledge obtained in his professional capacity from the patient.

Society Proceedings

WESTERN SURGICAL ASSOCIATION

Twenty-First Annual Meeting, held at Kansas City, Mo., Dec. 18-19, 1911

The President, Dr. Amos W. Abbott, Minneapolis, in the Chair

Officers Elected

The following officers were elected for the ensuing year: president, Dr. L. L. McArthur, Chicago; vice-presidents, Dr. W. P. Dorsett, St. Louis, and Dr. B. M. Ricketts, Cincinnati; secretary-treasurer, Dr. Arthur T. Mann, Minneapolis; chairman of the committee on arrangements, Dr. William D. Haines, Cincinnati.

The 1912 meeting will be held in Cincinnati.

The Pathology That Remains After Non-Surgical Treatment of Inflammation Within the Abdominal Cavity

Dr. J. W. Cokenower, Des Moines, Ia.: Pain in the abdomen is Nature's signal of distress and always means something, but should not be relieved to the extent that it will retard or prevent ascertaining the cause that produced it. Infection in the abdominal cavity is not unlike infection in any other part of the body, and as soon as the diagnosis is cleared up, the cause and pathology should be removed so far as possible in any way that will give the best results. The non-surgical treatment of peritonitis is the cause of recurrent attacks of appendicitis, cholecystitis, salpingitis, etc.

Cancer of the Hollow Viscera of the Abdomen With Special Reference to Diagnosis.

Dr. Miles F. Porter, Fort Wayne, Ind.: The symptoms commonly regarded as sufficient to warrant a diagnosis of cancer of the hollow viscera are such as are not manifest until the favorable time for surgical interference has passed. Success in the treatment of cancer of the hollow viscera depends largely on its early recognition. It is often unsafe and unwise to make a diagnosis between malignancy and benignancy without the aid of the microscope. The way to improve our results in the surgical treatment of cancer of the hollow viscera lies in the direction of earlier celiotomy and immediate microscopic examination of the specimen.

DISCUSSION

Dr. L. L. McArthur, Chicago: I want to urge the use of the erect posture when a digital examination is made in cases of suspected carcinoma of the rectum. I would also urge the use of the sigmoidoscope, or the long rectal instrument with an electric light within its lumen at the deeper end rather than the head mirror. The latter rarely gives an illumination that is satisfactory, whereas the little electric light within the sigmoidoscope does.

Dr. James E. Moore, Minneapolis: Future progress must be had from making timely exploratory operations by men who know pathology when they feel it and see it. It is difficult sometimes to differentiate between benign and malignant growths when we have the tumor between our fingers. That is particularly true of the hollow viscera, yet when a case is sufficiently grave to warrant exploration, we are justified in taking out a piece of the growth, making a frozen section, and establishing an absolute diagnosis at the time.

Dr. Amos W. Abbott, Minneapolis: I wish to call attention to an easy way of examining the rectum in cases of suspected carcinoma, and that is with the use of the ordinary Kelly cystoscope. You can get as good a view of the bowel with it as with the larger proctoscope under ordinary circumstances, and patients do not object to it.

Dr. W. W. Grant, Denver: The fact that the surgeon knows nothing of these cases and has not had the opportunity for any examination until the disease is far enough advanced to produce distinct clinical symptoms, often shows that it is too late even then to predict a good result from operative interference. As our instruments of scientific precision are at the present time indefinite and uncertain, we must get a closer study of the clinical history of these cases by the physician, and until that time comes and we have better diagnosticians and better clinicians, we will perhaps not have early diagnoses and better results in the treatment of cancer of the hollow viscera.

Dr. M. L. Harris, Chicago: Until some specific reaction is discovered, the diagnosis of cancer in all internal organs, those not subject to direct investigation by the microscope in their inception, is entirely one of probability.

Early Removal of Gall-Stones and the Preservation of the Gall-Bladder

Dr. Arthur E. Benjamin, Minneapolis: The interdependence of the gall-bladder, stomach, liver and pancreas is such that the gall-bladder should be preserved in all cases in which it is not hopelessly diseased and unable to regain its function. The frequency with which pancreatitis is associated with gall-stones in the common duct makes the gall-bladder an essential organ to assist in the drainage of the biliary passages in pancreatitis, and should be saved. The percentage of cancer associated and following the irritation of gall-stones in the biliary tract, should urge all practitioners to recognize their responsibility in a case of postponed operation for gall-stones.

Dr. Lewis L. McArthur, Chicago: Matas has improved my technic by advocating the introduction at the time of operation of a small rubber catheter (*a demeure*) into the duodenum by way of the common duct, letting it project there to one-third or one-half its length. Through this, with absolute confidence of its arriving safely within the duodenum, he could introduce any desired amount of any given fluid, food or medicament indicated. In fact, he has in this manner for a period of three weeks given various foods and drugs, including saline purgatives to the great satisfaction of the patient, and with no untoward results because of its method of introduction.

DISCUSSION ON PAPERS OF DRS. BENJAMIN AND MCARTHUR

Dr. Van Buren Knott, Sioux City, Ia.: I have been following some of Dr. McArthur's suggestions with beneficial results, using the common duct as a means of furnishing fluids and nutriment to the patient.

Dr. Arthur T. Mann, Minneapolis: It is up to the surgeon to make an early diagnosis of gall-stones. The diagnosis we make now is not one of the presence of gall-stones, but a diagnosis based on the complications of gall-stones. The characteristic pain, nausea and vomiting, and inflammation around the gall-bladder, are all late manifestations of gall-stones, not early ones. We must direct our attention, as we did to appendicitis twenty years ago, making a diagnosis of appendicitis when we had an abscess, when we had a peritonitis, and so on, and it is the same way with gall-stones. We must make the diagnosis when the gall-stones are forming. The symptoms of the early presence or early formation of gall-stones are very obscure. The symptoms are not in the gall-bladder but in the stomach.

Some Phases in the Surgical Treatment of Gastric Ulcer

Dr. W. D. Haines, Cincinnati: In a limited experience with the recurrence of symptoms after operation for gastric ulcer, I am wholly unable to distinguish at the time of operation the type of ulcer which will be cured and remain cured by a gastrojejunostomy from the type to which this operation will afford but brief relief from ulcer symptoms. Removal of the ulcer-bearing area, while in many respects an ideal operation, carries a prohibitive mortality and has not been generally accepted as the best method for dealing with gastric ulcer. Excision of the individual ulcer in conjunction with gastroduodenostomy or gastrojejunostomy is an operation which is rapidly gaining favor with American surgeons. Excision has many commendable features, it is applicable to a solitary ulcer situated in any part of the stomach-wall, it adds very little to the risk, and the end-results are more satisfactory. Due weight should be given the physical condition of the individual case before determining on the type of operation to be performed. The rapidity with which some of these half-starved ulcer patients recuperate after efficient stomach drainage is established and has enabled us to convert in a short space of time an almost helpless risk into a comparatively safe risk for a secondary or causal operation, excision—resection of the ulcer-bearing area. Rarely have I seen a case of chronic gastric ulcer which did not show some degree of gall-bladder or pancreatic involvement. With the view of relieving this phase of gastric ulcer pathology, Dr. S. H. Smith and I have for the past two and a half years been draining the gall-bladder in connection with the work on the stomach. The immediate results have been very gratifying, and the after history of those cases which we have been able to trace have derived permanent benefit from this additional procedure, such as to warrant further continuance of this practice.

(To be continued)

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION

Twenty-Fourth Annual Meeting, held in Washington, D. C., Dec. 12-14, 1911

(Continued from page 2171)

Officers Elected

The following officers were elected for the ensuing year: President, Dr. J. M. T. Finney, Baltimore; vice-presidents, Drs. James E. Thompson, Galveston, Tex. and W. P. Carr, Washington, D. C.; secretary, Dr. William D. Haggard, Nashville, Tenn.; treasurer, Dr. William S. Goldsmith, Atlanta, Ga.

Old Point Comfort, Va., was selected as the place for holding the next annual meeting in 1912.

Where Shall the Line Be Drawn Between Medicine and Surgery in Borderline Cases?

DR. JAMES E. MOORE, Minneapolis: All diseases of the thyroid, except tumors, are medical in the early stages, because at that time a majority of them can be cured without operation. Many of them become surgical when neglected, or when non-surgical treatment fails. A case of goiter becomes surgical as soon as it gives serious symptoms which fail to yield to proper medical treatment. The danger is that it may be kept on the medical side of the borderline until the best time for operation has passed. Diseases of the breast are always surgical. In face of the facts that 80 per cent. of tumors of the breast are malignant, and the mortality of cancer without surgical treatment is one hundred per cent., it is difficult to understand how any man can have the temerity to treat a nodule in the breast by any but surgical means. Most diseases of the stomach are still on the borderline. Malignant disease here, as elsewhere, is always surgical, and when medical men, laboratory men and surgeons by their combined efforts shall have arrived at a means of early diagnosis as large a percentage of cures should follow surgery here as elsewhere, because this organ is very tolerant of surgery.

All gastric ulcers are primarily medical, because when promptly recognized the vast majority of them will recover under intelligent medical treatment. They become surgical when they cause perforation, persistent or recurrent hemorrhage or stenosis, and when for lack of or in spite of intelligent medical treatment they become chronic with thick walls and hardened bases. Dilatation of the stomach without stenosis is always medical. Diseases of the gall-bladder are practically all surgical. Most diseases of the liver are medical, for up to the present time surgery has demonstrated a very limited field of usefulness. The kidney furnishes many borderline cases. In the case of stone or pyogenic infection the treatment should be surgical. The treatment of Bright's disease by decapsulation has not afforded sufficient encouragement to give it a definite place in surgery. Experienced surgeons agree that surgery is a failure in the visceroptoses. Tuberculosis in all parts of the body furnishes many borderline cases, and whether treated medically or surgically there is certainly great opportunity for improvement over our present methods.

DISCUSSION

DR. HERMAN J. BOLDT, New York City: There are a number of women who have a chronic catarrhal inflammation of the appendix, whose cases may be classed as on the borderline. I refer to women especially who have fat abdomens, who are to a greater or less degree neurasthenic or psychasthenic, and who can be cured by intelligent medical care, general hygiene, massage, etc. There are a number of women who are constipated, who will get well by intelligent medical treatment. There is another large percentage of patients who have pelvic conditions which are on the borderline, consequently it behooves the practitioner to study these patients carefully and to give them the benefit of a doubt before resorting to operations which will cause the destruction of a function which is of vital importance to womanhood.

The Colon Bacillus, a Regulator of Population

DR. ROBERT T. MORRIS, New York: This paper will be published in full in THE JOURNAL.

Parathyroids and Their Surgical Relation to Goiter

DR. CHARLES H. MAYO and DR. BERNARD F. MCGRATH, Rochester, Minn.: The parathyroids are concerned in the metabolism of the body, but definite knowledge of their physiologic function and pathologic importance is yet very limited. Many diseases have been attributed to these glands without having had their etiologic relationship supported by scientific investigations. Experimentation, clinical and histologic examinations have shown a connection between the parathyroids and tetany. Recent investigations have proven that pathologic processes in the parathyroids produce hyperplasia with resultant hypo-function, especially in the presence of a contributing factor, for example, gastro-intestinal disease. Hemorrhages, which probably occur in the glands, during labor, are given as one of the causes of the pathologic processes. It has been stated that tetany does not take place at the time of bleeding because the brain of the new-born is not sensitive, owing to the larger contents of calcium. The attacks rarely occur before the third month. Defective calcium metabolism has been noted in experimental tetany. Histologic examinations have shown a relationship between the parathyroids and tetania gravidarum. Cases of tetany associated with congenital syphilis, in which the parathyroidal tissue was hypoplastic, have been cited. Some authorities hold a morphological similarity and inter-relation of function between the parathyroids and the thyroid. In operations on the thyroid the variable size, location, appearance and condition of these little bodies should be kept in mind. If such a mass be removed accidentally, it should at once be implanted beneath some part of the capsule.

The Cinematograph As An Aid to Medical Education and Research

DR. RUDOLPH MATAS, New Orleans: As an agent in imparting sanitary and hygienic knowledge of great importance to the masses, the cinematograph is playing a most effective part. For instance, in impressing on the public mind the dangers which lurk about the house fly as a transmitter of disease and of the importance of eradicating this pest, the moving picture is far superior to any lecturer's ability in its power to depict the peril. The machine has been used in France to analyze the gait of the ataxic, paraplegic or hemiplegic, and other pathologic types of locomotion. Paul Sainton has also recently studied the convulsive tics with moving pictures. With the ordinary cinematograph the photographic film moves discontinuously, being arrested at the moment of each exposure. While this is simple enough at moderate speeds, it would be quite impossible when the exposures are made at the rate of two thousand a second, and the mean speed of the film four thousand centimeters a second. These are the figures that are necessary for the study of insect flight, and these are attained on the new instrument. With such a speed, the movement of the film must be continuous and a sharp image is possible only if the exposure does not exceed the one million, four hundred thousandth part of a second, and for this the electric spark gives a light of sufficiently short duration. In order to study the movement represented on the films, it is merely necessary to pass them through the ordinary cinematograph, making some fifteen exposures a second, instead of the fifteen hundred or two thousand a second employed in the taking of the photographs, and then the movements one hundred or more times as slow will be seen and in many instances easily followed.

(To be continued)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Meeting held Dec. 13, 1911

The President, DR. C. B. LONGENECKER, in the Chair

A New Scalp Tourniquet

DR. ERNEST LAPLACE'S description of this method will appear in THE JOURNAL with illustrations.

Report of the Committee on Hospital Dispensary Abuse

DR. HOWARD S. ANDERS, Chairman: At the first meeting of the committee there was adopted a definition of hospital dispensary abuse which should serve as a basis and limitation of facts, evidence and inference. A letter of queries was then sent to the various department heads of hospital dispensary service for representative statements of the conditions met with and methods in use to correct abuse and for opinions concerning improvement and reform. Letters were sent to seventy-eight physicians affiliated with seventeen hospitals having medical, surgical and special-disease service. Fifty-two replies were received.

Query 1. Is there any effort in the department over which you have control to eliminate from the dispensary those patients who are in a position financially to be treated at the offices of private physicians? If so, what?

Twenty answered in the affirmative; twenty-four in the negative.

Query 2. Do you direct your assistants to ask each dispensary patient a part of the routine questioning for the history card, as to their ability to pay a physician?

Fifteen replied in the affirmative; twenty-nine in the negative.

Query 3. If the preceding question is answered in the affirmative, do you refer such patient back to their physician; or, if they have no physician, what is your procedure?

Nineteen answered affirmatively as to referring such patients back; eight negatively, and thirteen were non-committal.

Query 4. Would it assist in reducing the dispensary abuses to require applicants for treatment to establish their inability to pay for services in a medical registrar's office as a preliminary?

Twenty-seven were positively favorable; nine unfavorable to such a plan.

From the results of this investigation and a study of the situation elsewhere, the committee offered the following recommendations for the solution of this vital medicosociologic problem:

1. Every individual dispensary physician, head and assistant, should constitute himself a committee of one to sincerely and steadily strive to abolish the abuse; especially should this be done by the members of the Philadelphia County Medical Society. 2. A social service department should be established in connection with each institutional dispensary, so as to ascertain those patients who are, and who are not, able to pay; and further, as in the work of the Charity Organization Society, to follow up the cases for thoroughness and accuracy of information. 3. That it should be made a misdemeanor under state law for any hospital or dispensary receiving state financial aid to treat as free patients those who it is found are able to pay a medical fee. 4. That consequent on the preceding suggestion, the Philadelphia County Society Delegates to the next state medical convention, should be instructed to induce the Committee on Legislation of that body to take up the matter of formulating such law tending to diminish or prohibit the dispensary abuse throughout this commonwealth.

The Status of Midwifery in Pennsylvania and a Study of the Midwives of Philadelphia

Dr. S. W. Newmayer: Legislation for midwifery brings up problems that are in some respects akin to dispensary abuse, when it is considered that the midwives in Philadelphia attend to about 25 per cent. of the births, that they are the physician in about 10,000 births a year, receive the same compensation for their services as the physician (and have not received the previous training), that many give medical care before and after to the mother of the child, one can appreciate the seriousness of the problem. Each midwife in Philadelphia attends to from two to thirty cases a month. I believe that the midwife to-day is a useless institution but I also believe that she cannot be wiped out with legislation. The time not being ripe for such a radical legislation, we should consider the enactment of laws which would protect the mother and the baby against the incompetent and daring midwife. Although Philadelphia was the city most concerned by the ultimate effects of recent legislation, Philadelphians were not consulted, except to ask the physicians here to endorse a bill framed by outsiders unacquainted with our conditions. The clause exempting midwives in practice more than ten years from examination is bad, because it is the midwife of long standing who is the danger factor. She often knows little of abscesses and is therefore overconfident; is found attending abnormal cases and often performing ordinary gynecologic operations. The law gives a permanent license, which I believe is a mistake. Such procedure prevents the continuous supervision which is as important in the profession of midwifery as licensing them.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Surgery, Gynecology and Obstetrics, Chicago

December, XIII, No. 6, pp. 597-727

1 Raynaud's Disease. A. H. Ferguson, Chicago.
2 Volvulus. E. P. Magruder, Washington, D. C.
3 *Accidents and Deaths from Exploratory Puncture of Pleura. H. Dayton, New York.
4 Cervical Pregnancy. I. C. Rubin, New York.
5 Focal Epilepsy. A. L. Skoog, Kansas City, Mo.
6 Fibromyomata of Uterus from Standpoint of Gynecologist and Obstetrician. L. E. Frankenthal, Chicago.
7 Surgical Pathology of Prostate. L. B. Wilson and B. F. McGrath, Rochester, Minn.
8 *Contribution to Surgery of Hernia. W. R. Cubbins, Chicago.
9 *Improved Method of Approaching Lower Abdomen. G. W. Roberts, New York.
10 Case of Brain Tumor with Second Operation. J. R. Judd, Honolulu, Hawaii.
11 Pharyngeal Anesthesia. H. K. Thoms, New London, Conn.

3. **Exploratory Puncture of Pleura.**—The records of about 20,000 consecutive admissions to the medical wards of the New York Hospital, Dayton found included one case of breaking of the needle in the chest-wall, three of subcutaneous emphysema, one of puncture of an abscess of the lung followed by septic symptoms, four of hemoptysis, one of puncture of an aortic aneurysm, one of syncope and one of death after sudden onset of grave cerebral symptoms. The precautions in performing exploratory puncture of the pleura, which analysis of these twenty-three cases of accidents due to pleural reflexes suggests, are: (1) Avoid moving a patient with pneumonia or pleurisy with effusion, especially from the recumbent to the sitting posture. (2) Avoid turning him on to the sound side. (3) Avoid excitement before the operation. (4) Use as small a needle as will suffice and avoid all unnecessary shock as this is badly borne by pneumonia patients. (5) Never use the exploring needle as a labor-saving device if a careful study of physical signs will suffice. (6) Puncture cases with probable consolidation only when a definite indication for diagnosis or treatment exists, e. g., the probable presence of pus as shown by the temperature curve and increasing polymorphonuclear leukocytosis, or extreme and increasing signs of fluid indicated by displacement of the apex-beat or by respiratory embarrassment. In a case beginning as a definite lobar pneumonia it is often more conservative to wait until after the crisis before exploring, unless the symptoms suggest the necessity for early operation if pus should be found. In such a case rapid resolution may remove the signs which simulate fluid. If the signs are such, however, as to prevent a clear diagnosis of the intrathoracic lesion, and empyema is suspected, explore without delay, especially in children. Dayton believes that more lives are probably lost by delayed diagnosis of empyema than by all the accidents due to exploratory puncture of the pleura.

8. **Surgery of Hernia.**—The value of the blood-supply to the external oblique muscle and the simplicity of the continuous suture in an operation of this type are emphasized by Cubbins. Only one suture is used by him for approximating all the structure.

9. **Method of Approaching Lower Abdomen.**—The method developed by Roberts, although considerably modified, is based on the principle promulgated by Pfannenstiel and is executed as follows: He uses a keen-bladed, hollow-ground knife with offset handle to make a semicircular skin-graft incision 4 or 5 inches in length and so placed that it is all or nearly all below the pubic hair line and the center of its convexity comes just above the pubic symphysis. The knife cuts a graft from ¼ to ⅓ of an inch long before it reaches the subcutaneous tissue; the graft is then wiped back and the incision continued in the usual manner with a scalpel down to the fascia of the external oblique which is bared by gauze wiping. In traversing the fat-layer the incision is carried somewhat upward till it reaches the external oblique about 1½ inches above the pubic border; the anterior rectus sheath (conjoined fibers of the tendon of the external and internal oblique and transversalis) is cut from linea semilunaris to linea semi-

lunaris exposing the perpendicular fibers of the rectus abdominis on each side as well as those of the two pyramidales, when these little muscles are present. From the ends of this incision an incision is made which splits the fibers of the external oblique upward and outward for 2 or 3 inches and also a similar incision which splits the fibers of the internal oblique outward toward the pelvic wall in a direction which carries the incision under the lower portion of the external oblique, the transversalis being hardly distinguishable in this location.

This flap, lying anterior to the recti, is lifted up and the fibers dipping down between the recti are cut as the lifting process goes onward till the recti are bared 4 or more inches of their length. The recti are now separated, the right rectus being slid from under the right pyramidalis and the peritoneum opened longitudinally and in the usual manner. The wound is closed throughout with No. 1 plain iodin catgut. One continuous suture enters the border of the left rectus or pyramidalis at the lower limit of its separation and then passes back and forth through the peritoneal borders in such a manner that these edges are turned out and broad peritoneal surfaces are approached; the last stitch goes up through the border of the right rectus and begins a continuous suture of the rectus borders, terminating at the lower end of the incision where the thread is tied to the other end of the peritoneal suture. Another long strand of No. 1 catgut approximates the separated fibers of the oblique abdominal muscles as an over and over stitch, approximating the edges of the internal oblique and transversalis as far as the left linea semilunaris when it begins to involve all muscles in front of the recti as far as the right linea semilunaris. To the right of the right semilunaris the suture again approximates the separated fibers of the internal oblique and transversalis only, but the last stitch goes up to the upper border of the external oblique at the limit of the incision on the right where it begins to return to the point of starting, involving external oblique only as far as the right semilunaris. Then in front of the recti the stitches are placed between those of the earlier portion of the suture and on the left side, closing the external oblique and being tied to the beginning of the strand.

A single strand of the same sized catgut now closes the skin wound as a subcutaneous stitch, leaving the original skin graft or flap unattached as it was when the skin graft knife was laid aside. The fat layer is allowed to take care of itself. The skin flap is fastened in place by means of strips of sterile court plaster ¾ of an inch wide and 1½ inches long, which approximate the edges with perfect accuracy, leaving uncovered interspaces of about ¼ inch. These strips of court plaster complete the dressing, a sterile towel is placed over the wound while the patient is being taken to her bed but the incision is then exposed to the air for an hour or so till it is thoroughly dry, when the abdomen is treated as though there was no incision except that it is under no circumstances washed.

Wisconsin Medical Journal, Milwaukee

November X, No. 6, pp. 300-366.

12 *Venous Pulse and Heart Sounds. J. A. E. Eyster, Madison.
13 Injuries to Orbit. G. E. Seaman, Milwaukee.
14 *Medical Inspection of Schools. R. W. Jones, Wausau.

12 and 14. Abstracted in THE JOURNAL, July 22, 1911, p. 314.

American Journal of Obstetrics and Diseases of Women and Children, New York

December, LXIV, No. 408, pp. 925-1143.

15 *"Carcinomatodes" (Krukenberg Tumor) of Ovary. G. W. Outerbridge, Philadelphia.
16 Urinary Analysis as Diagnostic Aid in Toxemias of Pregnancy. A. S. Hotaling, Syracuse, N. Y.
17 Urine in Pregnancy. W. A. Groat, Syracuse, N. Y.
18 Responsibility of the Obstetrician. F. S. Newell, Boston.
19 Pseudohermaphrodite. H. S. Crossen, St. Louis.
20 Drainage: Essential Element in Surgery of Biliary Tract. C. N. Smith, Toledo, O.
21 *Obese Abdominal Wall. F. Reeder, St. Louis.
22 Factors Entering Into Mortality of Acute Intestinal (Mechanical) Obstruction. J. Y. Brown, St. Louis.
23 *Use of Sterilized Animal Membranes in Surgery. R. T. Morris, New York.
24 Duty of Physician Toward Patient Afflicted With Venereal Disease. A. Vanderveer, Albany, N. Y.
25 *Cancer. J. G. Sherrill, Louisville, Ky.

15. **Carcinomatodes of Ovary.**—A specimen of this type of tumor was examined by Outerbridge. He believes that certain fibrosarcomata of the ovary may undergo throughout comparatively large areas a myxomatous degeneration, this affecting both the ground substance and the cells, the former then showing large, loose meshes, the latter becoming swollen, pale, faintly granular, with a deeply staining, crescentic, peripheral nucleus, presenting the so-called "seal-ring" form. These are the true "Krukenberg tumors" of the ovary and are comparatively rare, though probably not so rare as many authors believe. The cells of practically any other ovarian tumor, whether primary or secondary, may undergo a similar mucoid degeneration and produce microscopic appearances very similar to the preceding type, at least as far as the cellular elements are concerned, but usually the presence of distinct carcinoma masses, glandular formations, etc., in certain areas will reveal their true nature. Outerbridge contends that the causal relationship of malignant tumors of the stomach and ovary has been sufficiently well demonstrated to warrant the suspicion of the presence of both these conditions when either one has been diagnosed, until it has been proved by palpatory examination during operation that the other does not exist.

21, 23 and 25.—Abstracted in THE JOURNAL, Oct. 14, 1911, p. 1313.

Kentucky Medical Journal, Bowling Green

October 15, IX, No. 20, pp. 873-904

26 Postoperative Gastric Dilatation. G. A. Hendon, Louisville.
27 The Anal Canal with Special Reference to Reflex Phenomena; Report of Cases. G. S. Hanes, Louisville.
28 Prevention and Treatment of Eclampsia. J. B. Lukins, Louisville.

November 1, IX, No. 21, pp. 905-958

29 Pellagra. O. P. Nuckols, Pineville.

Journal of Cutaneous Diseases, New York

December, XXIX, No. 12, pp. 617-675

30 Oriental Sore. S. T. Darling, Canal Zone.
31 Method of Demonstrating Spirochetes and Trypanosomes by Means of Nigrosin. C. Goosmann, Cincinnati.
32 *Unusual Form of Keratoma. A. J. Markley, Denver.
33 Use of Uviol Lamp in Treating Psoriasis, with Report of Case. W. J. Heimann, New York.

32. **Unusual Form of Keratoma.**—While handling an automatic gun, Markley's patient accidentally had his right hand caught in the mechanism, causing a lacerated wound of the ball of the thumb. The injury was dressed without sutures and healed promptly without incident and with but slight scarring. About four months later, at the site of the injury, a nodule the size of a pinhead appeared, deeply imbedded in the skin, rapidly increasing in size, until at the end of six months it appeared at the surface as a pearly-white body about the size of a small pea. The growth itself and the area immediately surrounding it were now exquisitely sensitive to pressure of any kind. Pain radiated up the arm and finally became so severe as to preclude writing or any such use of the thumb, on which account the small tumor was then excised. Because of its extreme local sensitiveness and the radiating character of the pain it was thought that the growth was connected with a nerve, probably analagous to the neuromata developing in amputation stumps. On section, however, it was found that it consisted of concentric layers of flattened, horny cells, many of which still retained their nuclei, the whole surrounded by an intact layer or capsule of epithelium continuous with that of the surface. This accumulation of imperfectly keratinized cells remained within the epithelial layer and as growth proceeded the mass was thrust downward into the corium, causing the pain which was evidently mechanical in origin and due to pressure on the deep layers of the corium and the subcutaneous structures.

Journal of Medical Association of Georgia, Augusta

December, I, No. 5, pp. 153-196

34 Dysmenorrhea. J. R. B. Branch, Macon.
35 *Diseases of the Mouth. R. Adair, Atlanta.
36 Thrombosis of Cavernous Sinus, with Report of Case. H. H. Martin, Savannah.
37 Apomorphine and Its Uses. S. A. Visanska, Atlanta.

38 Treatment of Cancer of Breast. F. K. Boland, Atlanta.
39 *Nausea and Vomiting; Their Clinical Significance. W. W. Jarrell, Thomasville.
40 Acute Diffuse Suppurative Peritonitis. G. A. Traylor, Augusta.
41 *Diseases Produced by Bacillus Coli Communis in Intestines. F. B. Turck, Chicago.

35 and 41. Abstracted in The Journal, June 10, 1911, pp. 1754 and 1756.

39. Abstracted in The Journal, May 27, 1911, p. 1603.

Southern Medical Journal, Nashville, Tenn.

December, IV, No. 11, pp. 795-862

42 *Avulsion of Nerves for Neuralgia; Thiersch Method. H. P. Cole, Mobile, Ala.
43 Nutrition of Children. S. F. Hale, Mobile, Ala.
44 Purgatives with Pain in Abdomen. C. N. Cowden, Nashville, Tenn.
45 State Care of Epileptics. G. T. McWhorter, Riverton, Ala.
46 Sarcoma of Stomach, With Report of Case. J. Overton, Nashville, Tenn.
47 Glanders: Mode of Transmission and Diagnostic Difficulties. H. D. King, New Orleans.
48 Results Obtained with Salvarsan E. D. Holland, Hot Springs, Ark.
49 *Experimental Administration of Salvarsan in Leprosy. C. Wellman, W. A. Clark and T. J. Clark, San Francisco and New Orleans.

42. **Avulsion of Nerves for Neuralgia.**—Cole cites a case of neuralgia in the right supra- and infra-orbital branches of the trigeminal nerve. Intense neuralgic attacks ensued on the slightest pressure over these two nerve trunks at their point of presentation under the soft tissues. An infection of the right antrum of Highmore was the probable etiologic factor. The patient gave a history of purulent pneumonia of several months' duration. Because of the cardio-vascular-renal lesion a Gasserian operation was considered contra-indicated. Under ether anesthesia, the supra-orbital nerve was readily exposed through an eyebrow incision. Cutting the trunk at the orbital ridge, the distal 3 inches with all its branches was slowly and easily avulsed by twisting on forceps. The proximal stump was then plugged by screwing in a silver screw; a few strands of catgut were placed to drain the wound through a small stab wound below the incision. The antrum of Highmore was freely opened, curetted and packed through an oral incision, old granulations found in antrum. Ether anesthesia, twenty-five minutes. There was considerable edema about orbit for several days. Fine lines of subcutaneous hemorrhage outlined the course of the avulsed nerves, and extended well up on the forehead and downward below the ramus of the jaw. The patient left the hospital within a few days and made an uneventful recovery. The patient has practically regained his former health and weight, has resumed his occupation and has not had an attack of neuralgia since the operation, a period now of over twelve months.

49. **Salvarsan in Leprosy.**—Seven lepra patients were under observation by the authors. Two were of the anesthetic type, while five were of the nodular form. On January 17, 1911, five patients were given 6 decigrams of salvarsan, subcutaneously, and for purposes of control, two patients (one of the anesthetic type) were given 20 c.c. normal salt solution. Other than these subcutaneous injections no change was made in their mode of life. Some local reaction at the site of injection occurred in the cases receiving the drug, with considerable pain for the first two days. One patient died from septicemia following accidental hot water burns. One control patient is apparently unchanged, while the other, after growing steadily and rapidly worse, was finally given salvarsan which, however, failed to arrest the disease and the patient died April 21, 1911. There has been a gain in weight and strength and in the appearance of the superficial lesions, notably those of the throat and skin in the case of those originally treated. The attendant, who is not a trained observer, reports that in those patients who originally received the salvarsan there is a marked gain in energy and cheerfulness. In none of the cases is there any clinical evidence that the bacilli in the tissues are destroyed or their activity impaired. The blood-findings seem to be of no special significance.

Colorado Medicine, Denver

December, VIII, No. 12, pp. 413-448

50 *Differential Leukocytes at Various Altitudes. O. M. Gilbert, Boulder.
51 Diagnosis in Early Childhood. H. B. Whitney, Denver.
52 Rheumatism. L. W. Ely, Denver.
53 Gravity for Correction of Malpositions of Head in Cephalic Presentations in Labor. J. Lindahl, Denver.

50. **Differential Leukocytes.**—Gilbert's conclusions as to the effect which altitude plays in producing lymphocytosis is that it is one of the most important of several factors which tend to cause such an increase. He believes that the combined effect of these other factors, which ordinarily go hand in hand with increased altitude, such as sunshine, absence of continuous cloudiness, low humidity, sandy and well-drained soil, as well as increase in actinic rays, is even greater than that of altitude. He examined sixty cases of tuberculosis and followed Dr. Webb's classification in order to be able to compare results. The results agree rather closely except in one particular. Gilbert found that his "apparently cured" patients run higher in lymphocytes than the normal patients do. After closely observing the significance of lymphocytosis as a prognostic criterion in tuberculosis for nearly a year he is convinced that it is exceedingly helpful. A low count has almost always been accompanied or followed by poor clinical progress.

Maryland Medical Journal, Baltimore

November, LIV, No. 11, pp. 309-325

54 Syphilitic Meningitis of the Anterior Fossa, with Uncinate Gyrus Syndrome Simulating Neoplasm. T. A. Williams, Washington, D. C.
55 Tendencies in Medical Education in the United States. L. F Barker, Baltimore.
56 Ruptured Quadriceps Extensor Tendon; Report of Case. N. Winslow, Baltimore.

Canadian Medical Association Journal, Toronto

December, I, No. 12, pp. 1115-1227

57 Sanitary Milk. T. P. Shaw.
58 *Experimental Study of Phagocytic Immunity Produced by Tuberculin. J. C. Meakins, Montreal.
59 Primary Pyelitis in Infants. J. T. Fotheringham.
60 *Molds in Alimentary Canal. I. P. Hall, Vancouver.
61 Lung Abscess. E. M. von Eberts, Montreal.
62 New Combined Examining and Operating Air Distention Endoscope. G. S. Gordon, Vancouver.
63 Use of Radium in Ophthalmology. G. S. Ryerson, Toronto.
64 *Simple Method of Treating Fractured Clavicle. R. J. Manion, Fort William.
65 Malignant Edema. M. Chisholm, Halifax.

58. **Phagocytic Immunity Produced by Tuberculin.**—According to Meakins the inoculation of the rabbit with attenuated, living tubercle bacilli rapidly produces an immunity to lethal doses of virulent tubercle bacilli. The inoculation of the rabbit with killed tubercle bacilli in sufficient amounts over a long enough period, produces an active immunity to virulent tubercle bacilli. The estimation of the phagocytic power of the serum affords a fairly accurate estimate of the immunity possessed by the animal immunized. The injections into the rabbit of tuberculous toxin or "old tuberculin" does not produce any increase of the phagocytic power of the serum, nor does it produce any appreciable immunity to virulent tubercle bacilli. The fact that the injection into the rabbit of killed tubercle bacilli produces an immunity to virulent tubercle bacilli, Meakins says, might be taken advantage of to produce an immunity in infants before they become primarily infected with tuberculosis.

60. **Molds in Alimentary Canal.**—Hall believes that molds have a causal relation to cholera nostras and infantile diarrhea for the reason that molds are often present when no other sufficient cause of the symptoms can be found. They are present in abundance in some of the most fatal diseases. Their partial destruction is followed by immediate improvement. Their complete removal in such cases is an essential element in recovery.

64. **Treatment of Fractured Clavicle.**—Having an assistant hold the patient with the shoulders retracted, Manion attaches a 2-inch strip of adhesive plaster firmly to the front of the affected shoulder and over the point of it. It is then swung around the back of the chest, under the opposite arm, across

the front of the chest and finishes under the mammary or axillary region of the affected side. Theoretically, this is not quite proper, as it pulls down the affected shoulder, but this is corrected by a sling to elevate the elbow.

Chicago Medical Recorder

December 15, XXXIII, No. 12, pp. 656-714

66 Puerperal Infection. T. J. Watkins, Chicago.
67 Curability of Morphin Habit. W. F. Waugh, Chicago.
68 Farce of Medical Ethics. H. J. Achard, Chicago.
69 City Budget and Department of Health. H. R. Sands, Chicago.
70 Milk-Supply of Washington. G. M. Whitaker.

Bulletin of Manila Medical Society

October, III, No. 10, pp. 167-179

71 *Treatment of Puerperal Infection by Drainage of Uterus. B. Roxas, Manila.

71. **Treatment of Puerperal Infection.**—Since July, 1910, drainage of the uterus by means of a rubber tube has been systematically used in puerperal infections by Roxas without a bad result. Sometimes serum or vaccine treatment is employed in addition to drainage. The discharge of a large quantity of pus through the drainage tubes in one case cited was followed by gradual lowering of the patient's temperature, with occasional slight rises whenever the rubber tubes were expelled by the contraction of the uterus or abdominal wall. The mucopurulent discharge from the uterus gradually subsided and twenty days after the treatment was instituted the patient had entirely recovered. As an adjunct treatment, general tonics were used.

American Journal of Diseases of Children, Chicago

December 2, No. 6, pp. 369-450

72 *Infantile Paralysis. R. W. Lovett and M. W. Richardson, Boston.
73 Pyloric Stenosis In Older Children; Report of Case of Pyloric Spasm Ending Fatally. E. E. Graham, Philadelphia.
74 Apparatus for Collection of Excreta of Infants. E. F. Du Bois, New York.

72. **Infantile Paralysis.**—The authors present a brief resumé of present accepted knowledge of the various aspects of the disease and an analysis of the studies in Massachusetts made by the State Board of Health for the four years beginning in 1907.

New York State Journal of Medicine

December, II, No. 12, pp. 559-612

75 *Prevention of Deformity. W. R. Townsend, New York.
76 Pathologic Relation of Anesthetic to Surigcal Procedure. W. C. Woolsey, Brooklyn.
77 Causes and Treatment of Postoperative Complications and Early Voluntary Muscular Movements. W. F. Burrows, New York.
78 Case of Purpura Hemorrhagica. J. M. Swan and H. Dewolf, Watkins, N. Y.
79 *Diagnosis of Fractures of Hip. C. H. Baldwin, Utica.
80 Treatment of Fractures in and About Neck of Femur. D. M. Totman, Syracuse.
81 *Some Conditions Simulating Disease of Hip or Spine. P. Le Breton, Buffalo.
82 Influenzal Arthritis. J. P. Creveling, Auburn.
83 Physician and Optician. E. W. Ayars, Alfred.
84 Misconceptions Regarding Ophthalmia Neonatorum. E. M. Alger, New York.
85 Rôle of Smaller Hospital. M. O'Meara, Kingston.
86 Vaccination. D. S. Burr, Binghamton.

75. **Prevention of Deformity.**—Speaking of flat-foot, Townsend says that the condition to-day is deplorable in regard to the use of so-called flat-foot supporters. People who have no flat-foot are wearing them; people who have flat-foot are wearing them. The first class do not need them; the second class get no benefit from them, because they are faultily made and do not fit. The abuse of flat-foot supports is growing and the profession is to blame for it. Of the large number of patients seen at the hospital, who are unable to pay for treatment, nearly all have bought at one time or another some form of flat-foot support. The practice of many physicians of telling a patient to go to a shoe store and buy a support because he has flat-foot is certainly most deplorable and still more deplorable is it when the surgeon does not take the trouble to make an examination of the foot to see whether there is anything needing treatment. It should, therefore, be the aim and object of all to endeavor to prevent deformity and especially should those who are engaged in corporation work see to it that those who are to make the employees of the future are sound in mind and sound in body.

79. **Fractures of Hip.** It is urged by Baldwin to employ the x-ray in all injuries about the hip unless from the symptoms and physical signs we are sure without reasonable doubt that no change in the contour of the bone exists. He says we may not be able to carry about x-ray apparatus suitable for making skiagraphs of hips, but we can carry a tape measure, and by this, by our powers of observation, and by our fingers, satisfy ourselves whether or not it would be wise to convey a patient to an x-ray machine.

81. **Disease of Hip or Spine.**—Seven cases in which the attending physicians suspected disease of the spine or hip because of symptoms referred there, while the further course in each case demonstrated that the trouble lay elsewhere, are reported by Le Breton. Two cases simulating hip disease were of abscess following trauma, one located along the psoas muscle in front of the lumbar spine and the other back of the left kidney. Of the remaining five cases, all simulating disease of the spine, the first was a case of retroperitoneal carcinoma and the remaining four were cases of tuberculosis, one a tuberculous kidney, another a cold abscess near the kidney, another in which the exact site of the lesion was not determined and the last a case of tuberculosis of the appendix, complicated by tuberculous endometritis.

Journal of Minnesota State Medical Association and North-Western Lancet, Minneapolis

December 15, XXXI, No. 24, pp. 591-615

87 Diseases of Pancreas. R. E. Weible, Fargo, N. D.
88 Physiology and Pathology of Gall-Bladder in Relation to Its Removal. H. P. Ritchie, St. Paul.
89 Infection and Immunity. H. E. French, Grank Forks, N. D.
90 A Dicephalic Monster. F. W. Bullen, Hibbing.

Boston Medical and Surgical Journal

December 14, CLXV, No. 24, pp. 899-936

91 Outbreak of Tonsillitis or Septic Sore Throat In Eastern Massachusetts and Its Relation to Infected Milk-Supply. C. E. A. Winslow, New York.
92 Clinical Aspects of Epidemic of Septic Sore Throat in Cambridge, May, 1911. E. A. Darling, Cambridge, Mass.
93 Epidemic of Tonsillitis Due to Infected Milk. M. W. Richardson, Boston.
94 Epidemic of Sore Throat Occurring in Boston and Vicinity During May, 1911. J. L. Goodale, Boston.
95 Practical Application of Blood-Vessel Surgery. E. H. Risley, Boston.
96 Tubercular Epididymitis; Analysis of 153 Cases. J. D. Barney, Boston.

December 21, CLXV, No. 25, pp. 937-974

97 *Contagious Affections of Skin in Preparatory Schools and Colleges. J. T. Bowen, Boston.
98 *Diagnostic Importance of Hemoptysis. W. B. Bartlett, Hartford, Conn.
99 *Comparative Toxicity of Various Alcoholic Beverages. J. Friedenwald, Baltimore.
100 Tissue Necrosis Following Injections of Salvarsan. R. L. Sutton, Kansas City, Mo.
101 Nine Cases of Ocular Syphilis Treated by Salvarsan. F. E. Cheney, Boston.

97. **Contagious Affections of Skin.**—Bowen contends that there are a number of purely cutaneous diseases, most, if not all, of them undoubtedly communicable, which are of common occurrence in preparatory schools and among the younger members of colleges. It is from these sources that the brief descriptions and comments are drawn. He cites cases of impetigo contagiosa, scabies, ringworm, marginated dermatitis of the thighs and axillæ, alopecia areata, and verrucæ.

98. **Diagnostic Importance of Hemoptysis.**—The conclusions drawn by Bartlett from his study of hemoptysis are as follows: Bleeding from the upper air passages must be ruled out by careful inspection and history. It may occur in certain constitutional or blood diseases as merely another manifestation of the general tendency to bleed. Hemoptysis frequently occurs in broken compensation in heart disease and may occur in mitral stenosis as the only symptom of failing compensation. In such cases tuberculosis is frequently suspected; it is, however, rarely found. Ninety per cent. of all hemoptyses are due to pulmonary tuberculosis. As a rule

definite signs and symptoms are present. Not uncommonly, however, signs and symptoms do not develop for months or even years. Hemoptysis may occur in any ulcerating or eroding pulmonary disease. It should, therefore, be expected in abscess, gangrene, bronchiectasis or pulmonary cirrhosis. In such cases careful study of the signs and symptoms and frequent examinations of the sputum will usually suffice to rule out tuberculosis. Hemoptysis in pneumonia, bronchitis, asthma or following trauma should lead to the suspicion of an underlying tuberculous process. It is very doubtful if vicarious menstruation or hysteria can produce hemoptysis in normal lungs. Hemoptysis occurring without warning in young and healthy adults and passing off without the development of further signs or symptoms of tuberculosis is probably of tuberculous origin and should be so treated. Bronchopulmonary hemorrhage without definite symptoms or signs of cardiac or ulcerative pulmonary disease is due in nearly every instance to tuberculous infection, which is merely another way of saying that hemoptysis should be considered as due to pulmonary tuberculosis unless proved to be due to some other cause.

99. Abstracted in The Journal, June 3, 1911, p. 1680.

Iowa Medical Journal, Des Moines

December 18, No. 6, pp. 261-306

102 Diphtheria Carriers and Medical Inspection of Schools. H. Albert, Iowa City.
103 Blood-Pressure in Pneumonia. A. Lambert, New York.
104 Myelocytic Leukemia. J. H. Peck, Des Moines.
105 Postoperative Treatment of Prostatectomy. L. W. Bremerman, Chicago.
106 Occult Blood in Diagnosis of Gastric Ulcer. J. T. Strawn, Des Moines.
107 Importance of Wassermann Reaction in Syphilis, Special Reference to Use of Salvarsan. W. E. Sanders, Des Moines.
108 Latest Theories on Cancer. S. R. Klein, Valhalla, N. Y.
109 Late Congenital Syphilis. E. R. Posner, Des Moines.
110 Malignancy. G. W. Hinkle, Harvard.

New York Medical Journal

December 16, XCIV, No. 1724, pp. 1209-1260

111 Psychologic Mechanisms of Paranoia. A. A. Brill, New York.
112 *Pathogenesis of Hypertrophic Pulmonary Osteoarthropathy. H. Brooks, New York
113 *Corrective Placement of Uterus: New Ventral Suspension. G. S. Foster, Manchester, N. H.
114 Certain Hemolytic Tests in Case of Blackwater Fever. C. Wellmann and C. C. Bass, New Orleans.
115 *New Diagnostic Reflex Sign in Typhoid. C. B. Burke, Atlantic, Iowa.
116 Enteroptosis and Altered Function of Diaphragm Resulting from Intrathoracic Inflammations. F. M. Pottenger, Monrovia, Cal.
117 Diphtheria Antitoxin and Anaphylaxis. J. A. Roddy, Philadelphia.
118 Value of Noguchi Reaction to General Practitioner. M. Lederer, New York.
119 Influence of Ipecac on Intestinal Amebiasis. D. Roberts, New York.
120 Relation of Salvarsan to Ear. S. Seegman, Pittsburgh.

December 23, XCIV, No. 1725, pp. 1261-1312

121 Sterility in Women. E. McDonald, New York.
122 *Tetanus; Seven Cases with Recoveries. P. Kintzing, Baltimore.
123 Present Status of Origin of Life Question. H. C. Bastian, London.
124 *Operative Treatment of Fractures. E. P. Magruder, Washington, D. C.
125 Evolution of Operating Table. F. Hartley and F. W. Murray, New York.
126 Report of Three Interesting Obstetrical Cases. S. J. Scadron, New York.
127 Hepatoptosis. A. F. R. Andresen, New York.
128 Treatment of Diphtheria Carriers by Overriding Infected Area with Culture of Staphylococcus Pyogenes Aureus. H. Page, Manila, P. I.
129 Diagnosis. A. M. Corwin, Chicago.

112. **Pulmonary Osteoarthropathy.**—It is suggested by Brooks that for the evolution of the changes characteristic of hypertrophic pulmonary osteoarthropathy, these factors are necessary: 1. Comparative youth; 2, the presence of lesions in the lung, pleura, or heart, most commonly the first mentioned, as a result of which there is an obstruction to the venous return or deficient pulmonary oxidation. That the changes are not purely the result of a septic intoxication is clearly shown by the fact that they do not appear in liver or splenic abscess, in osteomyelitis, chronic dysentery, or those numerous other conditions characterized by prolonged septic absorption, and Brooks is inclined to attribute a rather minor, though possible, rôle to the importance of the infectious processes, although they are present in most reported cases and doubtless where toxins, cryptogenic or metabolic, are circulating in the blood venous stasis and fibrous hyperplasia are favored, all well recognized tendencies, perhaps most familiarly exampled in syphilis and alcoholism.

113. **Placement of Uterus.**—In Foster's operation 2 inch-wide strips of peritoneum are used as suspending ligaments of the uterus. A ligature passed through the fundus of the uterus and through the fascia of the rectus muscle gives a temporary support.

115. **Reflex Sign in Typhoid.**—Burke describes the sign which many years ago was considered to be diagnostic of typhoid but soon was found present in other similar febrile conditions, i. e., a fibrillary contraction of that portion of the biceps muscle traversed by the thumb and finger, producing an oval ridge without complete contraction of the muscle. The ridge thus formed disappears slowly.

122. **Tetanus.**—The remedy employed by Kintzing was a solution of pure phenol of 10 per cent. strength, made by dissolving the deliquesced crystals in sterile water. This solution was then diluted to suit the case, generally to thirty or forty minims, and administered by hypodermic injections deep into the muscles; the dose being repeated at intervals of three hours in the beginning, increasing the interval as improvement manifested itself. The full adult dose employed was ten drops of this 10 per cent. solution, equaling practically one grain of pure crystalline phenol. As a precaution against soreness or suppuration Kintzing has sometimes diluted with sterile water half the stated amount, five drops, to the capacity of a twenty-five or thirty minim syringe, injected this into one buttock, following immediately with the remainder of the dose into the opposite buttock; the succeeding injection may be made into the deltoids or the pectoral muscles, if deemed advisable. However, when the entire dose, properly diluted (i. e., to forty minims) has been given in a single injection, no bad results have followed. The dose employed in the second case was five minims; in the sixth case, three and one-half minims, which was afterward increased to five minims. In fully developed cases the second dose is administered one hour after the first, the third being given after the lapse already stated.

The urine is carefully watched, and if the characteristic smoky color develops strongly Kintzing should consider it a signal for temporary cessation of the injections.

124. **Treatment of Fractures.**—Magruder holds that operation is indicated in the closed fracture of wide displacement and when correct apposition is otherwise impossible, provided hospital facilities can be obtained; in articular fractures when ankylosis threatens, and the best results are obtained after exact coaptation and suturing of the fragments. Massage, followed by early passive motion, gradually made active, should be the practice. When operation is indicated at all, the earliest operation is the best. The operative treatment of open fractures is that which most nearly reduces them to the type of the closed fracture, except as to drainage. Gunshot fractures should be treated like fractures of the open type in contact with street dust. That is to say, in addition to the usual treatment administer, as a precautionary measure, antitetanic serum. In all cases the most exact coaptation and retention of the fragments gives the most gratifying results. The ideal suture, in his opinion, is one strong enough to hold until union begins and then admits of its own absorption. The nearest approach to this is the sixty-day chromic catgut, which is unsafe and unsatisfactory in the presence of tension. The most trustworthy metal suture is the tinned steeled annealed wire. Wiring is the best operative method of treatment. Because of the dangers of an osteomyelitis the medullary canal should not be invaded if it can be avoided.

Louisville Monthly Journal of Medicine and Surgery, Ky.

December, XVIII, No. 7, pp. 193-224

130 Medical Aspect of Acute Abdomen. S. J. Meyers, Louisville.
131 Symptomatology and Treatment of Lobar Pneumonia. O. B. Demarce, Frankfort, Ky.
132 Management of Acute Appendicitis and Indications for Interval Operation. H. H. Grant, Louisville.

Medical Record, New York

December 16, LXXX, No. 2145, pp. 1209-1258

133 Public and Medical Profession. J. Ewing, New York.
134 Preservation of Health in School Children. R. G. Freeman, New York.
135 Care of Crippled and Rachitic in Italy. D. C. McMurtrie, New York.
136 D'Arsonvalization in Treatment of Hypertension and Arteriosclerosis. W. B. Snow, New York.
137 *Unusual Case of Typhoid in Young Child. F. J. Barrett, New York.
138 Salivary Calculus of Wharton's Duct. E. H. Griffin, New York.

December 23, LXXX, No. 2146, pp. 1259-1308

139 Suggested Readjustment of Our Views on Heart Examinations for Life Insurance. C. F. Martin, Montreal, Canada.
140 Christian Science in Operation. H. D. Chapin, New York.
141 *Adequate Treatment of Gonorrhea. T. W. Jackson, Fort Hunt, Va.
142 Chronic Putrefaction Toxemia of Intestinal Origin. E. E. Cornwall, Brooklyn.
143 *Control of Measles. P. B. Brooks, Norwich, N. Y.
144 Treatment of Multiple Glandular Tumors. R. H. Boggs, Pittsburgh.
145 Transillumination. A. I. Benedict, Buffalo.
146 *Appendicular Abscess Followed by Phlebitis of External Jugular Vein. J. H. Richards, New York.

137. **Typhoid in Child.**—Barrett reports a case of typhoid in a child less than two years of age. There was intestinal hemorrhage, a symptom rarely seen in young children; the fever was remittent, and there was neither roseola nor splenic enlargement. There were, however, symptoms of meningitis with active delirium.

141. **Treatment of Gonorrhea.**—Fifteen cases of gonorrhea are cited by Jackson in which he employed injections and irrigations successfully. In the cases reported all individuals were considered as suffering from the disease so long as the Neisser organism was demonstrable either in the discharged urethral secretion or in the exudate or secretion obtained by gently drawing a sterile platinum loop over the exposed urethral mucosa within half an inch of the external meatus.

All injections were made with glass syringes of 10 c.c. capacity except in the case of argyrol. Solutions of this drug were instilled into the urethra with medicine droppers, the injections averaging 2 c.c. All injected solutions were retained in the urethra for five minutes. Irrigations were made with an apparatus consisting of a glass funnel and rubber delivery tube fitted with an urethral tip. All irrigating solutions were used warm. Formula for astringent "a"—Phenol, 0.325 gram; zinc sulphate, 2 grams; bismuth subnitrate, 4 grams; distilled water, 120 c.c. Formula for astringent "b"—Alum, 10 grams; phenol, 2 grams; distilled water, 500 c.c. The total number of cases receiving argyrol was 9; iodin, 8; silver nitrate, 3; astringents, 7, and boric acid, 1. The shortest case treated with argyrol only was fourteen days. The next shortest case (2) treated with iodin only was twenty-eight days. The next shortest case (3) treated with iodin only was thirty-four days. The average duration of fifteen cases was 82.6 days. The average duration of twelve uncomplicated cases was 75.75 days.

143. **Measles.**—It is Brooks' belief that present efforts to control measles do not give satisfactory results, chiefly because we permit the cases in the catarrhal stage to go undetected. He says that if it is to be controlled or prevented, it must be through isolation on the appearance of the first symptoms.

146. **Appendicular Abscess Followed by Phlebitis of External Jugular Vein.**—Not finding the appendix easily and being unwilling to break up the adhesions about the cecum, Richards did not remove the appendix but drained the abscess through the wound, sewing up the remainder of the incision. The drainage was free and on the third day following the operation the temperature was normal, and the bowels had moved well. No untoward symptoms developed until the eighth day, when the temperature rose to 105 and the pulse to 140. There was also a chill. The drainage was free and there were no signs of extending peritonitis. The drainage had a fecal odor, but not more so than at the time of the operation, and there was no fecal matter in the drainage. The patient complained of a stiff neck, with soreness in the left side of the neck. On the following day the pain in the neck was much more severe, so Richards examined this region more closely and found the external jugular hard like a cord, and very painful to the touch. Just above the clavicle there was some perivascular inflammation. Richards immobilized the head, and gradually the inflammation disappeared.

Lancet-Clinic, Cincinnati

December 9, CVI, No. 24, pp. 593-618

147 Plea for Earlier Diagnosis in Cancer. C. J. Cook, Indianapolis, Ind.
148 Surgery of Bronchus. B. M. Ricketts, Cincinnati.
149 Providing for Crippled Child. D. C. McMurtrie, New York.
150 Cancer Statistics and Their Meaning. I. S. Wile, New York.
151 Ancient Physicians and House Doctors. T. C. Minor, Cincinnati.

December 16, CVI, No. 25, pp. 619-644

152 Accidents and Injuries in Treatment of Eustachian Tube. W. E. Murphy, Cincinnati.
153 Infection of Gall-Bladder and Bile Tract; Surgical Treatment. W. Fuller, Chicago.

December 23, CVI, No. 26, pp. 646-670

154 Civic Medical Inspection of School Children, with Special Reference to Diseases of Eye, Ear and Throat. S. C. Ayers, Cincinnati.
155 Some Relations of Ophthalmology to General Medicine. G. H. Knapp, Cincinnati.
156 Appendix Open at Both Ends. J. F. Baldwin, Columbus, Ohio.
157 Ancient Cincinnati House Physicians and Interns. T. C. Minor, Cincinnati.

Cleveland Medical Journal

November, X, No. 11, pp. 881-968

158 *Ethics of Contract Medical Practice and Its Economic Advantage to the Community. R. E. Skeel, Cleveland.
159 *Economic Effect of Contract Medical Practice on Medical Profession. J. E. Tuckerman, Cleveland.
160 *Condition and Control of Contract Medical Practice in Other Cities of the Country. C. A. Hamann, Cleveland.
161 Contract Practice in Foreign Countries. W. B. Chamberlin, Cleveland.
162 Primary Syphilis; Advantage of Early Diagnosis, Diagnostic Measures and Treatment. C. L. Cummer and R. Dexter, Cleveland.
163 Proposed Deletions from Pharmacopeia. T. Sollmann, Cleveland.
164 *Typhoid Vaccine as Prophylactic in Typhoid. P. A. Jacobs, Cleveland.

158. **Contract Medical Practice and Community.**—Skeel points out that many forms of contract practice are not only ethical but economically necessary. Such forms include whole time service in sanitariums, state hospitals, municipal and state health departments, life insurance companies, etc., with a part time service as actual employes of corporations, manufacturing industries, etc., in which the employer pays for the service an adequate remuneration. Some forms are undesirable, such as contracts with lodges and other organizations which are in themselves good, but which pay their physicians so small a salary that his patients who ultimately pay the bill, do not receive adequate service. This should be righted if possible, but it is a very small mote in the eye of a profession which contains a number of fair sized beams that should be extracted before its vision is quite accurate. Some contracts are vicious both ethically and economically and they include all those in which the employer, who is a promoter, starts an organization with the direct end in view of collecting small fees from its members, promising adequate medical service in return, and who then hires the cheapest man he can obtain to trifle with the members' lives under his medical license. Such a medical man deserves no consideration whatever, no matter whether he is or is not in other respects a so-called ethical member of the profession.

159. **Contract Medical Practice and Medical Profession.**—There are two distinct elements entering into a consideration of the justice of so-called contract practice as distinguished from private practice. The first element is the ethical one. The second element is the economic one, with which Tuckerman's paper deals. The whole question here, he says, is one of adequate compensation. The compensation for contract work is inadequate in almost all instances considered, and it tends to become more and more inadequate through the economic pressure to which all laborers are being subjected, coincident with the development of large commercial interests. This condition has been allowed rapidly to come to the present

acute state through lack of knowledge of the ethics of medicine, professional jealousy, indifference of the older practitioners, the pernicious example set by some of the older and well-established practitioners, the overcrowding of the profession, the tolerance of this state of affairs by all medical societies, the commercialism of the age, and chief of all, the complete disorganization of the medical body. Whether the development of sanitation and the centralization of medical work is destined to reduce the number of physicians necessary to maintain health in our communities, Tuckerman regards as immaterial. It is, however, of vast economic importance, he says, that the profession address itself seriously to the problem of adequate compensation for those of its members who are destined to continue in the practice of medicine, or that shall hereafter enter on it, irrespective of whether their activities are in public or private fields.

160. **Contract Medical Practice in Other Cities.**—In gathering the material for his paper Hamann says he has come more and more impressed with the growth of contract practice in all its forms, government, state, municipal, lodge and fraternal and private organizations. Medical socialism, so to speak, is progressing rapidly in this country. It is important for the medical profession to discuss the subject fully. For the younger men already in the profession and for those who are students or are contemplating a medical career there is a particular need of careful consideration of the problems involved, for on the mode of solution of these problems will depend much of their future. He has also gathered the impression that contract practice has come to stay, that in some form or forms it is a necessary economic institution, and that, therefore, we must adapt ourselves and submit to the inevitable, only let us try to establish such conditions in the way of appointments, control and compensation that the standing of the profession will be maintained at its proper level in all respects.

164. **Vaccines in Typhoid.**—Jacobs says that since 1904, 60,000 men have been vaccinated against typhoid in India. Over 7,000 in Southwest Africa and over 14,000 in the United States. In no case has any harm followed its use. The time has come when this means of prevention against typhoid should be extended, not only in the military service, but among the civil population as well.

Woman's Medical Journal, Cincinnati

November, XXI, No. 2, pp. 237-252

165 The Mysterious Phenomena of Matter and Mind. G. P. Murray, New York.
166 Pathologic Anatomy of Amentia. M. M. Shick, Elwyn, Pa.
167 Responsibility of Medical Women of the United States to Women of Non-Christian Lands, and How We Are Meeting It. M. H. McLean, St. Louis.
168 The Menstrual Cycle, Its Physiology and the Preparation of the Young Girl for Its Advent. E. S. Brown, New York.

December, XXI, No. 12, pp. 261-284

169 Serological Aspect of Syphilis. D. O. Robinson, New York.
170 Instruction of Teachers in School Hygiene. G. M. Whipple.
171 Résumé of Loco-Disease. M. Gage-Day, Kingston-on-the-Hudson, N. Y.
172 Value of Corrective Gymnastics. M. K. Wallin, New York.
173 Menopause. M. D. Rushmore, New York.

Annals of Otology, Rhinology and Laryngology, St. Louis

September, XX, No. 3, pp. 511-750

174 Examination and Treatment of Eustachian Tube by Aid of Nasopharyngoscope. E. M. Holmes, Boston.
175 Actual Cautery in Treatment of Localized Tuberculous Lesions. G. B. Wood, Philadelphia.
176 More Efficient Methods of Aural Massage. A. Randall, Philadelphia.
177 Are the Tonsils a Menace or a Protection? H. L. Swain, New Haven.
178 Technic of Tonsillectomy. J. M. Ingersoll, Cleveland.
179 Relation of Enlarged Tonsils to Endocarditis. A. C. Getchell, Worcester, Mass.
180 Cases of Late Secondary Hemorrhage After Tonsillotomy. F. E. Hopkins, Springfield.
181 So-Called Conservative Mastoid Operation with Description of Technic of Heath, Bondy and Siebenmann. G. L. Richards, Fall River, Mass.
182 Injections of Blood Serum for Hemorrhage, Either Spontaneous or Postoperative. C. F. Theisen, Albany.
183 Intracranial Lesions Complicating Acute Aural Disease. S. M. Smith, Philadelphia.
184 Etiology of Otosclerosis. W. S. Bryant, New York.
185 Case of Rarefying Osteitis of Mastoid Bone. C. W. Richardson, Washington.
186 Blood Cultures in Otology. F. E. Sondern, New York.
187 Supernumerary Auricle Associated with Chronic Suppurative Otitis Media. H. Hays, New York.
188 Case Report of Extirpation of Larynx. R. H. Craig, Montreal.
189 Six Cases of Acute Suppurative Otitis Media in One Family with Complications. H. Hays, New York.
190 Mucocele of Nasal Accessory Sinuses; Report of Three Cases (Ethmoid, Maxillary Antrum, Frontal), with Tabulation of Thirty-Seven Cases. H. Hastings, Los Angeles.
191 Anatomy and Physiology of Salivary Glands. R. J. Held, New York.
192 Symptoms and Diagnosis of Diseases of Salivary Ducts and Glands. R. C. Myles, New York.
193 Treatment of Diseases of Salivary Apparatus. J. C. Beck, Chicago.
194 Fibroma of Nasopharynx, with Report of Four Cases. W. B. Chamberlin, Cleveland.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

December 9, No. 2658, pp. 1517-1576

1 Surgery of Abdominal Wall. A. P. Gould.
2 Certain Operative Procedures in Paralysis of Children. R. Jones.
3 Neurotic Dyspepsia. G. Rankin.
4 Radium in Malignant Disease and Varicose Ulceration. T. R. MacDonald.
5 Case of Rodent Ulcer Presenting Some Unusual Features. R. Farrant.
6 *Bacteriology of Cockroach. C. C. Morrell.

6. **Bacteriology of Cockroach.**—Morrell believes that the common cockroach is able by contamination with its feces (1) to bring about the souring of milk, (2) to infect food and milk with intestinal bacilli, (3) to transmit the tubercle bacillus, (4) to disseminate pathogenic staphylococci, (5) to transmit from place to place destructive molds. These facts, taken in conjunction with the life-habits of the insect, lead to the conclusion that the cockroach is able to, and may possibly, play a small part in the dissemination of tuberculosis and in the transmission of pyogenic organisms; that the insect is in all probability an active agent in the souring of milk kept in kitchens and larders; and that it is undoubtedly a very important factor in the distribution of molds to food and to numerous other articles, especially when they are kept in dark cupboards and cellars where cockroaches abound.

Lancet, London

December 2, CLXXXI, No. 4605, pp. 1535-1604

7 Unicellula Cancri: Parasite of Cancer. H. Butlin.
8 First and Last Kink in Chronic Intestinal Stasis. W. A. Lane.
9 *Association of Hysteria with Malingering. F. P. Weber.
10 Acute Osteomyelitis of Vertebræ. F. Fraser and T. McPherson.
11 Lead Bullet Removed from Metatarsal Bone After Twenty-Three Years. J. B. Christopherson.
12 Lymphatics of Scrotum. J. Morley.
13 *Systolic Blood-Pressure in Diseases of Heart. V. T. Korke.
14 Specific Gravity of Blood from Clinical Aspect. A. Ross.

December 9, CLXXXI, No. 4606, pp. 1605-1676

15 Intrathoracic Tumors and Aneurysms in Their Clinical Aspect. G. Steell.
16 Early Signs and Symptoms in Nervous Disease. J. Taylor.
17 Venereal Disease: Its Present and Future. D. White and C. H. Melville.
18 *Treatment of Exophthalmic Goiter with Milk of Thyroidless Goats. W. Edmunds.
19 *Enuresis and Thyroid Extract. A. C. D. Firth.
20 Use of Rosenbach Tuberculin in Surgical Tuberculosis. F. J. Rosenbach.

9. **Hysteria and Malingering.**—In a brief exposition of what he calls the phylogenetic or evolutional conception of hysteria, as being due to an exaggeration (or disorder) of tertiary (nervous) female sex characters, Weber endeavors to explain why hysteria (according to his conception of hysteria) is so frequently associated with a tendency to simulate disease, accident or injury, or deceive in some kind of way in the absence of any adequate (rational) motives. He claims that the so-called tertiary (nervous) female sex characters, though naturally best marked and most striking in the female sex, are not the exclusive property of the female sex. They occur likewise, though they are usually less conspicuous, in the male sex and it is by their occasional exaggeration (or disorder) that Weber explains the occurrence of hysterical and irrational (apparently motiveless) deception and simulation ("hysterical malingering") in males. Teleol-

ogy (that is to say, the modern Darwinic or evolutional idea of teleology) finds a place in the phylogenetic aspect of hysteria and it seems to Weber also to claim a place in regard to other conceptions (Babinski, Freud, Janet and others) of hysteria. For instance, he asks, is it not conceivable that hysterical excessive suggestibility may, on the whole, be useful rather than harmful for persons whose own will-power is pathologically deficient? Moreover, in cases in which wretched experiences have made their psychical marks or "psychical traumata" in the past and in which the present condition is in some way gravely affected by subconscious reminiscences, "separation of consciousness" may be supposed to bring not only inconveniences and dangers, but also a certain kind of relief.

Some functional nervous symptoms usually classed as hysterical are not readily explained by Weber's conception of hysteria. So-called "hysterical vomiting" seems to be a pathologically exaggerated action of the reflex defensive mechanism by which poisonous or irritating ingesta are normally rejected. But it may sometimes be on the borderland between hysteria and voluntary action simulating disease. Furthermore, Weber continues, in regard to the greater frequency of simulated diseases, self-inflicted skin lesions, etc., in women than in men it may be remembered that when a woman is depressed and altogether discontented with the life she has to lead, she is more likely than a man would be to try to attract attention or pity by simulating disease or injury. A man usually has much more open to him; he can seek a new country or (if he does not endeavor to obtain relief by drink or gambling) he can take part in dangerous ventures of various kinds which bring excitement and temporary relief.

13. **Systolic Blood-Pressure in Heart Diseases.**—The observations recorded by Korke were made on patients suffering from: (1) simple, uncomplicated valvular lesions of the heart due to acute rheumatic endocarditis; (2) valvular lesions due to other causes; and (3) other heart affections. No systematic complications were observed in cases of valvular lesions due to rheumatic endocarditis. There were no cyanosis, dyspnea, changes in the fundus oculi, febrile temperature and albuminuria, though traces of albumin were sometimes detected in a few cases. The observations were made on patients of both sexes, of different ages. They were allowed a mild out-door exercise and generally they were keeping in good health. The apparatus used for the observations was a sphygmomanometer, a Martin's modification of Riva-Rocci. The systolic blood-pressure was recorded by the armlet method during the recumbent posture of the patients. The observations were made daily, under similar circumstances, nearly an hour before dinner (at 1 p. m.) and in cases of doubt they were repeated two to three hours after 8 p. m. A record of pulse-rate and number of respirations was kept during the observations, and sphygmographic tracings of the pulse were often made to note the effect of blood-pressure on the pulse. In valvular lesions of the heart (with or without complications), due to rheumatic endocarditis and other causes, the blood-pressure was found to be normal or above normal. In simple and uncomplicated valvular lesions of the heart, due to acute rheumatic endocarditis, the blood-pressure was found always to be normal or above normal. In aortic incompetence complicated with anginal attacks, the blood-pressure was found to be subnormal during the interparoxysmal periods. As to the significance of high blood-pressure in simple and uncomplicated valvular lesions of the heart due to rheumatic endocarditis: The high blood-pressure observed in some of the cases is, Korke believes, a physiologic compensation in those individuals, though it may be mistaken for a pathologic state. The blood-pressure in cardiac muscle failure was normal or well above normal. In valvular lesions, complicated with chronic nephritis, and arteriosclerosis, the significance of supernormal blood-pressure requires no comment. It is distinctly pathologic.

18. **Treatment of Exophthalmic Goiter.**—Edmunds maintains that the effect (if any) of the treatment of exophthalmic goiter with the milk from thyroidless goats or preparations made from it must depend in a considerable degree on the dosage. Clearly a sufficient dose must be given. One of the preparations is said to be made by mixing the dried milk with an equal quantity of sugar of milk, which is added as a preservative; 1 ounce of dried milk would correspond with about 4 ounces of the whole milk. If, then, 1-dram doses of the mixed powder were given, each dose would correspond to 2 drams of fresh milk; and if the doses were ordered three times a day, they would correspond to 6 drams, or possibly 1 ounce, of the milk a day. But when the fresh milk is given it is usual for the patient to take the whole yield of one goat, which may be a pint or a quart a day; sometimes a liter (35 ounces) is prescribed. In one of the cases recorded by Edmunds, the patient was taking at one period 2 quarts of the milk a day; if, he says, this is anything like the right dose (and it certainly did no harm), 3 drams of the powder would be much too small.

19. **Enuresis and Thyroid Extract.**—Firth treated twenty-eight unselected and consecutive cases of enuresis with thyroid extract. The children attended hospital once weekly, and, as far as possible, no change was made in their mode of living while the thyroid extract was being administered. Adenoids were not removed, although this has been done in several cases since, and no anthelmintic was ordered in cases harboring threadworms. When the mothers had been in the habit of "lifting" the children on retiring themselves, they were instructed to continue the practice, but where it was not done, this method of treatment was not recommended. Of the twenty-eight cases, sixteen showed a marked improvement or were cured, and twelve did not improve at all. The cases which appear to react to this form of treatment better than all others are those in which the enuresis has persisted since birth, and in which the patients are also backward. Of sixteen cases in which the enuresis started during childhood, six out of the ten improved were backward compared with two out of six not improved. The initial dose was one-fourth or one-half grain daily, and the rate of increase varied much, as the work was experimental; often the dose was increased every fourteen days. In some cases which showed improvement, but in which the condition had become stationary, the same dose was continued for a month or more.

Clinical Journal, London

November 15, XXXIX, No. 6, pp. 81-96

21 Case of Aspiration of Fragment of a Tooth into Left Bronchus. W. Murrell.
22 Slight Strokes. S. T. Pruen.

November 22, XXXIX, No. 7, pp. 97-112

23 Causes of Convulsions in Infancy and Childhood. E. Pritchard.
24 Case of Hemochromatosis. R. Miller.
25 Parotid Tumors. A. H. Todd.

November 29, XXXIX, No. 8, pp. 113-128

26 Alcoholic and Syphilitic Affections of Heart. W. H. White.
27 Some Affections of the Optic Nerve in Relation to Medicine and Surgery. D. L. Davies.
28 Nervous Diseases in Children. J. P. Parkinson.

December 6, XXXIX, No. 9, pp. 129-144

29 Practical Points in Rectal Surgery. Sir F. Wallis.
30 Treatment of Middle-Ear Disease by Hot Medicated Air. A. Wylie.
31 Phlebotomus Fever. F. M. Sandwith.
32 Case of Caries of Frontal and Intracranial Abscess Due to Bacillus Typhosus Eleven Years After an Attack of Typhoid. W. R. Gore.

Indian Medical Gazette, Calcutta

November, XLVI, No. 11, pp. 409-448

33 Andamans: The Prevalence of Malaria and Its Adverse Effect on Health of Convicts. J. M. Woolley.
34 Operations Performed for Suppuration in Pelvis During Last Twelve Months. C. C. Barry.
35 Subluxation of Penis. N. Rainier.
36 Thanatophida. A. B. deCastro.
37 Nastin Treatment of Leprosy. P. Das.
38 Case of General Paralysis. A. Cochrane.
39 Puerperal Eclampsia with Recovery: Morphin Treatment or Accouchement Forcé. L. G. Fischer.
40 Cases of Fibroma Molluscum. Removal of Tumors in One Weighing Sixteen Pounds Ten Ounces, with Recovery. C. R. Chetti.
41 Case of Molluscum Fibrosum. L. B. Scott.

Medical Press and Circular, London

November 15, XCII, No. 3784, pp. 513-540

42 Deformities of Face and Upper and Lower Jaws Due to Nasal Obstruction. M. Collier.

43 *Treatment of Mucous Colitis (Colica Mucosa) in Children. F. Hernaman-Johnson.
44 Acute Abdominal Cases in General Practice. H. E. Barnes.
45 Syphilis. H. C. French.

November 22, XCII, No. 3785, pp. 541-566

46 General Medical Treatment of Early Cases of Insanity. R. Jones.
47 Diagnosis and Treatment of Tuberculosis of Urinary Tract. E. H. Fenwick.
48 Tuberculosis of Urinary Tract. F. R. Douglas.
49 Syphilis. H. C. French.
50 Influence of Alcohol on Body Temperature and on Heart. G. S. Woodhead.

November 29, XCII, No. 3786, pp. 568-592

51 Treatment of Pruritus. G. Milian.
52 *Use of Spinal Anesthesia in Prostatectomy. R. A. Stoney.
53 Dull and Backward Children. A. F. Tredgold.

December 6, XCII, No. 3787, pp. 593-622

54 Influence of Upper Air-Tract on Respiration. P. Watson-Williams.
55 *Influence of Menses on Onset and Frequency of Epileptic Fits. W. Alexander.
56 Anaphylaxis. G. Meilliere.
57 Tubercular Laryngitis in Infant of Seventeen Months. J. M. Hunt.

43. **Treatment of Mucous Colitis.**—Colitis mucosa in the adult Hernaman-Johnson considers essentially a neurosis. It is generally associated with constipation, but attention to this often fails to effect a cure. Nor does the surgical removal of some obvious offence, such as chronically inflamed appendix, by any means invariably meet with success. Its coming has been a gradual process, dating from childhood or adolescence. In the former period prevention is easy and cure can be accomplished by the means at the disposal of the ordinary practitioner. During early youth the causes are more subtle, tend to become mental rather than physical, general rather than localized in the gut itself. The disease now calls for special therapeutic measures, but it is still usually possible to ward off any serious consequences. As a general proposition, colica mucosa up to the age of 15 should be prevented and can be cured.

52. **Spinal Anesthesia in Prostatectomy.**—Though Stoney does not consider that spinal anesthesia should replace general anesthesia with ether or chloroform in general surgery, he thinks that it might be used with advantage in a large number of cases of prostatectomy. In fact, it should be looked on as the normal procedure in this particular operation. He reports a case in which this method of anesthesia was used. The special points of interest in this case are two: First, the unusually slight hemorrhage, both during and after the operation; the amount of bleeding was extraordinarily slight, all tinging, even, of the urine, having ceased within thirty hours of the operation. The absence of hemorrhage Stoney attributes partly to the absence of venous congestion caused by a general anesthetic, but chiefly to the action of the small quantity of adrenalin added to the novocain. Second, the absence of any aggravation of the condition of the heart or lungs. The pulse remained practically the same after as before operation, and the bronchitis, though severe at the time of operation, was not made any worse. Stoney is convinced that if a general anesthetic had been used the result must have been fatal.

55. **Influence of Menses on Onset and Frequency of Epileptic Fits.**—Of the 1,000 monthly records examined by Alexander, 235 have a record of menstruation, but not attack. In eighty-nine periods the number of attacks during the menstrual period and the intermenstrual period was the same. In 335 periods the number of attacks in the menstrual fortnight was in excess of the intermenstrual fortnight. In 342 periods the number of attacks in the intermenstrual period was in excess of those of the menstrual period. In those months where no attacks occurred and in those months where an equal number of attacks occurred, Alexander thinks it may be assumed that menstruation had no influence in promoting attacks. Adding to these those months where a greater number of attacks took place at the intermenstrual period, $342 + 89 + 235 = 666$ months where menstruation had no effect in increasing the frequency of attacks, against 334 months where it may have had such an effect. Is the onset of the menses usually ushered in by a fit? The day of the onset of the menses is marked for years in his books, and if its onset had any great effect in producing a fit the records should show a greater frequency at these times. Alexander then marked off those months in which no fits occurred on the day that the menses appeared, as well as on the day before and the day after, and compared the number in which these three days were free from attacks with the number in which fits occurred on any of the three days. In 510 months he found that no fits occurred on any of the three days, and in just one-half, or in 255 months, examined did any fits occur at that time. In many of these latter cases the fits had occurred sporadically all over the month, and, he says, it would have been strange if they had not occurred frequently at the menstrual time also. In a few cases it was thought probable that the menses had something to do with the onset of a series of attacks that appeared to be coincident with the onset of the menses, but in the same patients, in probably the next or in a subsequent month, a similar series of attacks occurred in the intermenstrual period and the menstrual period was free. In sixty-five cases, or 17.6 per cent., the disease began well after the periods had commenced and the influence of puberty had disappeared. In only 103, or 26.9 per cent., did the disease begin during the period between the ages of 10 and 20 years, a most generous allowance of time for the influence of puberty and of the onset of menstruation to assert themselves. In not more than half a dozen of 382 women examined are the menses blamed for the onset of epilepsy by those who filled up the admission papers. The establishment of the monthly period, then, has usually no definite relation to the frequency or severity of attack, and in the majority of female epileptics the seizures do not occur immediately before or after the menstrual perior, nor is there usually any augmenation in their number or severity at these times.

Australian Medical Journal, Melbourne

October 14, I, No. 13, pp. 135-146

58 Obstetrics and Gynecology. G. R. Adam.
59 Volvulus of Small Intestine. H. A. S. Newton.
60 Two Cases of Tetanus. M. Williams.

October 21, I, No. 14, pp. 147-158

61 Postpartum Hemorrhage. J. W. D. Hooper.
62 Fatal Jaundice of New-Born: Five Cases in One Family. J. N. Morris.

October 28, I, No. 15, pp. 159-170

63 Treatment of Fractures. R. H. Russell.

November 4, I, No. 16, pp. 171-180

64 Collapse and Shock. E. H. Embley.

Dublin Journal of Medical Science

December, III, No. 480, pp. 409-488

65 Need of Medical Inspection of School Children in Ireland. O. S. Gogarty.
66 An Obscure Case, Simulating in Some Respects One of Henoch's Purpura. B. C. A. Leeper.

Annales de Gynécologie et d'Obstétrique, Paris

November, XXXVIII, No. 11, pp. 625-687

67 *The Ultimate Fate of the Prematurely Born. (Avenir éloigné du prématuré.) V. Wallich and A. Fruhinsholz.

67. **The Fate of the Prematurely Born.**—Wallich and Fruhinsholz have applied in their research what they call the centrifugal and centripetal methods, that is, both ascertaining the later history of the prematurely born infants, and tracing back to birth the history of older children or adult patients. The earliest known history of the kind is that of a professor at Padua in the sixteenth century who was born at the seventh month and lived to be 80. Among other famous "prematures" mentioned are Newton, Rousseau, Voltaire, Cuvier, Victor Hugo, Lamartine and Renan. The compilations that have been published on the subject are reviewed and a personal compilation tabulated, including 143 infants born before term of presumably healthy parents, and whose history has been traced into adult life. The outcome is shown to depend in large measure on the weight at birth, that is, the degree of development. Of seventeen infants weighing from 900 to 1,500 gm., 41.1 per cent. have developed into normal adult life and a similar percentage are only slightly handicapped (*avenir laissant à désirer*), while the rest are much below the normal standard; of the 25 weighing from 1,500 to 2,000 gm., 52 per cent. are normal and 36 slightly handicapped; of the 36 between 2,000 and 2,500 gm., 75 per

cent. are normal and 22.2 per cent. slightly handicapped, while of the 65 weighing between 2,500 to 3,000 gm., 78.4 per cent. are normal and 20 per cent. only slightly handicapped. Among the total twenty-seven slightly handicapped infants, trauma from an obstetrical operation may have cooperated in eleven cases; five other infants were the first born. Tracing back the history to birth of 1,804 patients in Broca's children's surgical service, and of 620 inmates of the asylum for epileptics and feeble-minded, showed that over 12 per cent. of the former and over 8 per cent. of the latter are known to have been prematurely born. A large proportion of the prematurely born are thus shown to develop normally both in mind and body, while others present various signs of degeneracy, hernia, club-foot, incontinence of urine and nervous disturbances, these signs of degeneracy apparently linked with the earliness of the birth and the violence of the obstetrical trauma. On the other hand, the research shows a large proportion of prematurely born among the degenerates in institutions, and that degeneracy in general is traceable as a rule to syphilis or alcoholism in the parents or to the earliness of the birth and the fact that the infant was the first born. The authors' final conclusion is the importance of refraining from bringing on the birth before term by overwork or trauma from sexual intercourse.

Bulletin de l'Académie de Médecine, Paris

November 28, LXXV, No. 39, pp. 241-260

68 Mental Disturbances Following Operations. (Les psychoses chirurgicales d'origine infectieuse; la stupeur primitive des opérés.) L. Plequé and Le Dentu.
69 Elimination of Chlorids in Course of Acute Dysentery. (Les chlorures •et la crise dans la dysenterie aigue nostras épidémique.) L. E. Bertrand.

Presse Médicale, Paris

November 25, XIX, No. 94, pp. 969-980

70 Histopathology of the Thyroid. (Introduction à l'étude histopathologique du corps thyroide. Lésions élémentaires.) G. Roussy and J. Clunet.
71 Dwarf Growth with Hypophysis Tumor. (Nanisme hypophysaire.) R. Burnier.
72 Improved Technic for Eck's Fistula in Experimental Research. (Nouvelle technique de la fistule d'Eck.) A. Frouin.

November 29, No. 95, pp. 981-988

73 *Intermittent Claudication of the Spinal Cord. (La claudication intermittente de la moelle épinière.) Dejerine.
74 Antityphoid Vaccination. (Vaccination antityphique. Efficacité des vaccins polyvalents: vaccin par autolyse et vaccin bacillaire.) H. Vincent.

73. **Intermittent Claudication of the Spinal Cord.**—Dejerine says that the condition to which he applies this name is usually the precursor of confirmed spasmodic paraplegia, and its recognition is therefore important as appropriate treatment may ward off the latter. There are no necropsy findings on record, but from analogy with peripheral intermittent limp, we can assume that the trouble results from an arteritis gradually obstructing the lumen of the arteries supplying the segments of the spinal cord involved. A similar clinical picture can be induced in a guinea-pig by compressing with the thumb the aorta against the spine. After a few seconds the hind legs first hang limp and then are completely paralyzed for a few minutes, but they speedily return to normal as the circulation is restored. In the clinic a syphilitic origin is almost invariably discoverable and points the way to successful treatment; in only one case in his experience was influenza the only infection in the case-history. He reports a case in detail; the patient is a woman of 37 who noticed that her left leg tired easily and felt heavy and she had to rest it frequently for a few minutes. After three years the same symptoms were noticed in the right leg, both feeling as if the shoes were as heavy as lead. The intervals between the necessity for resting the legs in walking have grown constantly shorter, and there are vague cramps in the legs but no decided pains. The muscles, pupil reflexes and motor functioning are normal but the tendon reflexes are exaggerated and the sphincters do not behave quite normally, as there is intermittent retention of urine and stools, but there is no cyanosis, pain or chilliness in the legs so that the peripheral forms of intermittent claudication must be excluded. On the other hand, the exaggeration of the tendon reflexes and the sphincter disturbances show that the trouble is the result of an insufficient blood-supply to a certain segment of the spinal cord. During rest the supply is adequate but not when the legs are being exercised. Remarkable benefit is liable with treatment based on the suspicion or certainty of syphilitic antecedents in such cases. This alone will ward off the otherwise almost inevitable spastic paraplegia; the interval before development of the latter may be very long, over sixteen years in one of his cases.

Semaine Médicale, Paris

December 6, XXXI, No. 49, pp. 577-588

75 Passage of Cholesterin into the Blood in Acute Infections. (Evolution de la cholestérinémie au cours des infections aigues.) A. Chauffard.
76 Lane's Kink of the Ileum and Jackson's Membrane. (La coudure iléale d'Arbuthnot Lane et la péricolite membraneuse de Jackson.) F. Lejars.
77 Plague and Yellow Fever at the Recent International Sanitary Conference. (Rapport de la sous-commission de la peste.) A. Calmette. (Rapport de la sous-commission de la fièvre jaune.) A. Agramonte.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXI, No. 2, pp. 117-246. Last indexed Nov. 25, p. 1805

78 *Prognosis of Tuberculosis in Young Infants. (Zur Prognose der tuberkulösen Infektion im frühen Säuglingsalter.) J. Ibrahim.
79 *Course of Tuberculin Reactions During Day and Night. (Verlauf von Tuberkulinreaktionen bei Tage und bei Nacht.) R. Hollmann.
80 *Improved Technic for Induced Pneumothorax. (Zur Pneumothoraxtherapie. (Intrapleurale Injektionen physiologischer Kochsalzlösung.) I. Holmgren.
81 *The Menstrual Fever of Tuberculous Women. (Ueber das menstruelle Fieber tuberkulöser Frauen—mit Berücksichtigung gewisser pathologischer Erscheinungen.) K. Dluski.
82 The Diazo Reaction in Pulmonary Tuberculosis. (Die prognostische Bedeutung der quantitativen Bestimmung der Diazoreaktion bei der Lungentuberkulose.) A. Hatzfeld.
83 *Early Diagnosis of Pulmonary Tuberculosis. (Zur Frühdiagnose der Lungentuberkulose.) F. Walterhöfer.
84 Women's Clothing and Tuberculosis. (Frauenkleidung und Lungentuberkulose.) F. Sell.
85 *Tubercle Bacilli in the Blood. (Tuberkelbazillen im Blute von Tuberkulösen.) Sturm.

78. **Prognosis of Tuberculosis in Infants.**—Ibrahim remarks that the outlook for tuberculosis in young infants has been shown lately to be more favorable than was accepted even six years ago. Czerny has found that infants with tuberculous processes in the skin, bones and peripheral lymph-nodes generally survive, while those with tuberculosis of the internal organs generally succumb. Pollak has recently reported three cases of children now over 1 year old who gave a positive tuberculin reaction before they were 6 months old, and Bahrdt has published a similar case. Ibrahim then reports the details of a case in which an infant contracted tuberculosis during the first five weeks, its mother being a moribund consumptive. The child was then transferred to a healthy environment but the Pirquet reaction was positive and cutaneous tuberculids developed, but the child has grown strong and shows no trace of tuberculosis or of the exudative diathesis now, as it is approaching the end of its second year. The only treatment it received was a course of Fowler's solution for two months.

79. **Tuberculin Reactions in Daytime and at Night.**—Hollmann has been comparing the findings in 188 patients given the tuberculin test at evening, sixty-eight in the morning and sixteen both morning and evening, a total of 626 tests, of which 464 were evening tests. The tabulated findings show that the reaction after the injection occurs more rapidly in the morning than at night. The difference with a mild reaction is over eight hours, with a moderate reaction over six, and with a powerful reaction nearly four hours later when the injection is made in the evening. The milder the reaction the greater the difference. The difference was about the same when the same patient was injected morning or night. Hollmann concludes from the facts observed that the action of the daylight is an important factor, saying that the importance of light as a catalytic factor is becoming recognized more and more in research on various biologic processes.

80. **Artificial Pneumothorax.**—Holmgren has found it possible to induce therapeutic pneumothorax in cases in which it otherwise would have been impossible, by preparing a cavity for reception of the gas. This he accomplishes by preliminary injection of physiologic salt solution between the sheets of the pleura. He has never witnessed any harm from this pro-

cedure, and reports two cases to show the great benefit possible by its aid, influencing even extensive adhesions, stretching or loosening them sufficiently to permit effectual compression of the lung by a pneumothorax.

81. **Febrile Menstruation in the Tuberculous.**—Dluski found no influence on the temperature during menstruation in 56 per cent. of 300 women examined during several months. In the others the temperature proved extremely variable during menstruation even in the same women. There was no special type, and his experience does not indicate that fever during menstruation is necessarily a sign of tuberculosis. Only when the temperature recurs regularly and reaches a higher point month after month is the prognosis unfavorable. The question of the temperature during menstruation is complicated and requires research on the ovarian secretion and its action on different organs and the connection between febrile menstruation and the course of the tuberculosis.

83. **Early Diagnosis of Pulmonary Tuberculosis.**—Walterhöfer states that during the years 1909 and 1910, 88 and 78 of the 933 and 842 patients admitted to the Wilhelmsheim sanatorium proved to be free from the assumed tuberculous lung lesion. The diagnosis had been incorrect and he discusses the premises on which it had been based. The subcutaneous tuberculin test is the only reliable one of all the diagnostic means at our disposal, he says, adding that the reaction has to be considered from the point of view of the active or latent condition of the process; the focal reaction is the criterion for this. It was determined by auscultation in 91.67 per cent. while in only 8.33 per cent. did percussion give reliable findings. Any change in the room or in the patient's attitude or muscle tone may influence the auscultation findings. He remarks that Pottenger's rigidity of the muscles is of no appreciable avail for early diagnosis. Walterhöfer has the patient sit on a high chair with a low back, convenient for both the examiner and the examined. Examination in bed is entirely unreliable. The hearing of the examiner should be at its best, as fatigue and emotions aid in reducing the auditory capacity. Where all conditions for such auscultation and percussion are not available, it is futile to seek for a focal reaction after injection of tuberculin. He does not lay much stress on a febrile reaction alone. A history of hemoptysis or night sweats is not to be relied on in patients who are longing for a free course of sanatorium treatment. When the temperature in the rectum is found high after exercise and keeps high for over an hour, tuberculosis may be suspected although it must be borne in mind that the obese, convalescents, and those with unstable nervous system are liable to have a variable temperature at all times. The one unfailing sign of an active process is the local reaction in the diseased lung after a subcutaneous injection of a small dose of tuberculin, the appearance of râles or exaggeration of previous findings.

85. **Tubercle Bacilli in the Blood.**—Sturm found tubercle bacilli in the blood in only 46 per cent. of 50 tuberculous men, including five of ten in the first stage of tuberculosis, six of sixteen in the second and twelve of the twenty-four in the third. These findings do not agree with those of Kurashige who found tubercle bacilli in the blood of every one of 155 tuberculous patients in various stages. Sturm adds that he found tubercle bacilli in the urine in 50 per cent. of all cases. He never found tubercle bacilli in the blood of the ten healthy persons examined, while Kurashige reported positive findings in the blood of 59 per cent. of thirty-four supposedly healthy persons (*Sei-i-kwai,* 1911, xxx, 69, and *Ztschr. f. Tub.,* xvii, 4).

Berliner klinische Wochenschrift

December 4, XLVIII, No. 49, pp. 2193-2236

86 *Paget's Disease of the Nipple a Malignant Process. (Zum Wesen der Paget'schen Krankheit.) C. Kreibich.
87 *Heart Defects and Pregnancy. (Herzfehler und Schwangerschaft.) T. Rosenthal.
88 *Pseudoleukemia with Necropsy. (Zur Lehre von der Hodgkin'schen Krankheit.) E. Rosenfeld.
89 Paranephritis. M. Zondek.
90 *Ureter Stones. (Zur Therapie der Uretersteine.) F. Weisz.
91 *Two Cases of Toxic Optic Neuritis After Salvarsan. (Zwei bemerkenswerte Augenerkrankungen nach Salvarsan.) C. Cohen
92 Artificial Leeches. (Ueber lokale Blutentziehungen.) A. de Cortes.
93 Paracelsus as Therapeutist. P. Schenk.
94 Eye Disturbances in Diseases of Deranged Metabolism. (Augenerkrankungen bei Stoffwechselkrankheiten.) K. O. J. Helbron.

86. **Paget's Disease of the Nipple.**—Kreibich states that this affection is a flat melanosarcoma.

87. **Heart Defects and Pregnancy.**—Rosenthal remarks that we have absolutely no criterion as to how much a diseased heart can stand, and reports two cases in which the most serious symptoms were observed at term of a pregnancy, intense dyspnea and cyanosis of the entire body, or extreme edema. The women were artificially delivered at once by anterior colpohysterotomy without general anesthesia, after which the symptoms subsided. Both women had borne children before and one this time had twins, the two twins weighing nearly 15 pounds; both women recuperated to fairly good conditions.

88. **Hodgkin's Disease.**—In a previously healthy young man, chills, fever and general indisposition developed suddenly, followed by enlargement of glands, until the patient presented the typical picture of Hodgkin's disease. The liver and spleen fluctuated in size with the recurring fever, and there was moderate anemia. The disease proved fatal in seven months, after two periods of collapse one and two months before death. No infectious germs were discovered during life but Much's rods and granula were found in the lesions.

90. **Ureter Stones.**—Weiss was able to dislodge and lead to spontaneous expulsion of the two stones by injecting warm glycerin into the ureter.

91. **Optic Neuritis After Salvarsan.**—Cohen states that in the first of his two cases, the very protracted and ultimately unfavorable course in the eye first involved, the involvement of both eyes, the lack of influence of mercurial and iodid treatment on the optic neuritis while the complicating uveitis rapidly healed under it, and the features of the defect in the field of vision—a constant central blue-green scotoma, with intact periphery—all these features distinguish the case from an ordinary recurrence of manifestations of the syphilis in the nervous system. The same features of the defect in the field of vision were observed in the second case although the optic neuritis was not so severe. The salvarsan had been injected by the intramuscular route in the first and by the intravenous in the second case. He regards the optic neuritis in both as unmistakably a manifestation of toxic action.

Correspondenz-Blatt für Schweizer Aerzte, Basel

November 20, XLI, No. 33, pp. 1137-1184

95 Serodiagnosis of Syphilis. (Untersuchungen über die Brauchbarkeit der von Dungern'schen Reaktion für die Serumdiagnostik der Syphilis.) O. Stiner.

Deutsche medizinische Wochenschrift, Vienna

November 30, XXXVII, No. 48, pp. 2209-2264

96 *Abnormal Development of Embryos After Radium Exposures. (Das Radium als Hilfsmittel für entwicklungsphysiologische Experimente) O. Hertwig.
97 *General Principles for Treatment of Jaundice. (Die Behandlung des Ikterus.) G. Hoppe-Seyler.
98 *Negative Differential Atmospheric Pressure in Treatment of Circulatory Disturbances. (Ziele und Erfolge der Behandlung von Kreislaufstörungen mit Unterdruckatmung.) O. Bruns.
99 Nucleoproteid from the Thyroid in Treatment of Exophthalmic Goiter. (Ueber die Wirkung des im Schilddrüsenkolloid enthaltenen Nucleoproteides bei Morbus Basedowii.) A. Tschikste.
100 The Crossed Toe Reflex. (Ueber den gekreuzten Zehenreflex, im besondern über seine klinische Bedeutung.) O. Maas.
101 Induced Unilateral Paralysis of the Diaphragm in Treatment of Pulmonary Lesions. (Künstliche Zwerchfellähmung bei schweren chronischen einseitigen Lungenerkrankungen.) Stuertz
102 *Diagnosis of Foreign Bodies in Air Passages and Esophagus. (Zur Diagnose von Fremdkörpern in den tieferen Luftwegen und in der Speiseröhre.) F. Reinking.
103 *Venesection Plus Saline Infusion in Treatment of Skin Disease. (Aderlass und Kochsalzinfusion in der Dermatologie.) J. Simon.
104 Salvarsan in Japan; 331 Cases. (Unsere Erfahrungen über die Salvarsanbehandlung im Laufe eines Jahres.) K. Dohi and T. Tanaka.
105 Salvarsan and Quinin in Pemphigus. (Salvarsan- und Chinin-Behandlung des Pemphigus vulgaris.) H. Merz.
106 Recent Progress in Physiologie and Medical Chemistry. (Fortschritte der physiologischen und medizinischen Chemie in den letzen Jahren.) Brigl.

107 Recent Progress in Roentotherapy. (Fortschritte auf dem Gebiete der Röntgentherapie.) J. Wetterer.
108 Prophylaxis of Infectious Diseases in Infant Wards. (Die Verhütung und Bekämpfung der Infektionskrankheiten in geschlossenen Säuglingsanstalten.) J. Cassel.

96. **Radium in Experimental Embryology.**—Hertwig gives a number of illustrations of the deformities resulting from exposure of the eggs or spermatozoa to radium rays.

97. **Treatment of Jaundice.**—Hoppe-Seyler discusses the general principles of treatment of this symptom, emphasizing the importance of the search for its cause and the necessity for supervision of the diet and mode of life. Even apparently insignificant affections of the bile passages may lead to severe disturbances in the liver, even to acute atrophy. Rest for the liver as long as there is jaundice is extremely important, especially when there is fever. The diet should not stimulate liver functioning and should take into account the changed conditions in regard to digestion in the intestines from lack of bile.

98. **Negative Pressure in Treatment of Cardiovascular Disturbances.**—Bruns calls attention to the aspiration of venous blood into the interior of the thorax when the pressure is below that of the general atmospheric pressure, and the importance of this in treatment of disturbances in the circulation of the right heart due to insufficiency of the respiratory apparatus from rigidity of the chest walls, induration of the pleura or kyphoscoliosis, or the so-called emphysema or asthma heart. The negative pressure is also useful in treatment of asthma by combating the overdistention of the lungs. He has also found it valuable as a means of exercising and strengthening the heart in certain forms of weakness of the myocardium. The negative pressure procedure can also be applied as a test for the functioning of the heart.

102. **Foreign Bodies in the Upper Air Passages and the Esophagus.**—Reinking considers it remarkable that more general use is not made of bronchoscopy and esophagoscopy, while too much reliance is placed on roentgenoscopy, percussion and auscultation, and too little credence given the patient's statements. He reports three instructive cases in which the presence of the foreign body had been denied by previous examiners while direct visual inspection revealed it at once. One patient was an elderly man who applied for a "remedy for his cough;" only by persistent questioning was it finally learned that his cough had come on after he had "swallowed something the wrong way" some time before. Although there were no objective findings, yet the bronchoscope showed three slivers of bone which were readily removed. Reinking cites Leyden's two cases, both in medical men, one succumbing to a supposed tuberculous lesion in the lung which necropsy revealed to be merely the local reaction to a scrap of bone in the lung. There was no history of the patient having aspirated a foreign body. In the second case a shirt stud was coughed up after years of a gangrenous putrid process.

103. **Venesection Plus Saline Infusion in Treatment of Skin Diseases.**—Simon is enthusiastic over the benefits possible by "lavage of the organism," washing out toxins by withdrawing 100 or 200 c.c. of blood from a vein and then infusing without removing the cannula, 300 or 700 c.c. of a 0.9 per cent. salt solution, repeating this from three to six times at intervals of five or six days. No by-effects to cause uneasiness were observed on the part of the kidneys or vascular system in any case, so that he does not hesitate to apply this treatment even to the elderly, up to the age of 73. No fever was observed, and the technic can thus be applied to out-patients. The best results were obtained in pruritus, urticaria, furunculosis and eczema. The method has no contra-indications, he declares, and it is most effectual perhaps in the affections which are most refractory to other measures. It is not unfailingly successful, especially in the localized pruritus of the elderly. The most striking success in his 100 cases was that of a young merchant who had suffered from infancy from intense pruritus universalis, rebellious to all measures and incapacitating for all business. Relief followed the first infusion and the pruritus was permanently cured by the third.

Medizinische Klinik, Berlin

December 3, VII, No. 49, pp. 1879-1920

109 General Principles for Treatment of Gonorrhea in Women. (Zur Bewertung und Behandlung der Gonorrhoe der Frau.) A. Martin.
110 *Morbid Lack of Thirst. (Ueber Oligodypsie.) R. Schmidt.
111 *Abortive Forms of Myxedema. (Forme fruste des Myxödems.) A. Saenger.
112 Tumor in Optic Thalamus and Caudate Nucleus. (Zur Kasuistik der Sehhügel-Schweifkern-Geschwülste.) A Pilcz.
113 High Frequency Electric Currents in Therapeutics. (Die Behandlung mit Hochfrequenzströmen.) A. Laqueur.
114 *Osteomyelitis of the Scapula. M. Strauss.
115 Fatty Degeneration and Displaced Fat Tissue. (Moderne Anschauungen über Verfettung und Fettwanderung.) C. Kaiserling.

110. **Morbid Lack of Thirst.**—Schmidt states that a patient three years ago mentioned that she never was thirsty, and since then he has encountered fourteen women and eight men who complain that they seldom or never feel a desire to drink any fluid. Nearly all were persons with an instable nervous system, either in the psychic sphere or in the vegetative system, especially in the digestive tract. There were no objective findings except that the stomach and intestines displayed a tendency to undue irritability and weakness. Constipation and flatulence were the rule. He thinks that this oligodipsia is of the same character as polydipsia, a neuropathic phenomenon. In some cases it may be traced to an oliguria and indicates diuretic measures. Some of the patients with oligodipsia did not perspire normally during the summer or under the influence of aspirin, and the lack of fluids seemed to modify the metabolic processes and induce retention of waste products, some of the patients complaining of pain in the joints and neuralgia; the condition may favor production of gall-stones. It is possible that the atonic stomach instinctively seeks to restrain ingestion of fluids to avoid distention.

111. **Incomplete Forms of Myxedema.**—Saenger declares that in many cases a vague condition due to defective functioning of the thyroid has been mistaken for nephritis, chlorosis, neurasthenia or hysteria, and ineffectually treated for years on this erroneous assumption. He reports eight cases in detail, the diagnosis in one confirmed by necropsy. They show that the condition may occur without the characteristic changes in the skin; in some cases these changes may be discovered on the mucosa while lacking in the skin, in others the skin may be puffy and of normal tint; in others red and congested. In three of the cases there was none of the usual sluggishness in thinking, feeling and moving, but rather the reverse, the patients bright and lively. In some cases the symptoms were merely those of neurasthenia, restlessness and vague headache. The absence of a palpable thyroid may often throw light on the puzzling syndrome, although a normal thyroid may be located so low as to be concealed by the sternum. In these incomplete forms of myxedema the symptoms seem to persist long unmodified; sometimes the more characteristic symptoms develop later. Differentiation is very important in these cases as thyroid treatment is simple and effectual. One patient was a girl of 19 who had complained for years of pains and weakness in the arms but nothing could be found to explain this. Her face was plump and ruddy, the skin apparently normal, but no trace of a thyroid could be palpated and thyroid treatment was commenced with prompt recovery of the normal use of the arms. On suspension of thyroid treatment the painful paresthesia in the arms returned but vanished again under thyroid treatment, since which time the patient has been free from disturbances. In a similar case in a woman of 48, the vasomotor form of neurasthenia was accompanied by puffiness of the face, headache and lassitude, all of which subsided under persistent thyroid treatment. In another case the symptoms of incomplete myxedema accompanied a tumor in the frontal lobe, and the thyroid was found totally atrophied. Only one of the patients was a man. He was 45 and complained of headache, lassitude and inability to concentrate his attention. There was slight tremor of the head and the tongue and palate were unusually thick, while nothing suggesting a thyroid could be detected on palpation. Courses of treatment for the supposed neurasthenia gave no relief. Under thyroid treatment the symptoms all subsided.

They returned again on its suspension, confirming the assumption of hypothyroidism. Others have called attention to thickening of the tongue and soft palate as a sign of myxedema.

114. **Osteomyelitis of the Scapula.**—Strauss expatiates on the necessity for early differentiation as this alone permits radical removal of the focus in time. Heyfelder and Bockenheimer have reported cases with a fatal outcome from the general infection which so often masks the local process in its deep and concealed site. Strauss' article is based on thirty-two cases, including six from recent literature and one from his own practice. The inflammation frequently starts at the spine of the scapula and spreads into the subscapular fossa. An abscess developing here may long escape detection as the patient lies on his other side and the abscess does not work out to the axilla. When it breaks into the supraspinous or infraspinous fossa, tenderness and swelling attract attention. Any pressure on the primary abscess is liable to lead to general infection. An early diagnosis is possible only by excluding other affections, especially deep phlegmon of the axilla or osteomyelitis of the ribs below the scapula and acute infectious processes in the shoulder. Circumscribed tenderness of the spine of the scapula and internal angle is instructive, as also circumscribed edema of the supraspinous or infraspinous fossa, and the tenderness when the finger is worked down through the posterior wall of the axilla to the lateral margin of the scapula, and the intense pain when the upper arm is rotated outward. The first acute onset is usually followed by a tedious, subacute phase, with gradual involvement of the rest of the scapula, and possibly of the ribs. In one of the two cases reported, partial evacuation of the focus was followed by gradual spread of the process, rendering necessary a series of operations in the course of two years before the girl of 13 was finally cured. The periosteum and muscles must be respected as much as possible in operating; an incision along the vertebral border and over the spine spares muscles and vessels more than any other technic yet applied, but the incision must vary with the location of the abscess. An incision above or below the spine interferes less with the regeneration of this part of the bone. A cushion in the axilla will aid in immobilizing the arm after the operation.

Münchener medizinische Wochenschrift

November 28, LVIII, No. 48, pp. 2537-2592

116 Roentgen-Ray Findings with Spastic Constipation. (Ueber objektive Befunde bei der spastischen Obstipation.) G. Singer and G. Holzkueeht.
117 Reciprocal Relations Between Stomach and Large Intestine in Different Conditions in Regard to Shape, Contents and Position. (Die Wechselbeziehung zwischen Füllung, Form und Lage von Magen und Dickdarm.) F. M. Groedel and E. Schenck.
118 Fate of Phosphorus in the Food. (Versuche über den Nahrungsphosphor.) L. Böker, E. Durlach, W. Heubner, H. Stadler and H. Ulrich.
119 *Tuberculin in Diagnosis and Treatment of Tuberculosis. (Die spezifische Erkennung und Behandlung der Tuberkulose.) L. Saathoff.
120 Salvarsan in Relapsing Fever. (Rekurrens mit Salvarsan behandelt.) N. Svenson.
121 The Kidney in Scarlet Fever. (Zur Frage der Scharlachnephritis.) C. Leede.
122 Technic for Measuring Joints. (Zur Perimetrie der Gelenke.) E. Fritzsche.
123 *Criticism of Werner's Baden Cancer Statistics. (Zur badischen Krebsstatistik.) W. Weinberg.
124 *Fatal Paroxysmal Edema and Symmetrical Gangrene as Manifestations of a Neurosis of the Vessels. (Kasuistik über Angioneurosen.) F. Harbitz.

119. **Tuberculin in Diagnosis and Treatment of Tuberculosis.**—Saathoff emphasizes anew that the reaction to tuberculin is not a sign of tuberculosis but that it is merely a reaction showing the existence of an antibody, an Immunkörper. As the immune body does not develop without the presence of tuberculosis, the reaction is thus indirectly a sign of tuberculosis, but a negative response does not indicate that there is no tuberculosis. He calls attention to the great difference in the results he has obtained in treating the tuberculous according as they were hospital or sanatorium patients. Rapid cures were obtained in the hospital cases, while his sanatorium experience has been far less satisfactory. He explains this by the fact that the hospital tuberculous are generally robust young wage-earners, and they come to the hospital for treatment when the disease has roused from a latent to an active phase. All conditions thus favor the rapid improvement in the hospital environment. Sanatorium patients, on the contrary, are usually from the well-to-do classes and everything possible has been done for them at home before they come to the sanatorium. This same difference exists between private and contract practice in general. Koch's first success with tuberculin, which raised such flattering hopes, was obtained with hospital patients and it was not duplicated in private practice. Saathoff insists that tuberculin treatment on the whole is better suited for more rugged natures, for hospitals, public sanatoriums and lodge practice than for private practice among well-to-do. Under all conditions the outlook is better the earlier it is instituted, before the resisting powers have begun to ebb. By selecting the patients in this way, tuberculin will undoubtedly prove of great value, warding off chronic phthisis. But at the same time all the other methods, especially the physical, still retain all their usefulness and in many cases are the only means that will do any good.

123. Weinberg refers to the statistics reviewed in The Journal in Abstract 95, page 1954, Dec. 9, 1911.

124. **Acute Paroxysmal Edema.**—The special features of the case reported by Harbitz were the recurring attacks of edema in face, neck, larynx or lungs, and the history of similar attacks in a brother, father, grandfather and two of the latter's sisters. Necropsy revealed nothing to explain the edema. Harbitz ascribes it to an acute transient angioneurosis, which assumption explains further another, less severe familial case in his practice. It also throws light on the syndrome of symmetrical gangrene of which he reports a typical case. Sections of the amputated finger showed comparatively slight changes in the nerves and vessels except that the larger arteries were contracted, although otherwise apparently normal.

Therapie der Gegenwart, Berlin

December, LII, No. 12, pp. 529-576

125 Ovarian Hormone and Uterine Myomas. M. Henkel.
126 Treatment and Prophylaxis of Relapses in Malaria. (Die Therapie und Prophylaxe der Malariarückfälle.) A Plehn.
127 *Soap in Treatment of Cholelithiasis. (Zur Erkennung und Behandlung der Gallensteinkrankheit.) M. Mosse.
128 Alcoholic Beverages as Sedatives and as Stimulants to the Appetite. (Alkoholische Getränke als Hypnotica.) W. Sternberg.
129 Quinin as a Local Anesthetic. (Chinin als Lokalanästheticum.) E. Schepelmann.
130 Technic for Roentgen Exposures. (Einiges aus der Praxis der Röntgenbehandlung.) M. Fraenkel.

127. **Soap in Cholelithiasis.**—Mosse emphasizes the two facts that in certain cases of gall-stones, the knife is the only effectual means of cure, and that in certain other cases, a cure occurs without any treatment. Besides these, however, there is a group of cases in which the gall-stone trouble can be cured by stimulating the secretion of bile, and for this he thinks nothing surpasses a mixture of 10 or 15 gm. of medicinal soap with mucilage of acacia q. s. to make sixty pills; three pills daily. The pills can be supplemented by rectal injections of oil. This treatment is to be commenced on subsidence of the acute attack; during this, belladonna or atropin may be required. This soap treatment was introduced by Senator, and some experiments reported this year from Pawlow's clinic confirm, Mosse says, this cholagogue action of soap.

Virchows Archiv, Berlin

November, CCVI, No. 2, pp. 161-320

131 Foreign Body Giant Cells in Bronchiolitis. (Ueber eigenartige Fremdkörperriesenzellen bei Bronchiolitis obliterans.) K. Vogel. Commenced in No. 1.
132 Development of Fat Near and in the Lung. (Ueber Fettgewebs-Entwicklung an und in der Lunge.) W. Dohru.
133 Tuberculous Plus Syphilitic Lesions in the Liver. (Fall von "Röhrentuberkulose" der Leber wahrscheinlich mit Syphilis kombiniert.) H. C. Hall.
134 Experimental Research on the Action of Meat Poisoning on the Internal Organs. (Wirkung des Botulismus-Toxins auf die inneren Organe.) W. Komotzki.
135 Functional Adaptation, etc., in Development of Vascular System and Skeleton. (Berichtigungen zu den Aufsatzen R. Thomas "Ueber Histomechanik des Gefässsystems und die Pathologie der Angiosklerose," sowie über "Beitrag zur Histologie des Skeletts. usw.") W. Roux.
136 Laws Regulating Growth of the Skull. (Die Spannung der Schädelwand.) R. Thoma.

137 Proliferation of Heterotopic Epithelium in Chronic Gastritis: Two Cases. E. A. Hallas.
138 The Cyclic Changes in the Mammalian Ovary. (Der normale und pathologische Zyklus im Ovarium des Säugetiers.) L. Loeb.

Wiener klinische Wochenschrift, Vienna

November 30, XXIV, No. 48, pp. 1659-1690

139 The Diathesis. (Ueber Diathesen, Dyskrasien und Konstitutionen.) R. Schmidt.
140 Origin of Salvarsan Fever. (Zur Kritik der Ansichten über die Entstehung des Salvarsanfiebers.) L. Arzt and W. Kerl.
141 Capillary Test of Viscosity of Milk. (Vergleichende Viskositätsbestimmungen der Milch mit Hilfe ihrer kapillären Steighöhe.) A. Kreidl and E. Lenk.

Zeitschrift für Kinderheilkunde, Berlin

III, No. 3, pp. 191-312. Last indexed October 14, p. 1334

142 *Lactation in Virgins. (Ueber virginelle Lactation.) M. Pfaundler.
143 Atrophy of Certain Muscles as Cause of Lordotic Albuminuria. (Juvenile Dystrophie und lordotische Albuminurie im Kindesalter.) E. Ebstein.
144 Overfeeding and Convulsions. (Ueberfütterung und Krämpfe.) E. Ebstein.
145 Anaphylaxis of Serum Sickness. (Zur anaphylaktischen Analyse der Serumkrankheit.) O. Witzinger.
146 Determination of Actual Size of Infants. (Ueber eine Methode zur Bestimmung des Volumens bei Säuglingen) K. Oppenheimer.
147 Growth and Osmotic Pressure in Young Dogs. (Wachstum und osmotischer Druck bei jungen Hunden.) P. Schulz.
148 Amyotrophy Plus Obesity in Young Children; Two Cases. (Zur Frage der frühinfantilen Amyotrophen und einer sie begleitenden "endogen-" Fettsucht.) T. Gott and H. Schmidt.
149 Glycocoll in the Urine of New-Born Infants. (Vorkommen von Glykokoll im Harn des Neugeborenen.) A. v. Reuss.
150 Temperature of Infant's Skin. (Beobachtungen über Hauttemperaturen der Säuglingen.) A. Mendelssohn.
151 Contents of Vaccine Pustule. (Der Inhalt der Vaccinepusteln.) J. W. Rosenfeld.

142. **Lactation in Virgins.**—Pfaundler states that a fluid was sent to him for chemical examination, which his tests showed to be actual cow's milk although it was derived from a 2-year-old heifer that had never been covered. Some calves had been in the habit of sucking its teats and this had stimulated true lactation in time. He reviews the cases on record of lactation in virgins and the mechanism of the phenomenon, remarking that the milk glands have been trained to secretion through countless generations so that occasionally an individual is encountered in whom the lacteal glands start functioning without the ordinarily indispensable specific stimulus.

Zentralblatt für Chirurgie, Leipsic

December 9, XXXVIII, No. 49, pp. 1593-1624

152 *Indirect Eliciting of Pain in Appendicitis. (Bedeutung des indirekten Druckschmerzes bei Appendicitis.) E. S. Perman.

152. **Indirect Eliciting of Pain in Appendicitis.**—Perman palpates the left iliac fossa on suspicion of appendicitis, and has found that pressure on the left side induces pain at McBurney's point in case the appendix is much diseased and otherwise not. The pain thus indirectly induced at McBurney's point occurs most distinctly when the left side is lightly pushed in towards the right side, the patient breathing naturally, the abdominal muscles relaxed. He always prepares to operate when he finds this indirect pain, and he always found it accompanied by severe pathologic changes in the appendix or close vicinity or both, even when there was no rigidity of the abdominal wall. He has found this sign positive also in cholecystitis with severe lesions, as also in a limited experience with gynecologic affections. Perman interprets this indirect sign differently from Rovsing.

Zentralblatt für Gynäkologie, Leipsic

December 9, XXXV, No. 49, pp. 1657-1680

153 *Eclampsia. (Zur Eklampsiestatistik.) Lichtenstein. (Versuch einer mechanischen Theorie der Eklampsie.) A. J. Jarzew.
154 *Chorea of Genital Origin. (Chorea genitalen Ursprunges.) L. M. Bossi.

153. **Mechanical Theory of Eclampsia.**—Jarzew explains eclampsia as the result of accumulation of globulins in the blood with consequent thickening of the blood, this accumulation being due to the abrupt cessation of the functioning of the placenta and thus cessation of consumption of the albumin in the blood. He explains in detail the various premises on which he bases this theory: The stagnation of the thick blood increases the pressure in the arteries until the vasomotor center feels the influence of it and induces spasmodic contractions of the arteries, with resulting ischemia. This ischemia amply explains the symptoms of eclampsia and also the efficacy of the Stroganoff sedative method of treatment, by its reducing the excitability of the vasomotor center and thus warding off the spasm of the vessels. It also explains the efficacy of venesection (or, better yet, drawing blood directly from an artery). It is possible that an accumulation of globulins in the blood may be responsible also for the symptoms observed in uremia.

154. **Chorea of Genital Origin.**—Bossi reports a case of endometritis with retrodisplacement of the uterus and laceration of the cervix after delivery of a seven-months fetus. The patient was only 18 and severe chorea minor developed, with irritability, insomnia and partial loss of memory. Four months after delivery Bossi curetted the uterus, did a plastic operation on the cervix, and straightened the uterus with a pessary. In two days marked improvement was evident and the patient had soon entirely recovered. Bossi cites the case as evidence of the importance of genital lesions in the causation of nervous and mental disease in some cases. He is convinced that if the cervicitis had been cured during the pregnancy, there would have been no reason why the child could not have been carried to term, and the patient would have been spared her four months of trouble.

Gazzetta degli Ospedali e delle Cliniche, Milan

November 26, XXXII, No. 142, pp. 1499-1514

155 Sanitary Conditions in Tripoli. (Lettere sanitarie da Tripoli.) L. Dozzi.

November 28, No. 143, pp. 1515-1522

156 *Distomiasis and Its Treatment. (La distomatosi e sua cura.) A. Borini.

156. **Treatment of Distomiasis.**—Borini states that the different varieties of distoma yield to treatment with ethereal extract of male fern or thymol, and he relates experimental experiences which confirm the possibility of this. The parasites were invariably expelled in the moderately severe cases; the treatment failed to cure only those animals that were in advanced cachexia. The distoma is sometimes associated with the hookworm or other helminths. As the distoma usually seeks by preference the bile apparatus, it may carry infection with it from the intestines and set up a cholecystitis or pancreatitis.

Policlinico, Rome

November, XVIII, Surgical Section No. 11, pp. 481-528

157 *Varices and Their Treatment. (Varici e loro trattamento. Considerazioni sopra 150 casi operati variamente.) O. Cignozzi.
158 Functioning of the Kidneys After Ligation of Its Vessels. (Ricerche sperimentali sulle variazioni della funzionalita renale, dopo la legatura dell'arteria e della vena emulgente.) S. Marinacci. Commenced in No. 10.

157. **Varices and Operative Treatment.**—Cignozzi reports the outcome in 150 cases in which various operative technics were applied. The ultimate outcome has proved much better in the eighty-five cases in which the entire saphenous vein, internal and external, was removed. This is the only measure which guarantees absolutely against recurrence while the patients are freed from all disturbances at once. He gives a number of illustrations of the outcome, showing the linear cicatrix from ankle to hip.

Norsk Magazin for Lægevidenskaben, Christiania

December, LXXII, No. 12, pp. 1169-1344 and Supplement

159 *Duodenal Ulcer. (Om ulcus duodeni og dets kirurgiske behandling.) H. Wille.
160 *Gastric Cancer and Results of Operative Treatment. (Om den operative behandling av carcinoma ventriculi og dens resultater.) N. Paus.
161 *Pericolitis. K. Andersen.
162 The Most Important Manifestations of Degeneracy. ("Giv en oversigt over de vigtigste degenerationsprocesser.") S. Widerøe.
163 Removal of the Eyeball Under Local Anesthesia of the Ciliary Ganglion. (Enucleatio et Exenteratio bulbi i regionær anæstesi ad modum Elsching-Löwenstein.) T. Gunnufsen.
164 *Congenital Fistulas in the Neck; Twenty-Three Cases. (Om medfødte halsfistler og endel med disse beslegtede anomalier.) F. Leegaard.

159. **Duodenal Ulcer.**—Wille reports six cases from his practice last year and states that signs of duodenal ulceration were found at necropsy in 7 of the 4,100 cadavers examined

during the last ten years at the Ullevaal hospital; signs of ulceration in the stomach were found in thirty-one cases. He compares his data with those published by Mayo and other surgeons, commenting on the apparent comparative frequency of duodenal ulcer in America and on the large preponderance of men among the patients. Syphilis could not be incriminated in his six cases. The difficulty in healing and the dangerous complications liable render duodenal ulcer a very serious affection. To date we can estimate that from 80 to 90 per cent. of the patients are permanently cured by operative treatment while the operative mortality is 1 or 2 per cent. In four of his cases he made a posterior gastro-enterostomy alone and three of the patients have been free from symptoms since. One has still slight symptoms. In the fifth case he sutured in the ulcer before doing the gastro-enterostomy.

160. **Gastric Cancer.**—Pans tabulates the details of forty-eight cases of gastric cancer in which operative treatment was applied and the outcome later determined, out of 100 patients with gastric cancer. In twenty-two of the other cases merely an exploratory laparotomy was done, and even this was impracticable in thirty others; in twenty-three of the others merely a palliative gastro-enterostomy was done; in only twenty-five cases did the prospects justify radical removal of the growth. The patients survived after the gastro-enterostomy for an average of six months and twenty-three days, the range being from three weeks to twenty-one months. Four died of the twenty-five patients whose stomachs were resected; one from pneumonia; thirteen have died later, after survivals of from nearly one to eight years, all but one succumbing to recurrence after an interval of complete health ranging from a few months to over six years. Eight of the patients are in good health to date, from nine months to nearly eleven years since the operation, two for seven years and one for two years. Five of the patients treated by resection developed recurrences later than three years, but 36.8 per cent. of all the patients operated on lived for more than three years and 26.3 per cent. are free from recurrence. Omitting the operative mortality there are 43.8 per cent. living after the three-year interval and 31.3 per cent. are free from recurrence. The patients had had symptoms on an average for seven months before the operation, some for over a year. One patient had been treated for four months with internal measures alone although a tumor was palpable. Pans insists that operative treatment should be the first measure to be applied, not the last.

161. **Pericolitis.**—Andersen describes the clinical picture which accompanies inflammation of the peritoneal investment and the immediate vicinity of the cecum and ascending colon with the appendix intact. Treatment must be operative, he says, to be effectual.

164. **Congenital Fistulas in the Neck.**—Leegaard has encountered eleven cases of this kind and knows of twelve others in the practice of his Norwegian colleagues. In three of his cases with a fistula in the side of the neck, the children were brothers and sisters and the parents were cousins. The children in this family also had adenoid vegetations. In another case there were two fistulas, in another the fistula opened outward below the clavicle. In one case the fistula proved to be 12.5 cm. long although it could not be probed for more than half this distance. One child had a fistula in both neck and ear. In only three cases was the fistula in the median line. Leegaard discusses these congenital fistulas from various standpoints. Treatment is rarely necessary but if so, injection of a caustic fluid may obliterate the passage. One case is on record in which fatal poisoning followed injection of a mercurial salt. The incomplete fistulas respond better to these injections. The fluid must reach the entire epithelial lining and good results have been obtained in some cases. Operative treatment may be required when there is much dilatation and secretion with pain, fever, etc. showing retention. If the passage has to be resected, it should be loosened and removed with blunt instruments.

Ugeskrift for Læger, Copenhagen

November 30, LXXIII, No. 48, pp. 1757-1806

165 *Cholelithiasis. V. Scheel.

165. **Cholelithiasis.**—Scheel discusses the prevalence and differentiation of gall-stones and compares his own experiences with those of others in this line. During the last four years the necropsies at the general hospital disclosed gall-stones in 406 of 2,753 cadavers, that is, in 15 per cent. The proportions in the male and female cadavers were the same only that the corresponding percentages in the men were at an age twenty years later. Evidently the factors which cooperate to induce gall-stones are the same in both men and women, only that they act later in men. Pregnancy and tight lacing, therefore, do not have the causal importance formerly ascribed to them. Scheel is inclined to ascribe a favoring influence to the changes in metabolism which accompany the cessation of the sexual functions in both men and women. When this coincides with a casual infection of the biliary passages there is liable to be a production of gall-stones. This assumption explains why there is only a single generation of gall-stones. In his 406 cases the women's curve rises from 5 to 10 per cent. between the ages of 20 and 30, then to 15 per cent. between 30 and 40, and then it jumps to 25 per cent. before 50, and then to 35 per cent. by the age of 70; the men's curve parallels it almost perfectly only adding 20 years to each age. In 67 per cent. the bile passages were apparently not pathologic—in 74 per cent. of the cases with multiple stones and in 54 per cent. with single stones. If there had been an infectious process it had healed without leaving a trace. In 75 of the 133 pathologic cases there were evidences of an old, practically healed cholecystitis of the gall-bladder; the walls were thickened or shriveled, with more or less adhesions. This chronic phase is equivalent to normal conditions as no clinical symptoms are observed. There was cancer in the gall-bladder in five cases, and eight patients died from postoperative complications, such as pneumonia or embolism.

Correction.—In Abstract 67, page 1728, in The Journal, Nov. 18, 1911, omit "twice the volume of" in the third line from the bottom of the page. The sentence should read: "After thirty minutes the mixture is diluted with twice the volume of water and again, etc."

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Die Experimentelle Pharmakologie als Grundlage der Arzneibehandlung. Von Dr. Hans H. Meyer, Wien, und Dr. R. Gottlieb, Heidelberg, Professoren der Pharmakologie. Second Edition. Paper. Price, $3.50 and postage. Pp. 554, with 65 illustrations. New York: Rebman Company, 1911.

Nachweis und Bestimmung von Giften auf biologischen Wege. Von Dr. Hermann Fühner, Privatdozenten für Pharmakologie an der Universität Freiburg i. B. Paper. Price, $2.25 and postage. Pp. 176, with 89 illustrations. New York: Rebman Company, 1911.

Postgraduate Medical Work Under the Patronage of the Free Organization for Medical Courses at the I. R. University of Vienna. Third Edition. Paper. Pp. 144. Can be obtained free from Rebman Company, New York.

Case Histories in Medicine, Illustrating the Diagnosis, Prognosis and Treatment of Disease. By Richard C. Cabot, M.D. Second Edition. Cloth. Price, $3. Pp. 295. Boston: W. M. Leonard, 1911.

Appendix to Third Report of the Royal Commission on University Education in London. Paper. Price, 4 shillings. Pp. 489. London: Wyman & Sons, Fetter Lane, E. C., 1911.

Swamp Fever in Horses. By L. Van Es, E. D. Harris and A. F. Schalk. Government Agricultural Experiment Station of North Dakota, Bulletin No. 94. Paper. Fargo, N. D., 1911.

A Handbook of Health. By Woods Hutchinson, A.M., M.D. Cloth. Price, $1.25. Pp. 330. Boston: Houghton Mifflin Company, 1911.

Twenty-Ninth Annual Report, Friends' Home for Children, Philadelphia, 1910.

Thirty-Sixth Annual Report, Free Hospital for Women, Brookline, Mass.

Seventeenth Annual Report, St. Vincent's Hospital, Worcester, Mass, 1910.

Report of President of Board of Health of Hawaii, 1911. Honolulu.

History of the House of Hope. By Mark M. Savidge. Omaha.

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THE EDUCATION OF THE PHYSICIAN AND POSTGRADUATE STUDY IN THE HYGIENE AND DISEASES OF THE NURSING INFANT *

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NEW YORK

The history of the study of the diseases of infancy and childhood in America is intertwined with the development of all branches of medicine into special studies. As in all countries, the undergraduate study and postgraduate training of the American physician in the diseases of infancy and childhood has at first been slow and gradual. At the present time, we can say that the pursuit of knowledge in the hygiene and diseases of infancy receives its full quota of attention and acknowledged importance in this country. It is only within the past thirty years that pediatrics has become a recognized department of study in our universities and colleges. There are good reasons for this, and one of the most important is that in other lands this study of children was also of tardy recognition. In this new country where every foreign influence receives its quick response, pediatrics was not recognized as a distinct department of internal medicine until the late seventies. At this time and before, the various medical schools and universities combined the study of diseases of children with that of obstetrics and diseases of women. Even in the dispensaries and clinics the two departments, that of the diseases of women and that of children's diseases, were combined. As late as in the eighties, I knew of a reorganized dispensary which combined the treatment of infants and children with that of women. As Osler says in a notable address before the American Pediatric Society: "The foundation of accurate knowledge in internal medicine has been the study of the problems of the pathologic laboratory." Thus, from the empirical clinical field we turn for a good reason—for the development of pediatrics in America—to the study of pathology. And it was certainly those whose knowledge of pathology was well grounded who first broke the road to the modern trend of the study of the diseases of infancy and childhood in America. Before the seventies, the universities and medical colleges had no independent chairs of pediatrics.

In 1876, the reorganized faculty of the College of Physicians and Surgeons in New York, an offshoot of Columbia University, recognized the importance of the intimate study of the diseases of infancy and childhood as a branch of special pathology. The incumbent of the chair of pediatrics at this time was A. Jacobi, and the reorganized faculty was under the leadership of Alonzo Clark, who was one of the first to bring to America the light of modern pathology as reflected from the French schools. Jacobi, in all his teachings, it may be observed, rather leaned to the German school of pathologic anatomy and was a student of the work of the immortal Virchow and an expounder of his doctrines. To this source I lay the first development of modern pediatrics in America. Before this time, the influence of the English and French schools was predominant and these were mostly clinical. With the development of pathology and pathologic anatomy in America, through the leadership of Delafield, a pupil of von Recklinghausen and Rindfleisch, Prudden and Welch, pupils of Virchow and Cohnheim, and with the special direction given to such studies by teachers such as Jacobi, we may date the development of pediatrics as a separate special pathology in America. The charm of the earlier teachings of Welch and Prudden led many young men abroad to seek the treasures, part of which were taught to them in the lectures of the teachers I have named. Germany and its many schools were the Mecca of these young men, and to-day the influence of the German school of pediatrics is predominant in America and has completely displaced the English and French influence as a leading factor. We have only to turn to the earlier text-books written by American authors on diseases of infancy and childhood, those of Meiggs, Pepper, Smith and Keating, and compare them with later works of Holt, Rotch and Koplik to confirm these views. If the pathology of infancy and childhood in gross was the first great branch which has been responsible for the advance of pediatrics in America, the study of the various infections were of next importance, and with the advent of bacteriology the diseases of infancy and childhood received another impetus from the teachings of the parent country.

With the development of bacteriology, the studies of Booker, Jackson, Prudden and others were directed along pediatric lines following closely the impetus received from Germany in the work of Koch, Loeffler, Gaffky, Baumgarten, Escherich and Heubner. The younger generation of physicians here, charmed with the teachings and work of the leaders at home, brought also their quota of study both at home and abroad. I need not point out here how productive a field for both pathologic and bacteriologic study the subject of the diseases of infancy and childhood has always been; and American workers have been quick to recognize the fact that in the child is reflected the fate of the adult. The study of prophylactic hygiene of infancy and childhood is of only recent date. I recollect the day when diphtheria, as it was also abroad, was treated in the open wards in full ignorance of the facts connected with its infectiousness and communicability. To-day we see in America the full recognition of the importance of the hygiene of the newly born and the first months of life. We fully recognize our debt to teachers such as Koch, Escherich, Runge and Epstein in shedding light on these problems. I think that to-day the feeling of uncertainty in the presence of infection of the newly born has to a great extent been relieved, and the importance of such infections is fully recognized.

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* A report and address read by invitation before the Third International Congress for Child Welfare, Berlin, Sept. 11-15, 1911.

As in every country, the active practicing physician is found to forget the main principles of his training, and we find in private practice much more serious lapses against the fundamental truths of hygiene and infection than in institutional work. The cause of this can be easily traced. To-day, even in the medical schools, sufficient stress is not laid on the study of the hygiene of infancy and childhood, the prophylactic side as compared to the clinical study.

The clinical study of diseases of infancy and childhood has made great strides in the last two decades in America; the charm of these practical clinical studies has eclipsed the no less important fields of hygiene and prophylaxis. Effort has been mostly expended on the idea of making the medical student a good diagnostician and very little time has been given to the study of how, by hygiene and prophylaxis, the physician may teach the mother to avoid disease. I may say, in my daily work I am more and more impressed by the indifference which some physicians show to the rights of mothers to know and to be taught the simplest truths for the safety of the children and themselves. Among the poor this is especially evident. Outside of the clinics the private physician seems to think that with a few directions as to the preparation of an artificial food, his duty is ended. The general welfare of the child, the simple teachings as to its care, the care of the mouth, the body, the eyes, the genitals, all are passed by, perhaps on account of the stress of other duties.

The physician does himself as well as his patient injustice by the indifference hinted above; the result is that the laity have been quick to respond to the impetus of specialism, even in pediatric work, much to the harm and chagrin of the general physician. The remedy is still with the physician, and I am certain that he will also be quick to respond to this demand for extraordinary work on his part. The general activity during the past two decades in America in the welfare of infants and children was put on a secure basis in 1896, in the establishment of the American Pediatric Society. The union of the leading minds working in the same field has resulted in the establishment of many smaller societies for the study of diseases of children, so that in most states of America, societies for the study of diseases of children have been organized. The benefit to the general practitioner and through him to the laity has been inestimable. The laity have also taken an extraordinary interest in the study and welfare of infants and children, in the organization of societies for the study of infant mortality and the reduction of this mortality. The culmination of these activities among the laity has been seen during the early part of this year, in the great exhibits of the child welfare activities held in New York and Chicago.

I have said that pathologic studies first held their own, relegating hygiene and prophylaxis to a minor rôle. It seems to me that there is a distinct reason, not yet mentioned, for this. In European countries the government takes an intimate interest in the new-born, its fate and prosperity as also of the growing infant. In America this interest is the care of private individuals, and for this reason the whole realm of child welfare and infant mortality has been of late cultivation, but, though late, it is none the less active and sincere and now in the full era of its development. One of the first activities in the direction of child welfare, hygiene and prophylaxis in our country has been the institution of milk stations, or the *gouttes de lait.* The importance of these institutions in large cities, especially in the United States where the cities are congested with the poor from all quarters of the globe, the hopelessness of treating and caring for infants in the old way by simply prescribing for the child and sending the mother on her way, was first made evident to me on my return from studies in Germany. In connection with the largest pediatric dispensary probably in America, in the summer of 1889,[1] I established the first *gouttes de lait* with consultations. In this I not only instructed the mothers in feeding the children, but also those mothers who had some breast-milk were encouraged by all means to nurse their infants in addition to giving artificial food. The infants were weighed and the mothers thus encouraged in the progress of their little ones. This so-called milk depot was the first in America. Modeled on its plans, later on the Strauss depots were established, but the latter lacked the consultation feature. To-day, not only does the original institution of the *gouttes de lait* exist, but its usefulness has been fully recognized and New York has probably more milk depots in existence, also with consultations, than any other city, not only in America, but Europe. In 1911, in that city and its environs, there were sixty or more such milk stations under private and municipal control.

Another development of child welfare has been the school inspection instituted by the board of health. This also is an emanation from the teachings of the American Pediatric Society. In 1890, Caillé first suggested that daily school inspection of children would tend to reduce the liability of infection, and the New York Board of Health in 1897, as also the Massachusetts Board of Health (1894), and that of Philadelphia (1898) quickly saw the utility of such work. To-day the daily inspection of school children is a well-developed department under the auspices of the boards of health in the various large cities of the country. This system of school inspection cannot be overestimated as to its importance. The children who show need of care and medical guidance are referred back to the family physician; there is an endless educational chain established; not only infectious diseases, but the hygiene of the nose and throat and the management of defective vision and hearing come under the supervision of the health authorities. So important has this department of board of health activity become that in New York a department of child hygiene and welfare has been established by the board of health. This department has at its command nurses and physicians whose duty it is to educate not only the laity, but incidentally the physicians.

The division on child hygiene of the New York Board of Health takes cognizance and has money appropriation to control the practice of midwives, to supervise foundlings, to supervise day nurseries and institutions for the care of dependent children, to care for babies and reduce infant mortality, to inspect school children medically, and to issue employment certificates. Nor are these empty activities; the work of the health board and especially this department has, though only recently organized, begun to attract wide attention. One of the most notable activities of the department of health is the supervision of the milk-supply and the establishment of some fifteen milk depots, *gouttes de lait*, where not only pure and good milk is furnished at a nominal price, but where mothers are instructed in the care of infants and the preparation of their food.

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[1] New York Med. Jour., Jan. 31, 1891.

In 1910, some 250,000 pupils were examined in the public schools, an earnest of the enormous amount of work done and to be done in this melting-pot of 4,000,000 inhabitants. With this, there has been also free dental treatment following inspection, as also trachoma treatment. It would carry me away from my theme to go further into detail with regard to the work of what promises to be probably the most modern handling of the problems of child hygiene and prevention of mortality.

I will not enter into all the activities tending to child welfare which have sprung up of late years. I need only refer to the Russell Sage Foundation, which has been engaged in the study of child welfare and infant mortality in America, and in New York especially, and the far-reaching work of the Society for Improving the Condition of the Poor. In all this activity, where do we find the general practicing physician? I am in a position to know that the practitioner appreciates the helping hand which is given to him by these societies in his daily work among his patients; the district nursing and teaching, the furnishing of food for the infant, the education of the mother in the care of the infant. But in this uprising in the study of infant life, the hygiene of the new-born, the fate of the new-born, the fostering of the life of the infant, I see that if this development is to keep the pace that it has in the last ten years, it will grow beyond the control of the general practitioner. There will always, as Jacobi aptly says, "be an infant mortality"; no matter how perfect our system of prophylaxis and hygiene, there will always be the inexperienced mother and father to reckon with. There will always be the problems of environment and heredity, and there will always be the irreducible quota of infants who are born only to see the light of day and pass out. But the whole realm of infant and child welfare has of late years received such an impetus in America, and so much wealth and interest are being expended in the care of the infant and study of infant life that the inevitable result will be the building up of a new field of human interest. Just as formerly the general practitioner attended to the wants of the infant and child, and the accomplished practitioner with skill in discerning the needful as to sick infants was much in vogue, so now he has drawn to his aid and acknowledged the wider experience of the special pediatrist. On this side of the Atlantic we are just tending to the full development of an entirely different department of usefulness, that is, child welfare. It is the fault primarily of the general practitioner that the very side of his work which is the most important and interesting has been hitherto the most neglected by him.

I have taken at random 1,000 cases of infant-feeding from my private practice. Of these 1,000 cases, I find that an infant at the breast is taken away at times for the most trivial causes; the result is that the infant suffers, and I may say, also the mother.

Taking 1,007 cases of feeding, I have divided them for the sake of comparison into cases of infants exclusively fed from birth on the bottle, in which no attempt was made at breast-feeding, and those cases in which breast-feeding was attempted but abandoned during a certain period of infancy, and finally those in which from birth there was an effort at mixed feeding on the breast and bottle, presumably because the breast did not suffice.

Absolute bottle-feeding	286 cases
Breast- and bottle-feeding	721 cases
Total	1,007 cases

Of the 721 infants, 573 were carried along on the breast for periods of time as follows:

1 month or less	112
2 months or less	89
3 months or less	82
4 months or less	59
5 months or less	47
6 months or less	40
7 months or less	20
8 months more or less up to 1 year and then placed on the bottle	124
Total	573

A number to the extent of 148 cases of the 721 were started on the breast and bottle from birth because either the breast was insufficient or the mother could not or did not wish to nurse the baby entirely on the breast. Thus, of the whole number of 1,007 infants we can only really say that 124 were entirely breast-fed, 12 per cent., and of the whole number, 573, or 56 per cent., were breast- and bottle-fed babies for varying periods, while 28 per cent. were bottle-fed absolutely. Of the 573 infants which were fed on the breast and then on the bottle, 60 per cent. were put on the bottle at the fourth month and the breast abandoned, and in only 20 per cent. of the breast-fed children was an attempt made from the start at mixed feeding, the practitioner abandoning the breast in the remaining cases when the breast for one reason or another was insufficient.

These statistics give a much better insight into the nursing capabilities of mothers than any others I have seen because the infants were in the hands and under the advice of the family physician and were brought to me only when the physician or the mother saw that the infants were not thriving. These statistics also give an impartial picture of conditions as they exist in practice to-day.

Summary of 1,007 Cases

	Infants	
	No.	Per cent.
Breast-fed exclusively	124	12
Breast and bottle (various periods)	573	60
Breast and bottle from birth	148	14
Breast until fourth month	342	47
Exclusively bottle-fed from birth	286	28

To summarize further in 1,000 cases of feeding:

10 per cent. of the infants were exclusively breast-fed
30 per cent. of the infants were exclusively bottle-fed

The remainder were breast- and bottle-fed, and of these only 60 per cent. were kept on the breast until the fourth month, and then put on the bottle without any attempt to retain the breast.

If a physician makes only one analysis of mothers' milk and finds the fats low or high, he will in the earlier moments of lactation cease breast-feeding. Again, many mothers are dissuaded from nursing because they are nervous, others because there is not enough milk. Mixed feeding does not seem to occur to the physician of the baby. Another set of infants are taken away because of colic. Physicians still find it convenient to grasp at the substitute infant foods. They are not given to the study of the symptoms of indigestion or the character of the stools. Whose fault is this? I must say that my impression is that the fault is as much with the teacher as the pupil. Thus I see the development of a distinct activity, the higher education of the physician in the hygiene and diseases of infancy and childhood. These, as far as the purely hygienic and prophylactic sides are concerned, are passing into the hands of the boards of health, the so-called municipal control. There is in the future growing up a distinct class of activities, those concerned with *gouttes de lait,* school inspection, home nursing visits and instruction, day nursery and kindergarten inspection, the summer management of infants and children, which will bring into existence and furnish study to a distinct set of physicians, because the physician whose work is in the sick-room cannot find time to be in the *gouttes de lait* or in the schools. It would be well for our universities to recognize these facts.

Dr. Welch, in a recent discussion before the American Association for the Study and Prevention of Infant Mortality, said that it was not the function of the university to turn out the student adequately trained in preventive medicine. I do not think this as desirable as the incorporation in the university studies of a sociologic side to the selective training of medical men. In other words, the sociologic side of medical work is fast becoming of such great importance that it will command attention as a distinct department of medicine, and in this we will see the training of a distinct class of physicians, or even laymen, who will, among many other things, devote their energies to infant and child welfare. The department of infant and child hygiene established by the New York Board of Health is an earnest of a beginning in this direction. At present, there is in the universities no definite teaching of child hygiene and welfare apart from the general chair of diseases of infancy. There is not even any such pretension. The whole development of this subject in America has been outside the colleges and universities and, as I have pointed out, much of the initiative has been taken by physicians and public-spirited laymen.

Is it desirable for the general practitioner, the worker among the sick, to turn aside and devote his time to a field in which from a sociologic standpoint he has not been trained? I think the time and the training are lacking, and just as the diagnosis and management of a pneumonia require skill and practice, so the details of social child welfare naturally fall to the lot of an entirely independent set of workers. Thus the state or municipality will naturally take up this field and will train, as it does now, and bring into existence a new set of physicians who will give their full time to problems which to-day are understood but not cultivated by the physician at large. At the same time, in a retroactive way the general practitioner will appreciate more and more the importance of certain lines of work in the hygiene, prophylaxis and care of the infant and child, and will in a measure be a co-worker of the physician who is working with the state in a sociologic as well as a medical capacity. Thus indirectly, both by law and precept, the state will eventually teach and enforce those primary principles of hygiene and child welfare which to-day are a matter of growing interest. For the present, the system pursued by the municipal board of health, especially in New York, has developed into a postgraduate school for the higher education of the physician in the most important and pressing aspects of hygiene, prophylaxis and diseases of infancy and childhood.

Entering under the aegis of its activities, the physician is thrown into daily intimate contact with the infant and child, especially in the crowded districts of the city. From there his work tends directly to the research laboratories of the health boards. We find that not only the hygiene, but diseases of infancy and childhood, including infectious diseases, come under his active care.

Thus I see this postgraduate and higher education of the physician fast becoming a separate calling, a cult, apart from the active practice of medicine. The laity are quick to recognize the great resource placed at their command and are now using it in connection with the services of their regular physicians. The New York Board of Health has established a serum treatment activity. In diphtheria, meningitis, rabies, tetanus, they stand ready to apply not only the remedy, but the means of diagnosis, such as lumbar puncture.

Will the universities take up this phase of the practice of medicine? Will there be created an elective course for younger men of hygiene and preventive medicine in correlation with diseases of infancy and childhood? It seems that this is not imaginative if we look at the daily activities of the health board among the infants and the children of the poor. The increase of the work, the need for more physicians, young and enthusiastic, highly trained in the lines I have indicated will, I think, eventually result in a remodeling of the course of studies in the universities, so that men may elect to follow as a lifework the study and treatment, the hygiene and prophylaxis of diseases of infancy and childhood under municipal control, and in the most advanced scientific paths. The rôle of the general physician will broaden, he will be called on to advise and counsel, to point out the indication for interference, for diagnosis and treatment. Thus his education and higher education must inevitably keep pace with, and enter the paths of, the highest attainable scientific activity for the general welfare of the community at large.

30 East Sixty-Second Street.

HEXAMETHYLENAMIN

REPORT OF A CASE OF MEDICINAL CYSTITIS FOLLOWING ITS ADMINISTRATION

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Following the excellent work of Crow in 1908, hexamethylenamin has come into quite general use, as can be seen by a review of the recent literature. Its elimination, dosage, action, etc., have been studied, but little if anything has been written regarding its toxic effects, if they have been observed.

In 1899, Nicolaier[1] demonstrated that hexamethylenamin was excreted in the urine, and Sollman[2] showed that a considerable part, if not all the drug excreted by the kidneys, was excreted unchanged, and broke down liberating formaldehyd only after remaining in the bladder for at least one and a half hours. It has, therefore, been recommended in genito-urinary infections, and as a prophylactic when catheterization has to be resorted to for any length of time.

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1. Nicolaier: Deutsch. Arch. f. klin. Med., 1899, xxxviii.
2. Sollman, T.: The Journal A. M. A., Sept. 5, 1908, p. 818.

Crow,[3] in 1908, showed that when hexamethylenamin was given by mouth it was rapidly absorbed and remained in the circulating blood for twenty-four hours. He found it in the bile, excreted by the liver and in even greater amounts by the gall-bladder itself. He demonstrated that if the dose were at least 75 gr. per day, it would prevent bacterial growth within these passages. He, therefore, recommended its use in acute infections and as a prophylactic before operation on these parts; during and after typhoid fever, and on bacillus-carriers as they may harbor the organisms for a long period of time in the gall-passages. Given after typhoid fever it undoubtedly has some effect in preventing the formation of gall-stones, for the presence of the infecting organisms in these passages during and after the disease is a well-known fact, and Cushing has produced gall-stones in animals by injecting their gall-bladders with typhoid or colon bacilli, and he states that catarrhal inflammation is necessary to the formation of stones. Welch has shown that other organisms, among them streptococci, may be the nuclei around which stones are formed, and, therefore, in infections of these parts with other organisms, hexamethylenamin would be a precautionary measure.

Crow has also demonstrated the elimination of the drug in the synovial fluid, pancreatic juice, milk of dogs, saliva, pleural fluid and cerebrospinal fluid, after administration by mouth, and, in 1909, published experiments[4] showing that it had at least an inhibiting action on the growth of organisms introduced into the meninges of animals.

The largest amount of hexamethylenamin is present in the cerebrospinal fluid half an hour to one hour after ingestion, and the growth of organisms was inhibited in spinal fluid obtained by puncture after the administration of the drug.

In view of these experimental facts, Crow recommends its use after traumatic injuries to the skull, preliminary to ventral and lumbar puncture and in all operative procedures within the skull; also in extracranial infections apt to extend to the brain cavities, as mastoid, middle-ear and sinus infections. It has been used in meningitis and, in several cases reported, with evident benefit. Lately it has also been recommended in poliomyelitis.

Further study by others shows it to be eliminated elsewhere, as within the middle ear,[5] by the bronchial mucous membrane[6] and sputum,[7] and Miller[8] and others recommend it as useful in treating coryza, acute rhinitis, pharyngitis and infectious inflammatory processes of the respiratory tract. Excretion takes place into the anterior chamber of the eye,[9] but in such a concentration as not to inhibit bacterial growth, at least in the test-tube.

Hanzlik[10] showed that it was unchanged when found in the saliva, but here, as no stagnation occurs (which is not the case with the other fluids), this is not surprising, and from the work of Sollman, mentioned above, it would seem most probable that the drug may be unchanged everywhere on excretion, only breaking down liberating formaldehyd, and thereby assuming its protective nature after more or less stagnation. The drug unchanged in solution is very slightly if at all antiseptic.

As stated above, though considerable has been written on the use of the drug, I find little mention of its toxicity and no cases cited as examples.

Frothingham[11] has shown that hexamethylenamin injected into guinea-pigs causes congestion and sometimes hemorrhages into the stomach, and he states that this suggests that the lesion is not organic, while the lesion in the case I report below certainly has the appearance of being organic. Wiggs[12] speaks of the irritant effects sometimes encountered experimentally and states that if even small doses are continued, irritation will be produced. Hematuria of a mild grade has been encountered after the use of the drug, but clears up rapidly on its discontinuance.

That lesions of a more serious nature may be noted following its administration is seen by the following case:

Patient.—A white woman, aged 25, married; with one child, 18 months old. Her past history is unimportant, though it may be stated that she was never a very robust individual, had had several attacks of tonsillitis and more or less difficulty in breathing through her left nostril. She had never had any renal, bladder or pelvic trouble.

Present History.—The patient was 8½ months pregnant and perfectly well, up to the time when first seen. Her urine had been absolutely normal in this as in her former pregnancy. Her trouble began with a severe facial neuralgia which subsided on extraction of a carious tooth. Two weeks later a similar neuralgia developed on the opposite side of her face and this proved to be due to an empyema of the antrum of Highmore. The antrum was opened and drained through the nose, removal of the lower turbinate being necessary to enter the sinus. The turbinates of both sides were hypertrophied and swollen, and the septum deviated to the left. Drainage was free, and the cavity was frequently irrigated with boric and saline.

Course.—One week later the patient began having headaches which began quite regularly at 9 a. m., increased in severity up to noon and eased off so that by evening the patient was comfortable. These headaches increased in severity from day to day, though once or twice were not so severe as the day preceding. They were localized, being always on the left, in the supra-orbital region, and extending around to the temporal region of the same side. Tapping or pressure in the supra-orbital region, and especially when made upward and toward the midline at the inner angle of the eye, would be quite painful. After a day or so there was some slight puffiness in this latter area. For the severe pain the patient was given morphin, as it was feared she might fall into labor.

Diagnosis and Operation.—Involvement of the frontal sinus was suspected, and preparatory to a possible operation the patient was started on hexamethylenamin, receiving 40 gr. a day for two days. The third day after starting the drug, under ether, the frontal sinus was opened on the left through the nose and considerable pus and necrotic bone removed. The ethmoid cells were found very necrotic and were thoroughly curetted; the naso-ocular septum was also neurotic, in places entirely gone.

Administration of Hexamethylenamin and Its Results.—The day of this operation the patient received 60 gr. of hexamethylenamin and 60 gr. the following day, in the evening of which the bladder symptoms began after taking 200 gr. over a period of four days. She voided every ten or fifteen minutes, had pain and burning, especially at the end of urination. The day following, the hexamethylenamin was ordered stopped and hexamethylenamin methylen-citrate (helmitol) in doses of 15 gr. three times a day given in its place, as it has been held by some that the latter drug has the same effects without the occasional slight irritation of the former. Unfortunately, however, through a mistake, the patient received 45 gr. more of the drug during the day, and in the evening, twenty-four hours after her first symptoms, which had increased in severity during the day, she had marked hematuria, passing many small blood-clots as well as pieces of bladder membrane several centimeters square. The urine was acid, contained many pus cells and a considerable amount of albumin. The hexamethylenamin was stopped immediately, alkaline water was pushed to keep the excreted drug dilute and eliminate it as soon as possible, in order to reduce the irritation of the bladder by an acid urine and also because the drug breaks down most readily in an acid medium. Potassium citrate and tincture of hyoscyamus were given as a vesical sedative and all condiments and other irritative articles of diet stopped. For three nights and two days after the onset of the hematuria, the patient continued to pass blood-clots and bladder-membrane. Red blood-cells were present for ten days, the pus cells and albumin gradually diminished, though they disappeared entirely only after three weeks. The cystitis was thought at first to be due to some infective agent and it was conjectured that possibly the kidney or its pelvis was involved. If so, the pressure of the pregnant uterus on the ureters would prevent free drainage and serious consequences follow. Shortly after the onset of the cystitis symptoms, the patient was catheterized. No organisms were found either in centrifugalized specimens or in cultures made from the latter. Had the cystitis been an infective one of such severity, it would not have subsided so quickly, even with the hexamethylenamin, and organisms would have been found, at least in smears from the urine, at the height of the trouble. The urine being sterile, the symptoms arising shortly after the drug was begun and clearing up at once, though gradually, after it was discontinued, and there being no other possible etiologic factor, all this seems to be conclusive evidence that the trouble was purely a medicinal cystitis.

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[3] Crow, S. J.: Johns Hopkins Hosp. Bull., 1908, xix, 109.

[4] Crow, S. J.: Johns Hopkins Hosp. Bull., 1909, xx, 102.

[5] Bartin, W. M.: The Journal A. M. A., March 12, 1910, p. 871.

[6] Heltmuller, G. H.: The Journal A. M. A., April 9, 1910, p. 1222.

[7] Armstrong and Goodman: The Journal A. M. A., May 27, 1911, p. 1553.

[8] Miller, A.: The Journal A. M. A., June 10, 1911, p. 1718.

[9] Gradle, H. S.: Ophthal. Rec., March, 1911, p. 110.

[10] Hanzlik, P. J.: The Journal A. M. A., June 11, 1910, p. 1940.

[11] Frothingham: Arch. Int. Med., November, 1909, iv, 510.

[12] Wiggs, L. D.: South. Med. Jour., Nashville, December, 1910.

A word as to the dosage of the drug which, indeed, depends on the condition for which it is used. As a genito-urinary antiseptic, or prophylactic against infection and in infections of the respiratory passages, from 10 to 15 gr. three times a day is deemed to be sufficient. When its effects are desired in the biliary passages, at least 75 gr. per diem should be given. When the cerebrospinal cavities are to be protected, the dose may be as much as 200 or 250 gr. a day, though a dose of 100 or 150 gr. is no doubt as efficient and irritative effects much less apt to be met with. Here the object of the larger doses is to saturate the cerebrospinal fluid thoroughly and to keep it saturated during the period of greatest danger of infection.

The small doses may be continued for a considerable period of time without ill effects, but the larger doses are to be used only for short periods of a day or so.

Hexamethylenamin in itself has some diuretic action, but water should be liberally given, as it allows a freer excretion and lessens the dangers of irritation.

I wish to thank Drs. Thomas C. Worthington and Thomas R. Brown, both of Baltimore. Dr. Worthington did the nasal operations and Dr. Brown offered many valuable suggestions.

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Social Cooperation in Disease Prevention.—In the diagnosis and treatment of disease, etiology plays an important part, but the great triumph of etiologic medicine lies in the possibilities for preventive and social medicine which it has opened up. In preventive medicine the state through education, legislation, inspection and regulation plays an essential part. Preventive medicine can be made effective only where the state employs highly trained men to look after sanitation and hygiene. Nearly all diseases at bottom are social and can be properly repressed only by social cooperation.—C. R. Bardeen in *Science*

CESAREAN SECTION: INDICATIONS AND TECHNIC: REPORT OF TWENTY-NINE CASES *

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INTRODUCTION

The conservative Cesarean section with the technic here described is the easiest and best Cesarean operation, and the one which should give the least maternal and fetal mortality and morbidity. These deductions are based on thirty-two cases without maternal mortality from the operation, other cases observed, and on the general literature of the subject.[1]

INDICATIONS

Cesarean section is indicated:

First, when there is non-engagement of the head due to obstruction.

Second, when there is non-engagement of the head and a condition necessitating rapid extraction, which cannot be safely performed by the vaginal route.

The usual obstructions are:

1. Contracted pelvis.
2. Rigid cervix and excessive uterine retraction.
3. Tumor.
4. Large head, abnormal presentation or posterior position which cannot be corrected.
5. Atresia.

Contracted Pelvis.—Cesarean section is indicated when the conjugata vera is 3¼ inches (8 cm.) or less, and should be done as soon as the cervix is dilated two finger-breadths; or when the conjugata vera is more than 3¼ inches in a primipara, provided the head does not engage after the test of labor.

Symphyseotomy is preferable when the true conjugate is more than 3¼ inches in a multipara.

Craniotomy is indicated when the true conjugate is 3 inches (7.5 cm.) or more if the fetus is dead.

Obstructing tumors are usually fibroids of the lower uterine segment, ovarian tumors impacted in the cul-de-sac, bony tumors of the pelvic wall and carcinoma of the cervix.

Fibroid tumors often flatten and slip out of the way spontaneously. If this does not occur, an effort should be made to displace them manually or by the knee-chest position. If they cannot be so displaced, they should be removed with or without doing a Cesarean section.

In carcinoma, sarcoma and certain fibroma, the Porro-Cesarean section, i. e., Cesarean section with partial or complete hysterectomy, should be performed.

The usual conditions which necessitate rapid extraction by Cesarean section are non-engagement of the head with:

1. Eclampsia.
2. Placenta prævia with rigid cervix.
3. Ablatio placentæ with active hemorrhage.
4. Beginning exhaustion or collapse of patient.
5. Death of the mother.

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* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911. Between the time this paper was read and the receipt of the proof the author tried a modification of the technic used in those cases in which the uterus was not delivered until after the extraction of the child. The article has been modified to include the new preferred technic and the report of ten additional cases.

[1] The author's first three cases were reported in the Colorado Medical Journal, November, 1902.

Eclampsia.—Cesarean section is indicated in eclampsia with non-engagement of the head, after medical treatment fails, in a primipara, or in a multipara with rigid cervix or a history of previous difficult labor. Medical treatment is considered to have failed in eclampsia if it does not stop the convulsions, lessen the coma and improve the pulse within an hour or two.

Abdominal section is preferable to vaginal in eclampsia in a primipara with rigid cervix, even if the head is engaged. It requires less time and is more favorable to the child.

Infected Cases.—So-called infected cases (i. e., those which have been long in labor, have been repeatedly examined, and even had the forceps applied) do as well after the conservative Cesarean section as after high forceps, and better than after the extraperitoneal or the Porro operation.

Porro-Cesarean Section.—Cesarean section, with partial or complete hysterectomy, is only indicated in cases complicated by carcinoma, sarcoma or certain fibroma.

TECHNIC

Preparation.—A soapsuds enema should be given and the abdomen and vulva shaved, rendered aseptic and dressed. (The soapsuds enema prevents subsequent gas pains.) One arm in the region of the basilic vein should be rendered aseptic and dressed so that an intravenous injection may be given.

When the patient is in a private house and Cesarean section becomes indicated, the ambulance or taxicab should be ordered and the patient prepared as much as possible for the operation. A soapsuds enema should be given if one has not been given within the last few hours. The lower abdomen and vulva should be shaved or closely clipped, thoroughly scrubbed with soap and water, covered with wet bichlorid towels and plenty of absorbent cotton, and secured by an abdominal and a vulvar "T" bandage. The patient may be kept in the first stage of anesthesia in the ambulance, if necessary to lessen suffering, to prevent excessive retraction of the uterus, to prevent eclamptic convulsions and to have the patient ready for operation when she reaches the hospital. If an ambulance or taxicab is inaccessible the patient may be taken to the hospital in a wagon on a mattress, or if she is in good condition, on the train, even if it requires several hours' ride.

If the operation must be performed in a private house, plenty of sterile gauze and sterile towels should be in readiness, but if they cannot be obtained at once, clean towels and sheets may be sterilized in a wash-boiler and the water drained. Wash-basins and pitchers may be sterilized in another wash-boiler or sterilized before the sheets and towels. Tin, galvanized or enameled basins and pitchers may be sterilized by boiling water in them. They should be filled with water, covered with another basin or a cloth and the water allowed to boil fifteen minutes.

In an absolute emergency towels and basins may be disinfected by phenol (carbolic acid) and alcohol or by hot strong bichlorid solution, and then twice rinsed in a hot normal salt solution. An operating table may be improvised by using the kitchen table and a stand or an ironing-board.

Instruments necessary for the abdominal section, the clamping and cutting of the cord, and intravenous injection should be sterilized. A dish-pan or foot-tub of warm water, a pitcher of cold water and an aspiration tube should be at hand to use in resuscitating the baby. A hypodermic of ergot should be ready.

INSTRUMENTS

For making the abdominal and uterine incisions, a scalpel and a pair of blunt-pointed scissors, curved sidewise, i. e., Krey's, 6½ inches.

For holding the ends of the uterine and abdominal incisions, two pairs of Moore's tenaculum forceps, 6½ inches.

For passing iodoform gauze through the cervix, one large sponge forceps.

For suturing the uterus, one dozen large, full-curved, round, taper-point needles, Ferguson's No. 1, each threaded with one-fourth of a No. 3 chromic catgut suture.

For suturing the abdominal layers, except the skin, three similar needles threaded with a No. 1 plain catgut.

For skin sutures, eight full-curved cutting-edge needles, No. 1, threaded with medium-weight silkworm gut.

For holding the ends of sutures and grasping bleeding vessels, a dozen hemostatic forceps.

For cutting sutures, a small pair of scissors.

For clamping and cutting the umbilical cord, Pulling's funis-clamp and a pair of Krey's 5½-inch blunt-pointed scissors, curved sidewise.

For aspirating mucus from the throat of the child, a piece of rubber tubing about the size of a lead-pencil and a glass connecting-point with a groove near its large end. (This groove allows the teeth of the one resuscitating the baby to get a good bite on the connecting-point.)

For intravenous transfusion, the usual instruments.

For anesthesia, ether, as chloroform seems to be the main cause of fetal asphyxia in Cesarean sections.

TIME OF OPERATION

The best time to operate is after the cervix has dilated two finger-breadths, as this insures good drainage during the lying-in period. When this amount of dilatation is not present, it should be produced by manual dilatation per vaginam before the Cesarean section, but in an emergency it may be effected by passing the fingers into the cervix from above. There should be less danger of contaminating the peritoneum by dilating the cervix through the vagina than through the uterine incision.

THE OPERATION

The entire abdomen should be prepared and surrounded by sterile sheets and towels. (A large horseshoe pad should be placed on the abdomen, or towels folded lengthwise and wrung from hot normal salt solution should be placed on the sides and upper and lower parts of the abdomen.)

The Technic When the Uterus is Delivered Before it is Incised

The abdominal incision should be made through the left rectus muscle near the median line, but enough to the left to miss the umbilicus. The incision should be about 8 inches long and about one-third of its length above the navel. (It should be started with a knife, below the navel and opposite a projecting part of the uterus, to avoid cutting the intestines, which may lie in front of the fundus, but not in front of the body of the uterus, and it should be done gently to avoid cutting the uterus. The incision should be enlarged with Krey's scissors.)

One hand should be passed into the incision and behind one horn of the fundus and this pulled forward, then the other hand on the abdomen should push the other horn forward, thus bending the fundus through a small incision, without loss of time.

As soon as the uterus is delivered, the large protecting pad or the folded towels should be placed against the uterus and especially behind the fundus, to prevent any blood passing into the abdomen.

An assistant should grasp the lower part of the broad ligaments near the uterus to check the bleeding and to hold the uterus steady, but care should be used not to grasp it so tightly as to interfere with the extraction of the head. At this time the anesthetist should give the hypodermic of ergot.

A 5-inch incision in the anterior wall of the body of the uterus should be rapidly made with a knife. Care should be used not to cut the baby and it is well to remember that the uterine wall may be very thin. If the placenta is in the way, it should be rapidly incised or pushed to one side.

The fetus should be grasped by the buttocks and extracted. When the lower segment is tightly retracted on the head, the operator should pass one hand into the uterus along the occiput to the vertex and deliver the head by flexion.

As soon as the child is delivered, the upper assistant, grasping the broad ligaments, should release his hold and grasp the upper end of the uterine incision with tenaculum forceps and make traction to control the bleeding, to steady the uterus, and later to coapt the edges of the incision, and thus aid the uterine suturing. (This traction of the uterus usually controls the bleeding so that it is rarely necessary to have an assistant grasp the broad ligaments or the lower segment of the uterus and be in the way of the operator.)

The child should be handed to an assistant and the placenta immediately delivered. The placenta should be detached by grasping with the hand its fetal surface and twisting. The membranes should be loosened by gentle traction. (The uterus should be carefully inspected for particles of the placenta and membranes and the lower segment especially examined for adherent membranes.)

While the placenta is being delivered, the assistant holding the baby should perform artificial respiration by flexion and extension of the chest on the abdomen and have the baby's mouth wiped with dry gauze.

After the placenta is delivered, two one-yard strips of 3-inch iodoform gauze, washed in hot normal salt solution and knotted together should be grasped in a sponge holder, the knot passed through the cervix into the vagina and the rest packed in the uterus.

The uterine incision should be closed with interrupted sutures, run an inch wide and an inch apart and deep enough to go nearly to the endometrium. Wide stitches like these usually stop all bleeding, but if they do not, one or two mattress stitches should be introduced.

Just before the last one or two sutures are inserted, the uterus should be firmly squeezed with a hot towel, to expel blood and aid retraction. The uterus should then be wiped clean, any blood mopped from the abdominal cavity and the omentum placed behind the uterus. The abdominal incision should then be sutured in tiers.

The peritoneum should be very carefully stitched so as to coapt its edges and to keep the sutures out of the peritoneal cavity.

The muscle should be loosely sutured and then four retention sutures of silkworm gut should be passed through the skin and fascia and held with hemostatic forceps. Next the fascia should be sutured with a continuous catgut, and lastly the skin sutured with silkworm gut.

Variations.—The abdominal incision may be made entirely with the knife. The ovum may be delivered whole when the placenta is in the line of the incision, or if the membranes are firm.

The upper part of the abdominal incision may be temporarily closed with tenaculum forceps. The operator may resuscitate the baby while an assistant removes the placenta and membranes.

When the recti muscles are wide apart, they and their fascia should be dissected sufficiently to bring the muscles together and to make the edges of the fascia overlap. In this case the fascia should be fastened together by mattress stitches.

The Technic When the Uterus is not Delivered Until After the Child is Extracted

The assistant opposite the operator and facing toward the patient's feet should grasp the sides of the fundus, and then in order to prevent the escape of amniotic fluid and blood into the peritoneal cavity, he should push the uterus forward against the abdominal wall at the same time making traction on the skin. The pressure should be continued after the extraction of the child, to deliver the uterus.

The operator should make a 5½-inch incision in the *right rectus muscle* just below the navel. He should make the uterine incision about 5 inches long, and then with the aid of pressure exerted by the assistant, extract the child, the uterus and after-birth in rapid succession. The child should be delivered by grasping its head.

As soon as the uterus is delivered, the upper assistant should grasp the upper end of the uterine incision with tenaculum forceps. The rest of the operation should be done as previously described.

DISCUSSION OF THE PRECEDING TECHNIC

The better technic for the average operator is that in which the uterus is delivered before it is incised.

The technic of choice for all skilled operators is that in which the uterus is not delivered until after the child is extracted and while it is the operation for elective cases, i. e., clean cases, it probably can be used in so-called infected cases with as good results, provided special care is used to keep the fluids out of the abdominal cavity.

Making the short incision through the right rectus muscle allows the uterus to be incised in its median line without rotating it, a procedure which is not always easy for the inexperienced. This incision is the ideal one for cases complicated by appendicitis, as after the Cesarean section the appendix can be easily reached through this incision and removed.

Grasping the fetal head instead of the breech aids extraction and seems to lessen the fetal asphyxia.

Rapidly cutting through the abdominal wall may injure an intestine or the bladder, and often slightly cuts the uterus to one side of the median line. The use of Krey's 6½-inch scissors, curved sideways, lessens the danger, in rapidly making the abdominal and uterine incisions.

The use of the large protecting pad or the folded towels lessens the amount of blood which may enter the peritoneal cavity, but the pad is better than the towels.

The making of the incision in the rectus muscle allows the stitching to be made in layers and thus lessens the dangers of hernia.

Making one-third of the incision above the navel allows the extraction of the uterus through a smaller incision and lessens the chances of injuring the bladder.

Too tightly grasping the broad ligaments near the uterus may interfere with the extraction of the head.

The ergot should not be given before the abdominal incision is begun, as giving it at an earlier period seems to cause an excessive retraction of the uterus.

Care must be used in cutting through the uterus, which varies in thickness from 1/4 to 1/16 of an inch, as otherwise the child is often slightly cut.

When the placenta is in the line of incision, rapidly incising it does less harm to the child than taking time to separate the placenta.

At times it is impossible to extract the fetus rapidly without grasping its head or pushing upward from below.

Grasping the upper end of the uterine incision with tenaculum forceps, and making some traction steadies the uterus, coapts the edges of the incision and aids retraction of the uterus and uterine blood-vessels.

Through lack of careful inspection (or palpation) of the interior of the lower uterine segment, adherent membranes are often overlooked.

Loosely packing the uterus and cervix, with iodoform gauze, lessens the possibility of hemorrhage, aids retraction, does not cause the blood to escape into the peritoneal cavity and does not interfere with the normal uterine drainage, if it is not left in more than twelve to twenty-four hours.

A single row of interrupted stitches of heavy chromic catgut (No. 3) placed an inch apart and an inch wide, usually stops all bleeding, and usually, perfectly coapts the incision.

Mattress stitches stop the bleeding in bad cases better than the usual stitch, but they do not coapt the edges of the peritoneum quite as nicely.

Application of a hot, wet towel causes the uterus to markedly retract and thus, together with sufficient pressure to expel the uterine clots, lessens subsequent bleeding and after-pains.

The resuscitation of the child should begin as soon as it is born, for the sooner the mucus is removed from the child's throat and nose and artificial respiration begun, the less the fetal mortality.

The use of one row of uncovered stitches in the uterus and the placing of the omentum behind the uterus results in a ventral suspension, makes the uterus and most of the abdominal incision practically an extra-peritoneal wound and usually causes the patient to get up as after a normal labor and without any bearing-down sensations.

Carefully stitching the peritoneum lessens the tendency of omental adhesions above the uterus and prevents the possibility of a ventral fixation.

REPORT OF TWENTY-NINE CASES

In all these cases non-engagement of the head and the special indications mentioned were present.

The sections were all performed at Mercy Hospital, Denver (except one case performed at the County Hospital), and for the uniform good results which were obtained, much credit should be given to the interns and nurses of that institution.

Special mention should be made of the following physicians who have repeatedly assisted me: Dr. J. C. Hutchison, Dr. George L. Munson, Dr. Agnes Ditson, Dr. Charles A. Ferris, Dr. Ida Beers, and the anesthetist, Dr. C. G. Parsons, who administered the anesthetic, directed the giving of the ergot and did the intravenous work.

The duration of the operation from the beginning of the incision to the tying of the last suture and including removal of tumors or tying of uterine tubes, varied from fifteen and one-half to thirty-eight minutes.

The after-care in reference to asepsis, bowels, diet, getting up, etc., was practically that usually employed at Mercy Hospital for obstetric cases. (See *Denver Medical Times,* March, 1911.)

Report of Eighteen Cases With Removal of Uterus Before Extraction of Child

The anesthetic used in these cases was chloroform.

The maternal mortality from the operation was *nil.* The patient with tuberculous meningitis died half an hour after the Cesarean section.

Maternal morbidity was present in 70 per cent., i. e., twelve out of the seventeen that lived had a temperature over 100.5 sometime after the first twenty-four hours. This was due to a stitch abscess in three of the cases.

All the patients with morbidity slept and felt well, except for after-pains or gas-pains the first three or four days.

The infant mortality from the Cesarean section was 22 per cent. (i. e., four out of eighteen infants died during labor or a few hours afterward). One premature child also died on the sixth day from no discernible cause.

There was no infant morbidity, although in most of the cases, the child was asphyxiated when extracted.

Case 1.—Mrs. W., primipara (patient of Dr. Ray). Dermoid cyst incarcerated in cul-de-sac.

June 27, 1906, Cesarean section, Drs. Burns and S. T. Brown.

Normal recovery. Temperature over 100 for three days, then 99 + to twelfth day. Pulse 99 to 100 to eleventh day. Child, male, well.

Case 2.—Mrs. D., primigravida near term (patient of Dr. Skillman). Placenta prævia, rigid cervix, repeated hemorrhages before and after vaginal tamponade.

Oct. 5, 1906. Vagina carefully packed and then Cesarean section performed.

Normal recovery. Temperature 100 sixth day, pulse 130 on the first, third and sixth day. Child, female, weighed 6½ pounds and seemed well until its death on the sixth day.

Case 3.—Mrs. S., multigravida near term (patient of Dr. Hamill). Ablatio placentæ, rigid cervix, repeated hemorrhages before and after packing; cervical canal long and only dilated one finger-breadth.

Sept. 11, 1907, Cesarean section.

Good recovery but slight morbidity. Temperature 100 second and third days, pulse 128 just after operation, 104 second day. Patient very weak and faint from considerable bleeding after hypodermic injection codein ½ grain for after-pains, but rapid improvement after strychnin, salt solution per rectum and vaginal tamponade. Patient says she got along as well as after her previous labors. She soon showed definite signs of syphilis and we concluded that the decidual endometritis must have been due to syphilis. Two or three years after the Cesarean section her uterus was removed by Dr. I. B. Perkins, who found the line of the uterine incision just as thick and firm as the rest of the uterine wall. Child was a premature male, presenting by the breech. It died four hours after birth.

Case 4.—Mrs, M., primipara (patient of Dr. Alice T. Moore). Flat pelvis, brow presentation, head not engaged; prolonged labor, forceps ineffective.

May 9, 1908, Cesarean section. Considerable difficulty in extracting the head from retracted lower uterine segment.

Good recovery but slight morbidity, and hernia along incision below navel developed after patient was up and working hard.

At subsequent operation inner edge of recti muscles found half way to lines running vertically up from anterior spines of ilia. The recti muscles were brought together, the fascia overlapped and an excellent result obtained.

Temperature 100.8 third day, then packing removed and temperature went down. Pulse before operation 82, after, 140; 150 third day; 100 to 130 until the tenth day, when it was 90. Child, male, well.

Case 5.—Mrs. W., primipara (patient of Dr. Agnes Ditson). Contracted pelvis.

April 13, 1909, Cesarean section. As the uterine incision reached 3 inches, a uterine contraction occurred and caused the incision to rupture into the right horn of the fundus. The patient received, before the operation was begun, 1 dram of ergot by mouth and 1/30 grain of strychnin by hypodermic injection to overcome the supposed relaxing effects of a hypodermic injection of ¼ grain of morphin given one and one-half hours before. This is the probable cause of the rupture.

Good recovery occurred but there was slight morbidity. Temperature 100.6 once, 104 once, emesis and pain the first three days. Child, female, well.

Case 6.—Mrs. B., primipara (patient of Dr. Agnes Ditson). Right hip-joint ankylosed; right knee in front of left thigh, pelvis otherwise normal.

Jan. 7, 1910, Cesarean section.

Good recovery, but infection from stitch abscesses. Temperature 101 the first ten days; 99 + the next eight days. Two stitch abscesses found on the tenth day and some pus present until twenty-first day.

Child, male, well.

Case 7.—Mrs. L., primigravida. Eclampsia; first convulsion after 40 grains of chloral per rectum and hypodermic injection of gr. ¼ morphin; four convulsions fifteen minutes apart; internal os rigid.

Jan. 28, 1910, Cesarean section.

Good recovery, but slight infection from stitch abscess. Temperature 102.4 on seventh day, due to one stitch abscess; temperature 101 several times; pulse 90 to 100.

During the first week marked drowsiness, some restlessness, no appetite and very poor vision were present, but these gradually disappeared as did the albumin in the urine.

Child, male, well.

Case 8.—Mrs. S., primipara (patient of Dr. Ida Beers). Flat pelvis. Right occipitoposterior position; head not engaged, cervix dilated, forceps failed in hands of three operators; fetal heart-beat seemed good at residence; patient in labor forty hours, in second stage six hours; pulse 150; skin mottled from failure of circulation.

Feb. 23, 1910, Cesarean section and an intravenous injection of 500 c.c. of physiologic salt solution. Some morbidity but, except for backache and weakness, patient felt well and ultimately made a good recovery. A hot lemonade sweat on the eighth day apparently caused the temperature to drop from 103.6 to 102 on the ninth day. Temperature 100 + to 101.6 first six days, 102 on seventh day, 103.6 on eighth day, 102.8 on ninth day, 102 on tenth day, 101.2 on eleventh day, 99 + twelfth to thirteenth days. Pulse after operation, 140; 110 to 120 up to fourteenth day, 90 fifteenth day.

Child, male, still-born, weighed 10 pounds.

Case 9.—Mrs. E., primipara (patient of Dr. Ida Beers). Flat pelvis, labor forty-eight hours.

Feb. 28, 1910, Cesarean section.

Slow recovery. Some infection from stitch abscess; pus discharge for weeks and patient not well. Temperature 99 to 100 first week, 102.6 eighth day, 103.4 ninth day, 103 tenth day, 99 eleventh to thirteenth day, normal fourteenth day. Pulse 120 first three days, 90 to 100 to end of first week, 112 eighth day, 120 ninth and tenth day, 100 eleventh day, normal from twelfth on.

Hot lemonade sweat eighth day, stitches removed ninth day and stitch abscess found. Home on fourteenth day without permission.

Child, male, well.

Case 10.—Mrs. F., multipara, previous labor, high forceps, still-birth and severe lacerations followed by considerable morbidity. Contracted pelvis, left mentoposterior position corrected to right occipito-anterior, labor test of two hours after conversion and cervix fully dilated; no progress except occiput rotated backward until "deep transverse arrest" of head was produced.

March 11, 1910, Cesarean section.

Good recovery, but slight morbidity. Temperature 99.6 second day, 101 third day, 102 fourth day, 101.5 fifth and sixth day, 99 + until twelfth day. Pulse 100 to 110 first six days, 99 + seventh and eighth days, then normal.

Child, male, well.

Case 11.—Mrs. W., primigravida, eighth month. Tuberculous meningitis and moribund. (Tonic spasms of arms, stertorous breathing, dilated pupils, cold sweat, coma twelve hours); fetal heart sounds good.

March 21, 1910, Cesarean section to save child; usual technic except fetus delivered without rupture of membranes. Child cried as soon as membranes ruptured. Mother given 500 c.c. of physiologic salt solution intravenously. Pulse slow before and after operation. Convulsions and death half an hour after operation. Could not obtain post-mortem, but patient had had pulmonary tuberculosis for over a year.

Child, male, well.

Case 12.—Mrs. H., primipara. Fibroid in anterior wall of lower uterine segment, preventing passage of child into lower uterine segment after test of labor.

April 28, 1910, Cesarean section and removal of fibroid.

Normal recovery. Temperature 100 first day. Pulse 100 first day, and chill second day. Child, female, 5 pounds, asphyxiated, resuscitated but atelectasis and death in twelve hours.

Case 13.—Mrs. F., multipara (patient of Dr. Mugrage). Ventral fixation; no engagement of head after test of labor, and cervix only three finger-breadths. ("Mouth of womb opened at seventh month by rusty instruments.")

May 3, 1910, Cesarean section and ligation of uterine tubes.

Good recovery, but slight morbidity. Temperature 99 first day, 100 + second and third days, 101 to 102 fourth day, 99 ninth day, then normal. Pulse 100 first three days, then 120 to ninth day, 90 to 100 to twelfth day, then normal.

Child, male, well, 4½ pounds.

Case 14.—Mrs. S., primipara, dermoid cyst of right ovary impacted in cul-de-sac.

May, 1910, Cesarean section and removal of dermoid.

Good recovery, but slight morbidity second day. Temperature 98.4 first day, 100.6 second day, 99.2 third to sixth day, after then normal. Pulse 80 first day, 80 to 90 after. Child, female, well.

Case 15.—Mrs. R., primipara (patient of Dr. Gray). Excessive uterine retraction, slight pelvic contraction. Left occipitoposterior position; in labor thirty-six hours, cervix dilated manually but traction with forceps caused cervix to retract on blades.

Aug. 15, 1910, Cesarean section. After section cervix repaired.

Normal recovery. Temperature 99.5 third day, normal after third day. Pulse 116 second day. Child well.

Case 16.—Mrs. B., multipara (patient of Dr. Ditson). Excessive retraction before rupture of membranes, head in left iliac fossa, one elbow and one foot near internal os; in labor fifty-two hours; prolapse of cord after rupture of membranes.

Aug. 15, 1910, Cesarean section.

Normal recovery. Temperature 99.2 third day. Pulse 94 first day. Child, male, well.

In these two cases it will be noted that the operation occurred on the same day.

Case 17.—Mrs. D., primipara (patient of Dr. Agnes Ditson). Excessive uterine retraction, head projected over rim; in labor twenty-three hours; well-marked caput succedaneum, membranes unruptured, retraction not lessened by two hypodermic injections of morphin, ¼ grain.

Aug. 21, 1910, Cesarean section.

Good recovery, but slight morbidity. Temperature 100 to 101 first twelve days, then normal. Pulse 110 first two days, 100 to the twelfth day, then normal. Child, female, 6½ pounds, well.

Case 18.—Mrs. L., colored, primipara (patient of Dr. Spratlin). Contracted pelvis, head floating, cervix dilated, Walcher's position and forceps of no avail.

Aug. 27, 1910, Cesarean section and removal of two small fibroids.

Good recovery, but slight morbidity. Temperature 101.6 on eleventh day and from normal to 101 + until twenty-second day, after-pains and gas-pains first three days, then normal. Pulse 110 on eleventh day, 80 to 100 rest of time. Child gasped several times and died. Much mucus, not removed.

Report of Eleven Cases Without Removal of the Uterus Until After the Extraction of the Child

Two of these operations were performed by Dr. J. C. Hutchison and one each by Drs. Hugh Taylor and G. L. Monson, but as consultant, and because the technic here described was followed, I obtained permission to report them.

Chloroform was the anesthetic for the first four cases, ether for the last seven. The fetal asphyxia was much less in the ether cases.

The maternal mortality in these cases was *nil*. Maternal morbidity (temperature over 100.5) was present in 45 per cent., i. e., in five of the eleven mothers, but all got up well. The morbidity was due to stitch abscess in three of the cases, to appendicitis in one and no apparent cause in one. [We are unable, at present, to explain the frequency of stitch abscesses in Cesarean section.]

All the patients with morbidity except Nos. 19, 22 and 27 slept and felt well unless disturbed by gas-pains or after-pains.

The infant mortality from the Cesarean section was 18 per cent. (i. e., two out of the eleven died from asphyxia, but both were only seven month fetuses).

In the first four of these cases the abdominal incision was made through the left rectus muscle, in the last seven it was made through the right rectus.

Case 19.—Mrs. A., primipara, aged 19, 9 months pregnant (patient of Dr. Shollenberger).

Eclampsia, seven convulsions; head not engaged; internal os dilated one finger; two hypodermic injections of morphin gr. ¼.

May 22, 1911, Cesarean section.

After operation, six convulsions. Chloral gr. 30 and bromid gr. 30 of no value. Chloroform off and on for one hour, twice of some value. Hypodermic of morphin gr. ¼ of more value. Bleeding, 8 oz., and 500 c.c. of normal salt solution intravenously of great value. After the bleeding and salt solution, patient quiet for the first time and no more convulsions. Patient unconscious for three days.

Highest temperature 100.2, sixth day; stitch abscess in arm.

Child, male, 6 pounds, well.

Case 20.—Mrs. C., primipara, aged 19, nine months pregnant (patient of Dr. Ida Beers).

Eclampsia, three convulsions; head not engaged; internal os dilated one finger. Milk diet, drugs, sweats, etc., for three days before convulsions and temperature 99.4 for three days preceding convulsions. Morphin, gr. ¼, after first convulsion.

May 29, 1911, Cesarean section. Patient bled 8 ounces and given 500 c.c. of normal salt solution during operation.

Patient conscious one-half hour after the operation. No more convulsions. Good recovery, but temperature 102+ for three days. Stitch abscess in arm and abdomen.

Child, male, 8¼ pounds, well.

Case 21.—Mrs. S., primipara, aged 19, nine months pregnant (patient of Dr. Collyer).

Eclampsia; three convulsions, head not engaged; internal os effaced, external os two fingers. Two hypodermic injections of morphin gr. ¼, also chloroform.

June 1, 1911, Cesarean section. Patient bled 8 ounces and given 500 c.c. of normal salt solution during operation. Patient conscious four hours after operation. Fine recovery, highest temperature 100, third day.

Child, male, 8¼ pounds, well.

These three eclamptic patients were blonds, under 20 years of age, primiparæ, and all the children were males and born within ten days.

Case 22.—Mrs. H., primipara, in labor thirty hours. Cervix only four fingers, no progress last six hours, manual dilatation of no avail, head not engaged, forceps applied tentatively, but no descent; excessive uterine retraction, even under anesthetic.

June 14, 1911. Cesarean section; extraction of head possible only after getting hand below it and then delivery caused a loud report due to the excessive retraction of lower segment around head.

Good recovery, pulse 130 to 150 after operation and above 100 until after the seventh day. Temperature, 101 on fifth day and several times 100.6. Slight phlebitis of right leg and stitch abscess.

Abdominal incision only 2½ inches a month after operation. Child, female, easily resuscitated and well since.

Case 23.—Mrs. W., primipara, seven months pregnant (patient of Dr. Hugh Taylor).

Appendicitis for several days. Temperature 101 to 103.5 for three days. Internal os effaced and external os one finger for over two days.

July 12, 1911, at 2 a. m., Cesarean section. Operation performed by Dr. Hugh Taylor, assisted by myself. Abdominal incision made through right rectus muscle; after Cesarean section uterus pressed to the left, walled off with gauze and then appendix removed.

Good recovery. Temperature 102.4 to 103.8 and pulse about 110 first three days. Temperature 101 tenth day because of stitch abscess. Pulse below 90 after fourth day.

Child, 7 months or less, could not be resuscitated.

Case 24.—Mrs. C. (patient of Dr. H. C. Brown), secundipara but first was an 8-month child and weighed only 4½ pounds. Pelvic deformity at left sacro-iliac joint. In labor twenty-four hours, complete dilatation of cervix, but head not engaged, forceps tentatively used, of no value.

July 20, 1911, Cesarean section. Incision in right rectus; pulled head out first, uterine incision so low that it nicked the bladder at its upper attachment to the uterus.

Pulse 68 after operation.

Fine recovery; highest temperature 100 first day; highest pulse 88.

Child, male, 7½ pounds, easily resuscitated, well since.

Case 25.—Mrs. S. (patient of Dr. J. C. Hutchison), primipara, breech presentation, twenty-two hours of hard labor, cervix only two fingers after manual dilatation from one finger, excessive retraction beginning.

Sept. 3, 1911 (2:20 a. m.), Cesarean section. Operation performed by Dr. Hutchison assisted by Drs. Monson and Burns.

Fine recovery; highest temperature 100.4 first day, normal most of time; highest pulse 88.

Child, male, 8½ pounds, easily resuscitated and well since.

Case 26.—Mrs. G. (patient of Dr. G. L. Monson), tertipara; previous labors instrumental and children still-born. In labor seventy-two hours.

Aug. 6, 1911 (12:30 p. m.), Cesarean section performed by Dr. Monson assisted by myself and others.

Good recovery. Highest temperature 100.2 first day; highest pulse 170 first day, 134 second and 100 third.

Child, female, 8 pounds, easily resuscitated and well since.

Case 27.—Mrs. S. (patient of Dr. Hutchison), tertipara. Two previous labors, breech presentations and delivery of head very difficult; children still-born. Cancer of left breast; gonococci in vaginal discharge; acute dilatation of heart one week before labor. In labor thirty-six hours, breech presentation right sacroposterior, cervix dilated two fingers. Pulse 120.

July 30, 1911, Cesarean section performed at County Hospital by Dr. J. C. Hutchison, assisted by Drs. Monson and Burns. Patient had pneumonia and stitch abscess but ultimate recovery good. Highest temperature 104, sixth day; highest pulse 136 sixth day, respiration 36 to 40 first twelve days. Patient well since fourteenth day.

Child, female, easily resuscitated and well since.

CASE 28.—Mrs. B. (patient of Dr. J. T. Elliott), primipara, polyhydramnios, over seven months pregnant, shoulder presentation, excessive uterine retraction without contractions until hand introduced into cervix, could not pass hand into uterus under anesthesia, fetal heart-beat good.

Sept. 21, 1911, Cesarean section. Fine recovery; highest temperature 100.2 fourth day, most of time normal. Pulse 100 first three days.

Child, male, could not be resuscitated.

CASE 29.—Mrs. C. (patient of Dr. Rice), secundipara, First labor breech at eight months, child died in three hours. Right ovary and left tube removed and uterus suspended subsequently. Present labor: third position of shoulder presentation, cervix nearly dilated, cord, arm and shoulder in vagina, excessive uterine retraction. Oct. 10, 1911 (6:06 p.m.), Cesarean section. Good recovery; highest temperature 102.2 fourth day and 101.2 sixth day. Pulse 118 fourth day.

Child, male, 5¼ pounds, easily resuscitated and well since.

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ABSTRACT OF DISCUSSION

DR. JOHN OSBORN POLAK, Brooklyn: The question of Cesarean section has come into great prominence of late because of the work of Reynolds and others who have shown that there is a large class of cases that are better handled by Cesarean section than by "high forceps operations and versions," as Dr. Burns has mentioned. There is one point in considering the indications for Cesarean section which must be taken into account. That is, we do Cesarean section in the interest of the child. I take exception to Dr. Burns' statement when he referred to the operation ablatio placentæ. There the mortality of the child is extremely great and the chances from Cesarean section after the placenta has been delivered are relatively small. In central placentæ, which is the only one which does not give the sign of hemorrhage, with rigid cervix, I have seen two cases that in my opinion justified Cesarean section. Both patients were primipara; both were central placenta prævia. In the one I did the old-fashioned bipolar version and lost the child; in the second, Cesarean section, with a very easy delivery and both mother and child recovered. In the treatment of ablatio placentæ I cannot conceive of Cesarean section having any place, because of the very high fetal mortality attendant on it. In eclampsia Cesarean section is a debatable question. Personally, I have seen enough eclamptics to believe Cesarean section is not indicated. The chances of the child are poor in the presence of toxemia while those of the mother are very small because of toxemia. My own experience covers 67 Cesarean sections with no maternal mortality and one fetal death. The technic is a counterpart of that of Dr. Burns. Where it can be done the uterus is not eventrated. By pressing the uterus well up against the abdominal incision the Cesarean section can be made and the child eventrated through the small incision. With the protection of the edges of the wound there is no soiling of the peritoneal cavity. I do not hold the broad ligaments because the hemorrhage almost immediately ceases. Neither do I put a tenaculum in the upper end of the wound; I put the first suture in the upper angle and hold that. One other point is the importance of light anesthesia, combining oxygen with the anesthetic and never beginning the anesthesia until the patient is on the table and the final preparation is being made. I have never had to resuscitate a single baby. When the patient was anesthetized in the reception room every baby had to be resuscitated.

DR. T. MITCHELL BURNS, Denver: I have nothing to say different from what has already been said with reference to indications. I only refer to ablatio placentæ as being an indication for Cesarean section in exceptional cases and so of placenta prævia. In reference to the mortality of mother and child in eclampsia, I believe that if Cesarean section is performed early enough, as many babies would be saved in eclampsia as in other instances in which Cesarean section is performed.

THE TRAINING-CAMP METHOD IN THE TREATMENT OF THE FUNCTIONAL NEUROSES *

THOMAS J. ORBISON, M.D.
LOS ANGELES

The training-camp method is an evolutionary result of clinical experience. The best results in the rational treatment of the functional neuroses are obtained by the application of some form of work at a selected stage of the treatment.

Various forms of work have been tried, ranging from brass beating and pottery to gardening and farming. It is unnecessary to review the arguments in favor of work as a rational therapeutic agent in these cases; the question is, what is the best form of work. In the first place, all these patients do best under a regime which is free from personal responsibility. The best method known by which endurance, stamina, powers of resistance and physical well-being are obtained (under ordinary circumstances) is that which is imposed on professional athletes and especially on pugilists and wrestlers in training for their respective contests.

Some years ago I began to apply these methods, in a modified and suitable form, to various types of the functional neuroses and psychoses, and tried to evolve from the findings a rational system or method which would be sufficiently concrete to be useful and sufficiently pliable to be widely applicable. It must be suitable for women as well as men, and it must be so adaptable that it will admit of the exhibition of any other desired form of therapy. To be of actual value, it must be a method which will specifically increase the tone and resistance of the higher psychic and lower nerve-centers as well as the tone of the muscular system. It must be applicable to correct the asthenic circulatory conditions with low blood-pressure with which we meet in so many neurasthenics and psychasthenics. It must be a distinct addition as a psychotherapeutic measure in the treatment of the phobias, feelings of inadequacy, hypersensitiveness and subjective asthenia of the psychasthenics. It should enable the physician to apply reeducation and intensive psychotherapy to the curable dementia præcox cases and aid us in substituting the normal judgments and emotions for their abnormal ones and renew the psychic stereognosis. In hysteria it should help to overcome the dissociations and renew the normal associations. In short, it should specifically aid in bringing about the normal interrelation between the mental and physical by inducing in each its normal tone.

In a series of thirty cases of various types of the functional neuroses treated along certain definite lines and covering a period of more than ten years, the results have been so uniformly good that I desire to make a preliminary report on the method which shall, for convenience, be called the training-camp method.

Of the thirty patients fifteen were males and fifteen females. The disease forms represented are neurasthenia, psychasthenia, hysteria, dementia præcox, psychasthenia with melancholia and recurrent melancholia (see synopsis).

As to the seven cases of dementia præcox, three were diagnosed by the late Dr. Wharton Sinkler of Philadelphia, being referred to me by him, one patient has been under the care of Dr. Weir Mitchell, the other two had, likewise, been under the care of eastern neurologists.

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

(I emphasize the preceding because the diagnosis of dementia præcox is liable to be misused and its confirmation is therefore the more satisfactory.)

In a later communication other cases will be reported at length. The present paper will be devoted to typical cases of neurasthenia and psychasthenia.

Case 1.—*History.*—The patient was an unmarried woman, aged 27. The case was diagnosed as neurasthenia. No neuropathic taint was discovered in any of the immediate family or near relatives. The patient had never been robust. Six years before the present illness she had had a similar one (at that time she was under the care of a nurse for six months). She never fully recovered her normal health and had been semi-invalid since. During July her condition became very grave because of the inability to retain food (at times she could not retain even small quantities of water). She was referred to me in August, 1909, when she had been ill for five months.

Present Illness.—Her symptoms were those of progressive fatigue and progressive emaciation. The emaciation had become alarming and her fatigue so pronounced that she could not turn over in bed, brush her own teeth or hold her arm fully extended. A very unpleasant symptom was an excessive, generalized tenderness most pronounced along the spine (like that described classically by Weir Mitchell). The intestinal canal was atonic; micturition scanty.

Physical Examination.—The emaciation was extreme. Height 5 feet 7 inches; weight was judged to be between 50 and 60 pounds (by lifting her). The skin was of a muddy color and there seemed to be little or no subcutaneous fat; this was most marked over the thorax. The hands and feet were claw-like; the abdomen was concave and board-like. There was a peculiar musty odor prevalent about the patient. The tongue was coated and the mouth dry; the skin was very sensitive and the spine tender. All the reflexes were exaggerated. The voice was weak and low-pitched. The mentality was clear and there were no phobias. At times the patient wept because of weakness and a feeling of discomfort but no true hysterical symptoms were elicited. The heart sounds were weak and their rate rapid on any exertion but no organic lesion was noted. The lungs were clear but the respiration was very shallow. Vomiting and gastralgia were distressing symptoms; constipation obstinate.

Treatment and Course.—Inasmuch as this patient had of necessity been confined absolutely to bed and a rigid rest treatment, it was imperative to continue this with some rearrangement. In order to have her ingest the proper amount of food various psychotherapeutic measures had to be invoked, and within two weeks she was taking (for her) enormous amounts of food. The spinal tenderness was overcome by firm, steady, deeply directed pressure by the balls of the thumbs and fingers exerted on both sides of the spine at the same time and making traction in opposite directions as though attempting to rub out a wrinkle in the skin. I found that this sort of massage could be tolerated when no other could be, and the result was relief of the nervousness as well as the spinal tenderness. In the early weeks I relied on specific written directions to nurse and patient, which imposed absolute rest of mind and body and were accompanied by persuasion and encouragement. Forced feeding and massage could then be given at regular intervals. Graduated doses of the fluidextract of cascara were given three times daily for the intestinal atony. A specially directed combination of ferrous carbonate and arsenic was administered three times a day and increased gradually. Progress began early and continued favorably (with one change of nurses). In six weeks the patient sat up for ten minutes; in another week she could take a few steps and was weighed for the first time. The scales registered 76 pounds. After that she gained 1 pound a week steadily for a number of weeks (when dismissed she weighed 102 pounds and has increased it since then). Her muscular condition was improved by resisting exercises, while in bed, so as to prepare her for future work. After she was able to be out of bed the exercises were increased until she was fully prepared for the hard work that was to end her course of treatment. Up to this time she had gone through the rigid rest treatment, the modified rest treatment and the beginning combined rest-and-work treatment.

Her day was mapped out anew and she was placed on the training-camp routine. In her case this began with a series of stiff setting-up exercises at 7 a. m., followed by a cold salt rub. Then came a generous breakfast in bed. At 9:30 a. m. she and her trainer went out for road work for an hour; this consisted of brisk walking and some running. When she came in she was given a thorough, hardening rub-down and after it rested one hour in bed. At this time she was given two raw eggs in a glass of orange-juice—well beaten and shaken up with cracked ice.

After lunch the patient could read or sew until 2:30 p. m., when she put on her gymnasium suit and was led through an hour of hard work, beginning with skipping exercises, then crawling about on the floor, then medicine ball and last of all quoits. Then came a shower bath and another vigorous rub-down. This was followed by a rest period. When necessary, she was given a sweat bath to freshen the skin.

These constituted the main features of this stage of her treatment and lasted just about eight weeks, though she kept it up in a modified form for some time after. The result of her treatment was a gain of over 25 pounds in weight; she could walk several miles at a stretch. She began and has continued to live a normal, busy life.

I have reported this case at length because it was one of the severest types of neurasthenia and because it demonstrates the efficacy of the training-camp method to round out the preliminary treatment of such cases. (I have found it almost a specific in the cases of neurasthenia in which I have tried it.)

This case bears ample testimony to the imperative necessity of the so-called rest cure as a preliminary stage in a selected class of cases of neurasthenia and the almost startling benefits that follow it. But it goes a step further, most of these neurasthenics have probably never been in such excellent physical and mental condition as they are at the close of the training-camp stage of their treatment. The same holds true to a great extent in the cases of psychasthenia and hysteria in which I have imposed it. In these cases I consider that the benefits of the training-camp method are due in large measure to the almost military discipline, the regularity of the routine and the opportunities for applying lasting psychotherapeutic measures (as, for example, persuasion and reeducation, the substitution of a sense of adequacy for that of inadequacy, the overcoming distressing phobias, the counter-acting an excessive scrupulosity — in short, the correcting of psychasthenic dominants).

As an example of the training-camp method applied to psychasthenia I would cite the following obstinate case:

Case 2.—*History.*—The patient was a married man, a banker, aged 36. His father was subject to fits of depression; he died at 74 of endocarditis following rheumatic fever. A paternal aunt committed suicide. The patient has three healthy children. As a boy and man he has had obsessions of fear. It is probable that they began with a story that was told him by one of the servants one night when he was a little boy. After this he was possessed by fear so that he got out of bed and sat on the stairs. He could recall vividly his sensations and said he sat rigid and staring into the darkness for hours before he was found and put to bed. He said he had had a number of phobias all his life but that he had until now been quite well able to control them. For instance, he could never stand beside a body of water without a desire to jump into it; going to a height caused an overpowering impulse in him to jump down from it. But these had now been augmented by the fear of being in a crowded house—unless he could have a seat near an exit—the fear of going across a bridge, the fear that he would be unable to pay for the things he buys (as shoes and other wearing apparel).

Present Illness.—His condition was one of intense psychasthenia with its attendant feeling of inadequacy, lack of the power of concentration, self-reproach, inability to continue a business life, and the fears above mentioned. This aggravated condition was the result of the panic of 1907. Toward its end he became possessed by unnecessary fears for the ability of his bank to retain its integrity. He had lost 30 pounds in weight and had no appetite; his sleep was unsatisfactory and restless. At times he forgot what he had said or done a short time before; for instance, before coming under my care he visited my training-camp with a friend and seemed much interested in it but forgot that he had been there and what he did there. His expression was depressed and anxious. Symptoms of gastro-intestinal atony were abundant. His muscular condition was flabby; tendon reflexes exaggerated; indicanuria marked. His mental symptoms were hypochrondriac and melancholic.

Treatment and Course.—He was sent at once to a training-camp in the foot hills as he did not need a preliminary rest treatment. He received three months' rigid training. During this period the internal administration of such nerve tonics as valerian, hyoscyamus, camphor and asafetida, with cascara for the intestine atony, was deemed advisable. At the end of that time he returned home and later resumed an active business life. The latest reports from him were very satisfactory.

In this case the method was applied as follows: The site of this training-camp was a cottage in the foot hills near Pasadena. Here the patient and his trainer lived practically an outdoor life. The trainer was a professional trainer of pugilists and athletic teams. The food was simple, nutritious and well cooked. There was an open space at the rear of the cottage where boxing, wrestling, and medicine ball could be had regularly every afternoon. At 9:30 in the mornings his trainer took him out for an hour of road work. The work was easy at first and gradually increased. After both work periods he was given a hardening rub-down (after a shower) and then was put to bed for a rest period of an hour. His whole day was arranged for him and all that was expected of him was to obey instructions.

The motto of every training camp is "obedience." Every necessary psychotherapeutic measure is tried according to the case; seldom has it been necessary to attempt any of the extraordinary methods of psychoanalysis in the training-camp cases (in one of my cases it had been tried by a physician with disastrous results and in two others by an exponent of the Emmanuel movement with no effect, owing to faulty diagnosis).

CONCLUSIONS

I have found this method to be a specific in the true neurasthenias — combined with the other forms of rational therapeutics. Final results have been more gratifying in the cases in which it has been enforced than was believed possible, especially was this true of the cases of dementia præcox.

Additional experience has led me to try it in a variety of functional disorders characterized by atonicity either psychic or physical—e. g., in convalescence from the various infections and migraine.

My experience includes thirty cases in all. Nine patients were suffering from neurasthenia; four of these were men between the ages of 27 and 43, and five, women between 23 and 48. In this series the treatment resulted in eight cures and one cure with recurrence. In a series of ten patients suffering with psychasthenia, of which six were women between the ages of 35 and 52 and four men (one with dipsomania) between 36 and 50, six were permanently cured; two had a recurrence and two patients were improved. In a third group of dementia præcox, consisting of one woman, aged 25, and six men between 22 and 35, five patients were permanently cured; in two the outcome is as yet unknown. Two women of the hysterical type, both aged 25, were cured. Two patients, one a woman aged 23, suffering from psychasthenia with melancholia, and the other, aged 69, with recurrent melancholia, were cured.

Theoretically the method seemed capable of scientific application. Practical results of such application not only warrant its further use, but lead me to look on it as a powerful therapeutic aid that should give as good, if not better, results in the hands of others, if used with intelligent enthusiasm.

401 Auditorium Building.

ABSTRACT OF DISCUSSION

Dr. C. R. Woodson, St. Joseph, Mo.: I think Dr. Orbison in his detail of cases has merged neurasthenia, simple melancholia and pronounced melancholia. In plain English, neurasthenia is a tired nervous system, occurs oftener in persons who have loaded beyond their carrying capacity, and if that be true, the treatment that should necessarily follow would be rest. I am a strong believer in individualizing, and for that reason lay down no general prescription for the treatment of any disease. The individual who has the power of suggestion, or who can entertain, either as a physician or nurse, is fortunate. The individual who suffers from melancholia lacks initiative. He is apprehensive; he is suspicious; he realizes that his mind is affected; but still he has no delusions; the only manifestations that he has along these lines are along the lines that I have spoken of. This individual can be diverted by the diplomatic nurse or by the physician who can entertain. The one who imagines a certain thing, when he knows it is not so, or the one who fears that he may do a certain thing, and cannot go near a body of water or cannot do this and that, is suffering from a phobia. To produce sleep without medicines, to increase body weight, to insist on long hours of sleep, are the essentials in treatment of neurasthenia and melancholia.

Dr. C. L. Case, Oakland, Cal.: While I was in San Diego County in general practice I had a patient for whom I did not know what to do. He got so he did not take any interest in anything. I said to his father, "Get the boy interested in something; if you can't get him to do anything else, play cards with him." The boy played cards so long that he did get interested in that, and from that became interested in other things and got well.

Dr. Thomas J. Orbison, Los Angeles, Cal.: I hold that if a patient is free from his symptoms for a year or more he may be considered cured. There is none among these cases that may not recur, for the same causes will induce a recurrence; but all the patients whom I have put down here as cured have remained cured. When there has been a recurrence, I have marked them "cured, with a recurrence," or "unimproved" and so on. So the patients are not simply cured for a little while and then lost track of.

As to the diagnosis, I divide certain of them into neurasthenics and psychasthenics. We all know the difference. The psychasthenic may be perfectly strong physically and yet be possessed by phobias, and has many mental symptoms that look much like melancholia. I found that almost all of my psychasthenics had hereditary taints, whereas in a good many of the neurasthenics I could not find a straight hereditary influence. It is most difficult to get these people free from their phobias, and in some of them I have been unable to do so entirely. They seem to be free, and in many cases I know that they are free from a number of them. For instance, one man, who was afraid to pass a certain building, was cured of his phobia. Another man was afraid to cross a bridge in his automobile. I have seen him with his face in his hand in abject fear. He recovered; so did many others. He has not rid himself of the fear of being in a high place. I don't believe that is a psychasthenic symptom entirely, as many of us have known many normal people who cannot go into a high place unless they have something to hang to.

As regards the treatment of the women, I have found it necessary to educate the trainer first, because you will find it difficult to get competent women trainers for your patients; but here and there you can pick up one who will carry out your instructions. I find that when a woman will do that work, she will do it as well as a man. You make your point clear to the woman that you are going to have as your trainer, and then lay down rules in writing to be carried out.

CHLOROFORM FATALITIES: A REPORT OF CASES

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The prevalent use of chloroform as the anesthetic of choice in many districts of the United States and its use throughout this country almost to the exclusion of ether, and this in spite of the increasing evidence and more or less general knowledge of its grave dangers, induces me to report the following cases.

I hesitate to report them only because I am unable to give pathologic data concerning them. The clinical courses, however, of Cases 1, 2 and 3 are so typically those recently attributed to chloroform as the causative agent in producing acute degenerative changes in the liver and an acid intoxication, that I think little doubt can be entertained of the diagnosis. The fact that such changes have been induced experimentally in animals by chloroform, and that clinically nothing else seems to explain the condition so aptly, has led, I think, to the general acceptance of the belief that this train of symptoms is the sequela of an anesthetic in those peculiarly susceptible, and that it is very much more frequent after chloroform than after ether.

Notwithstanding the comparative rarity of these cases, those which are herein reported have all come within my experience or knowledge as having occurred in this city during the past fifteen months. Of the sudden deaths occurring during the administration, one of them was that of my own patient and the others of patients of my colleagues. None of them has been reported.

I am entitled to a word of explanation that I should have continued to run the risk of chloroform even after experience of the first case. I have, as a matter of fact, since then used ether almost altogether, but on some occasions the anesthetist available has had no experience with the administration of ether and there has been no choice in the matter. In Cases 3 and 4, my anesthetist was a nurse, inexperienced in the administration of ether, but of ample experience as anesthetist in a hospital in the United States where chloroform is, or was a few years ago, used in routine.

Case 1.—Mrs. H., aged 24, a native, a nullipara, of the better class, well nourished, and with a history of previous good health, was operated on for appendicitis, Wednesday morning, May 11, 1910.

The attack had begun several days before but the earlier symptoms had abated, the trouble had become localized, but with a distinctly palpable mass and a persistent and increasing afternoon fever. The operation was done in the patient's home but under favorable conditions. The general condition of the patient was excellent, and the urine normal. A distended and unruptured appendix, showing on the surface small areas of beginning gangrene, was removed. The surrounding tissues, cecum, mesentery and omentum showed considerable edematous infiltration; there was no pus, and the pelvis was clear; the wound was closed without drainage.

The amount of chloroform used was about 100 gm. The patient stood the operation well. On the following morning there was little pain or distention; there was returning appetite, and urine had been voided twice since the operation; the temperature did not go above 100 or the pulse above 90. During the night, however, the patient was not quite so well; there was some mental depression and uneasiness. On Friday morning, the abdominal condition was unaltered; there was no pain nor vomiting and but slight distention; no indications whatsoever of a peritoneal infection; the temperature about normal and the pulse-rate less than 100. The hunger was gone, however; there was slight jaundice which deepened rapidly during the day; the uneasiness gave place to a marked restlessness and later active delirium, with periods of stupor; there was nausea but no vomiting until evening, when greenish matter containing brown shreds and later the black coffee-ground vomitus appeared. The pupils became widely dilated. Calomel had been begun early in the morning and later various enemata and croton oil, but all without result. If any urine was passed during the day, it was very scant and lost in the bed; there was no edema of the skin, which remained dry in spite of hot packs.

The patient grew steadily worse, the pulse more rapid and feeble; the temperature remained slightly above normal. Deepening coma preceded death which occurred at 5 a. m. Saturday morning, sixty-eight hours after the operation and about thirty-six hours after the first indefinite symptoms had been noted.

Case 2.—Mrs. L., an English woman, aged 26, in good health, pregnant for the first time and in the third month of pregnancy, was curetted by her physician for an incomplete abortion. The operation was done on Tuesday morning; no packing was put in the uterus. As the hemorrhage continued, chloroform was again given on Wednesday morning and the uterus packed with some strips of iodoform gauze.

I first saw the patient on Friday, about seventy-two hours after the first operation. The history was given that the previous day the patient had passed no urine and that about 2 ounces had been drawn by catheter, very dark in color, containing albumin and red blood-cells; no urine had been passed since then and but a few drops were obtainable by catheter. On Thursday she had become very restless, and during the night somewhat irrational; had vomited repeatedly a greenish fluid containing dark brown shreds; morphin had been given two or three times to quiet her.

The patient was at this time very restless, throwing herself about the bed, talking irrationally and complaining of thirst; her pulse was 110, of increased tension, and the temperature was normal. The skin was dry and distinctly jaundiced, though at no time did the jaundice become so marked as in Cases 1 and 3; there was no edema at this time. There was no dilatation of the pupil nor was this noted at any time; the patient had had, however, and continued to have, frequent doses of morphin. There was violent retching and frequent vomiting of small quantities of material as described above. Abdominal examination revealed nothing abnormal.

A diagnosis of chloroform poisoning was made, though the possibility of the symptoms being due to iodoform was kept in mind. The packing was removed and a douche given. Enemata had not been effective, so 4 drops of croton oil were given and as the vomiting was so incessant, this was repeated at intervals until the bowels moved. In the evening the patient had several dark, fluid and offensive stools.

An attempt was made to give alkalies by the mouth and by the rectum. Hot packs were given but the skin remained dry. The odor of acetone was noted on the breath.

On Saturday morning she was very much worse; entirely irrational, delirious and stupid in turn; the pulse was smaller and weaker, 120 to 140, the temperature about normal. There was slight edema noted over the tibiæ. No urine had been secreted. The patient was very hoarse, almost aphonic, and there was subcutaneous emphysema of the face and neck, supposedly due to a rupture in the upper respiratory passages caused by the violent struggles or vomiting. Salt solution was given intravenously.

The patient died in coma at 3:30 p. m., 101 hours after her first anesthetic and about fifty-four hours after the first unfavorable symptoms were noted.

Case 3.—Mrs. T., aged 29, a native, primipara, of the middle class, well nourished, and with a history of good health previous to her pregnancy, was operated on Saturday morning, Aug. 5, 1911, for a ruptured ectopic pregnancy in the third month.

The abdomen was distended and, to the level of the umbilicus, filled with clotted blood. Many intrapelvic adhesions made the isolation and removal of the tube a matter of some difficulty and the woman was under chloroform for about two hours. The abdomen was irrigated with salt solution, left filled with the same and the wound closed without drainage. Salt solution was instilled by rectum following the operation.

The condition during the following twenty-four hours was good; no vomiting; pulse 104 to 114; temperature 99.6 F. On Sunday, however, the patient vomited a few times, greenish fluid containing dark brown particles; the pulse was 114 to 126; the temperature 99 to 100.6; otherwise there were no unfavorable symptoms.

During the third day, Monday, the vomiting, though not severe, was repeated several times; the pulse-rate was slower and the temperature not above 99.6; the bowels moved slightly following an injection of salt solution; urine was being passed in sufficient quantities; there was nothing to indicate intra-abdominal infection. In the evening, the patient was depressed and uneasy; said she was "going to die."

On Tuesday morning the temperature was normal and the pulse slower; there was slight jaundice; the uneasiness was succeeded, during the day, by extreme restlessness, so that constant watchfulness was necessary to prevent the patient getting out of bed; she became entirely irrational; there was some retching though not excessive; vomiting had ceased; the patient would take very little by mouth; thirst did not seem intense; the pupils became very widely dilated, and the jaundice deepened rapidly in hue.

The urine continued to be passed in fair quantities and contained bile and albumin; unfortunately no examination was made for acetone bodies. Calomel had been given early in the morning without result, also enemata. In the evening 4 drops of croton oil were given through a catheter passed through the nose, as the patient was refusing everything by mouth. This proved effective, several loose, dark stools resulting. Urine was being passed involuntarily. The temperature was normal; the pulse 100 to 110.

During Wednesday, the fifth day after operation, the condition continued about the same, periods of stupor alternating with the delirium; the jaundice became quite deep; the dilated pupils persisted; urine and stools were involuntary; there was no vomiting and the patient took a fair amount of water; some bile-stained serum escaped from the lower end of the wound.

On Thursday, after a quieter night, the patient was rational; the pupils smaller and active; vomiting, which had not occurred since Tuesday, was again provoked by food and water.

On Friday the patient was very much better, hungry and in good spirits, complaining only of some rectal tenesmus, which subsided on the insertion of an opium suppository; there was no more vomiting; the jaundice was less marked.

From this time the recovery of the patient was uneventful, and she was discharged August 20 with only a slight jaundice persisting.

It is quite difficult in any of these cases to fix exactly the time of onset of the unfavorable symptoms; in all of them it seems that the first symptom manifested was a mental depression and uneasiness. In Case 1 this was noted about thirty-two hours after operation; in Case 2, in less than forty-eight hours after the first operation; and in Case 3, disregarding the vomiting which occurred on the second day, not until fifty-eight hours after operation. Jaundice was noted early in all of them. It is to be noted, too, that in Case 3, which went on to recovery though the mental disturbance was quite as severe and the jaundice even more marked, the patient continued to secrete urine in fair quantities, while in Cases 1 and 2 anuria occurred shortly after the onset of the symptoms.

It is recognized that pregnant women are the most liable to these degenerative changes. Patients 1 and 2 were both near the close of the third month of pregnancy.

Case 4.—Manuel C., Mexican laborer, aged 24, of robust physique, was sent to the hospital, October 22, 1910, for a beginning cellulitis of the foot, resulting from a puncturing wound. On the afternoon of same day chloroform was given that incision might be made and the wound cleaned.

During the scrubbing of the foot and before anesthesia was complete, the patient stopped breathing, but the respirations were promptly resumed and the condition was apparently normal; the anesthetic was continued. Before the incision was completed, the anesthetist advised me that the respirations had again ceased. This time no efforts at resuscitation were of avail. Inversion of the patient, artificial respiration with oxygen administration, did not cause even a spasmodic effort toward their reestablishment. The respiratory failure distinctly preceded cessation of the heart action.

Case 5.—J. G., a Mexican mechanic, aged 28, of apparent good health, went to the office of Dr. P. for a cellulitis of the arm. A physician from an adjoining office was called to assist in operating. There was no discoverable heart trouble or contra-indication to an anesthetic.

Following some struggling efforts which the patient made during the early stages of anesthesia, the respirations stopped and all efforts to reestablish them failed.

The physician who gave the chloroform told me that he thought the cessation of the heart action occurred almost simultaneously with the failure of respiration, but of this he was not positive.

An autopsy performed by the police authorities is said to have revealed slight atheromatous changes in the heart and arteries.

Case 6.—John M., a Swiss, aged 26, was admitted to the hospital April 24 under service of Dr. W. with extensive cellulitis of face and neck. The patient had difficulty in swallowing and some obstructive dyspnea, but was not cyanosed. The patient was operated on shortly after admission, as his condition was considered quite grave.

While incision was being made, the respirations very suddenly ceased. Because of the possibility of an obstructive edema, a tracheotomy was quickly done and every effort made to reestablish respirations, but all efforts were entirely unsuccessful.

In these cases of sudden death during the administration of chloroform, it will be noted that death occurred in all of them during the early stages of anesthesia. Cessation of respiration was the first symptom noted in each case.

As to the increased danger from an anesthetic in this altitude—about 7,200 feet—there is varying opinion. It seems to me that with the great majority of patients it makes no difference, but in those who have suffered from prolonged wasting diseases or whose ailment is in itself aggravated by the altitude, there is added risk.

Also the anesthetists tell me that it is more difficult here to secure complete anesthesia with ether given by the drop method than when it is so administered in a lower altitude and consequent heavier atmosphere.

Calle de Gante 1.

The Knowledge of the Physician.—The physician is a servant, not a teacher of Nature. He must know what his predecessors have known, if he does not wish to deceive both himself and others.—Hippocrates.

AN IDEAL ABDOMINAL INCISION FOR PELVIC SURGERY IN THE FEMALE

CHARLES GARDNER CHILD, Jr., M.D.
NEW YORK

In approaching the pelvic organs in the female for the purpose of surgical treatment, the incision used should possess numerous features advantageous alike to both operator and patient.

To overcome two great objections to the median-line incision—shock and postoperative hernia—the vaginal incision was devised and extensively practiced. This incision, while greatly minimizing the amount of shock and practically abolishing postoperative hernia, had the additional advantage of affording more direct access to the field of operation. It enjoyed well-deserved popularity, but that it had its limitations was soon evident. At the Second International Congress for Gynecology and Obstetrics, held at Geneva in 1896, Küstner presented a new method of opening the abdomen in place of the median-line incision. The cut was made in the region of the suprapubic hair in a transverse direction through the skin and subcuticular tissue; the fascia and peritoneum being incised vertically in the median line. He advocated this modification because of the objection on the part of the laity to the deformity caused by an ugly median-line scar, and recommended it for simple cases, such as the separation of adhesions and ventral fixation.

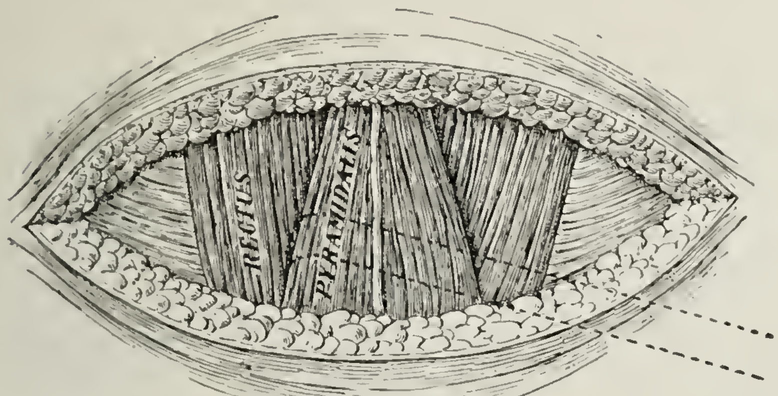

Fig. 1.—The transverse incision, with the pyramidales and the abdominal recti exposed.

At the same congress, Rapin presented his *incision esthétique*, which was identical in all respects with the one described by Küstner. In 1900, four years later, Pfannenstiel modified these by incising the fascia likewise in a transverse direction, separating it above and below from the underlying muscles, entering the peritoneal cavity by a vertical incision through the linea alba and peritoneum. Aside from the cosmetic standpoint, his modification was of great importance for it was designed to abolish that "bugbear" of all abdominal surgeons—postoperative hernia.

The principal difference between the Küstner-Rapin incision and that of Pfannenstiel is that in the latter the fascia, being incised transversely, is left completely intact over the vertical incision in the linea alba. By this means the unfavorable tension exerted by the transverse and oblique muscles of the abdomen on the fascial scar in the median-line incision is disposed of. Pfannenstiel hoped that this incision would afford absolute protection from postoperative hernia, and I believe I do not exaggerate when I say that his dream has been fully realized. To him belongs the honor of being the first to plan, execute and publish the transverse fascial incision which had been independently practiced, however, by both Stimson of New York, and Hartman of Paris. The Pfannenstiel incision overcame many of the objections to both the median-line and vaginal incisions, and its many advantages were so apparent that it met with immediate and almost universal favor. An extensive trial of this incision has led me to make certain modifications and changes in his technic, designed to meet the requirements of the average case better, and it is because of these radical departures and because the incision I have evolved seems to me so near perfection that I have ventured to call it "ideal."

TECHNIC

With the patient in the Trendelenburg position, a transverse incision 2 to 4 inches in length is made in the edge of the suprapubic hair, or in the transverse skin fold usually found just above it. A straight cut is used rather than a semilunar one, because experience has shown that it severs fewer blood-vessels, giving rise to less hemorrhage and causing less interference with the subsequent nutrition of the flaps. It is seldom necessary to ligate more than two or three vessels in the wound, and often no ligatures at all are needed, thus greatly reducing the amount of foreign material introduced into the wound, all of which has an important bearing on wound-union.

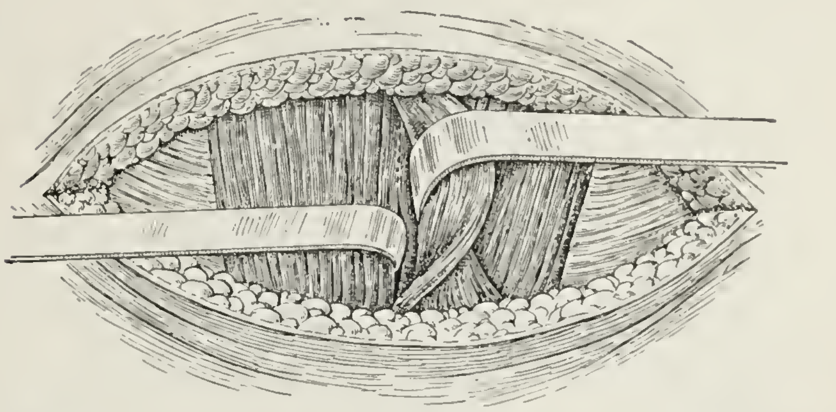

Fig. 2.—The pyramidalis drawn aside and the recti being separated.

The wound is now stretched with the fingers, thereby slightly enlarging it and better exposing the underlying fascia. After operation, contraction back to the original size of the cut occurs. The fascia is next incised in the same direction and to the same extent, 1 to 2 inches above the symphysis pubis. The extent of the fascial incision to either side should be limited by the outer borders of the recti muscles, and if a larger opening is required, the incision should be curved upward, or follow the outer borders of the rectal sheaths directly upward, to avoid injury to the external rings. Dissecting the fascial flaps free from the underlying muscles, which can readily be done by blunt dissection with the finger (from the linea alba they must be cut with the scissors), discloses the two recti overlapped by the pyramidales. The right pyramidalis is separated at its outer edge from the underlying rectus but not from the linea alba, and retracted to the middle line. Under this the rectus is separated from the middle line and retracted outward (Figs. 1 and 2).

The peritoneum now lies exposed, and the abdominal cavity is opened by a vertical incision. The lower flap is retracted by a self-retaining retractor, preferably that of Doyen, and the upper one by a small movable abdominal retractor (Fig. 3).

These are the only permanent retractors required. Of great assistance during the remainder of the operation are two Pryor trowels, which make possible perfect retraction in what would otherwise be inaccessible portions of the operative field, and which can be made to illuminate many a dark area with light reflected from their polished concave surfaces.

When the operation is completed, the wound is closed in three layers—the peritoneum, fascia and skin.

ADVANTAGES

The abdominal opening afforded by this incision is in close proximity to the pelvic organs, being directly above them.

The operator works to greatest advantage as the opening centers the field of operation, instead of being above it, as in the median-line incision, and he has free access in every direction without being obliged, as Kelly says, "to work in the lower angle of a rigid V."

Retraction is easy, as the muscles, being freed from their overlying fascia, are readily drawn aside and can be kept out of the way with the use of very little force on the retractors. As the long axis of the incision runs in the same direction as the pelvic organs, from the adnexa on one side across the fundus and adnexa of the other side, a maximum exposure of the field of operation is afforded by a minimum length incision.

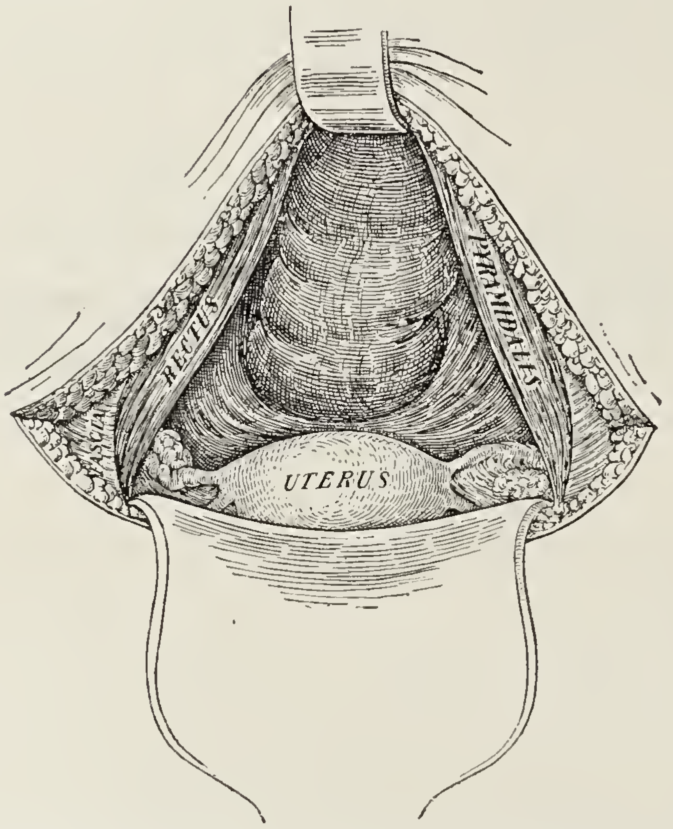

Fig. 3.—The incision and separation of the muscles and fascia completed, with the pelvic cavity and organs exposed.

The advantages derived by the patient on whom this incision is used are of extreme importance: (1) The comparative freedom from shock and postoperative complications is quite noticeable when using this method after the old median-line incision: (2) the perfect exposure, with the ease of access to the pelvic organs which it affords, greatly limits the amount of intra-abdominal manipulations necessary; (3) the intestines are kept in place, well covered and amply protected by the upper flap; (4) few, if any, laparotomy pads are required, except in pus cases; all of which items greatly reduce the amount of intraperitoneal traumatism and give a convalescence proportionately smooth.

In the series of cases to which I shall refer more in detail later on, the only postoperative complication met with was a mild bronchopneumonia in one case. There were no acute dilatations of the stomach and not a case of ileus; in fact, abdominal distention was conspicuous by its absence. With the transverse abdominal incision tendency to postoperative hernia is reduced to a minimum, and I do not hesitate to say that such a complication with the transverse suprapubic incision which I have described is practically impossible. I have never encountered or heard of a case, and my interest in the subject has made me more than ordinarily vigilant.

The incision is intermuscular, made in the strongest part of the abdominal wall, the lower third of the distance between the symphysis pubis and the umbilicus, a region most abundantly supplied with strong muscular tissue, and one where spontaneous hernia is seldom, if ever, seen. Here the recti, two strong thick muscles, lie close together, and are further strengthened by the overlapping pyramidales. On the other hand, the upper two-thirds of the distance between the symphysis pubis and the umbilicus is, with the exception of the abdominal rings, the weakest part of the abdominal wall, where spontaneous hernia is often seen. Here the recti broaden and thin out, separating to pass the umbilicus above, and the additional support of the pyramidales is lost. Hernia here frequently results from the simple separation of the recti and thinning of the fascia of the linea alba consequent to the stretching produced by the enlarged uterus of pregnancy, or an abdominal tumor. By all means, a region to keep away from and not to weaken further by operative invasion.

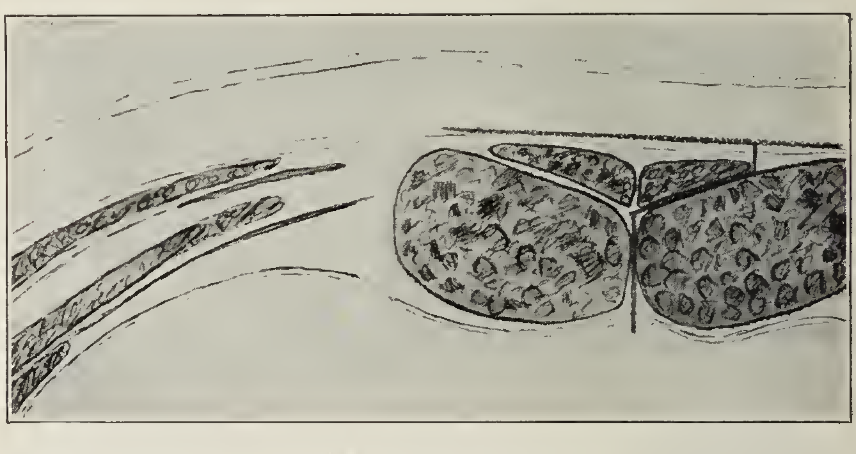

Fig. 4.—Cross-section of abdominal wall at site of incision, showing the path of entrance to the abdominal cavity by author's technic.

To secure the strongest wound after operation, the incision should be made in the strongest part of the abdominal wall by a technic that interferes as little as possible with the integrity of the fascia and muscles.

Just behind the peritoneal scar of this incision lies the bladder which, as it fills, pushes the intestines away, preventing them from adhering to the wound. In none of the cases in which I have had occasion to reopen the abdomen did any such adhesions exist.

Drawings 4 and 5 show in cross-section the path of entrance to the abdominal cavity in my incision and in that of Pfannenstiel. In the former the recti are close together, the linea alba a line only, and if the intestines should work their way through this narrow space between the recti, the pyramidalis would have to be passed before the fascia was finally reached.

In the latter the recti lie farther apart and are not so thick; the linea alba is broad and is cut to free the recti, so if weakened as a result of the operation, they would more readily yield to any advance of the intestines, and the main support of the abdominal wall would then depend solely on the fascia.

The cosmetic result leaves little to be desired. After six months or a year, the fine, unpigmented linea cicatrix is hardly to be seen, and if situated in the pubic hair is completely hidden from view—a minor point possibly, but worth considering in a patient with neurasthenic tendencies, where a visible abdominal scar serves ever as a constant reminder of the past.

The better to set forth the possibilities of this incision I have appended a brief report of one hundred consecutive cases in which it was used. In this series there was not a death; only one postoperative complication, a mild bronchopneumonia; 14 per cent. of the patients were septic at time of operation, yet primary wound-union was obtained in 97 per cent. The following pathologic conditions were encountered:

	Times
Retrodisplacements of the uterus	37
Chronic salpingitis	30
Cystic enlargement of the ovaries	18
Ovarian cyst	15
Hydrosalpinx	10
Pyosalphinx	10
Fibromyomata	10
Corpus luteum cyst	6
Tubal pregnancy	4
Tubo-ovarian abscess	4

The operative treatment carried out was as follows: The round ligaments were shortened thirty-nine times; the round and uterosacral ligaments four times; the ovarian ligament twenty-three times; salpingectomy was done thirty-four times; resection of the tube was performed twenty times; and in fourteen cases in which inflammation had caused its occlusion, the distal end of the tube was opened; oophorectomy was performed thirty-one times, and resection of the ovary for cystic enlargement nineteen times; in seven cases the uterus was removed by a supravaginal hysterectomy, five times for fibromyoma, and twice for suppurative infection; the appendix was inverted four times; ligated and removed forty-one times.

CLOSURE OF THE WOUND

In ninety-seven of the cases the fascia was united by a continuous mattress suture of silkworm gut, and the skin with a subcuticular stitch of the same material. The ends of these two sutures were brought out through the skin at either end of the wound and tied together over a wound-covering of gauze by the method[1] I described and illustrated in 1907.

In two cases silver wire and in one aluminum-bronze wire were used, instead of the silkworm gut. The non-absorbable sutures were withdrawn by the end of the second week.

WOUND-UNION

The number of cases in which primary union occurred was ninety-seven, an extremely high percentage.

Although the method of closure and the use of non-infectable suture material were probably largely responsible for such a favorable showing, still I believe several points in the technic of the incision itself to be contributory. For instance, it has been my experience, though Pfannenstiel and Menge report to the contrary, that the transverse incision severs very few blood-vessels of any size. It appears to parallel the larger vessels in the suprapubic region, and as few are cut, there is a minimum interference with subsequent tissue nutrition, and little necessity for the use of ligatures—two most potent causes of wound infection. Likewise the perfect exposure of, and easy access to, the field of operation limit greatly the traumatism inflicted on the tissues from frequently shifted retractors. The retractor of the lower wound-flap when once placed is permanent throughout the operation, while the retractor of the upper flap is not often moved. The trowel retractors, the only ones frequently moved, seldom touch the edges of the wound.

Failure to secure perfect primary union in the wound occurred only three times. An unabsorbed blood-clot was the cause in one case; a serum accumulation in another; and in the third, the case in which aluminum-bronze wire was used in closing, the wire, by its own elasticity, tended to assume a straight line, and on the sixth day after operation was found lying loose in the wound, having, in the process of straightening out, completely freed itself from the tissues.

While on the subject of wound infection, it is interesting to note that fourteen of the cases in this series were suppurative processes, septic at time of operation, and yet in these the percentage of primary union was 100. I call attention to this point particularly because among those who have used the transverse incision extensively, the idea seems to prevail that it is more easily infected than the median-line incision, Halsted and Daniel having gone so far as to advise against its use in suppurative processes. My experience certainly does not justify any such conclusion, but rather the reverse.

The average maximum postoperative temperature for the series was 100.5 F., with a pulse of 95, which occurred on the second day. On an average, the temperature reached normal, with a pulse of 84, between the third and fourth day.

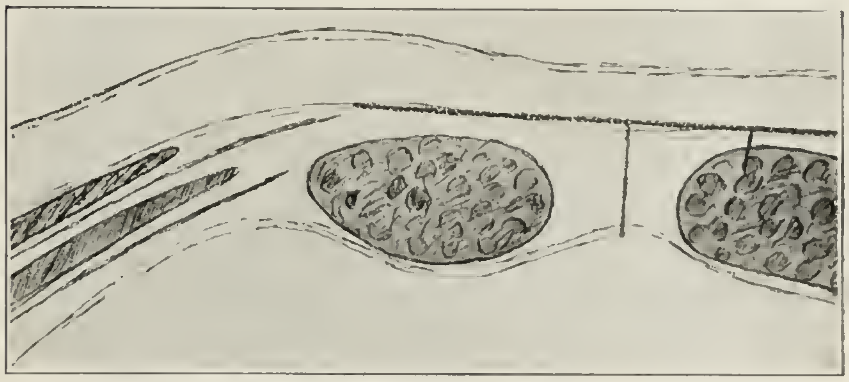

Fig. 5.—Cross-section of abdominal wall at site of incision, showing path of entrance to abdominal cavity by Pfannenstiel's technic.

INDICATIONS

Though intended primarily for pelvic surgery, the transverse suprapubic incision, with a little practice in its use, admits of a much wider field of application. As an illustration, allow me to refer again to the above-mentioned series. Among the ovarian cysts there were several which extended well up out of the pelvis, and the upper extremity of one, a dermoid, was on the level of the umbilicus. Yet in all, after aspiration of the fluid contents, the sac was easily drawn through the wound, ligated and removed. In two cases numerous intestinal and omental adhesions were encountered, but were easily separated as the sac was brought through the wound.

In several of the fibromyoma cases the tumor extended well up out of the pelvis, and in one reached as high as the umbilicus. In these the tumor-mass was decreased in size by morcellation until the uterus could be delivered into the wound, and supravaginal hysterectomy performed. Four of these cases were enucleations only; in one the fibroid was intraligamentous. In none was any difficulty encountered because of the low situation of the incision, or on account of its small size.

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[1] Child, C. G.: The Journal A. M. A., Jan. 19, 1907, p. 221.

Howard Kelly, in a recent article, has called attention to the transverse suprapubic incision for exposing the interior of the bladder extraperitoneally, and considers it ideal for this purpose. In this I heartily agree with him and believe it well adapted for intraperitoneal bladder surgery as well. Four years ago I used it in repairing a vesicovaginal fistula. The fistula was situated at the base of the bladder between the ureters, in a location inaccessible for purposes of repair from the vagina below, yet I was able to free the bladder so as to deliver its base well into the field of operation and repair the fistula with the utmost ease.

Two cases requiring a second operation at intervals of seven months and two years, respectively, afforded opportunity to observe to what extent the first incision had changed the normal relations of the tissues. In both, the skin cicatrix was scarcely visible, in the fat there was no evidence of cicatricial tissue, while in the fascia in the first case there was only a slight thickening, and in the second I was unable to find the site of the original incision. On opening the rectal sheaths the relations of the muscles appeared as normal, no atrophy being apparent. No adhesions to the abdominal wall were present in either case.

CONCLUSIONS

I would summarize the advantages of the transverse suprapublic incision as follows:

1. Freedom from shock and postoperative hernia.
2. Close proximity to the pelvic organs, with easy access to the field of operation.
3. High percentage of primary wound-union.
4. Cosmetic perfection.

163 East Seventy-First Street.

AN APPARATUS FOR THE INTRAVENOUS INJECTION OF SALVARSAN WITH SALT SOLUTION PRECEDING AND FOLLOWING

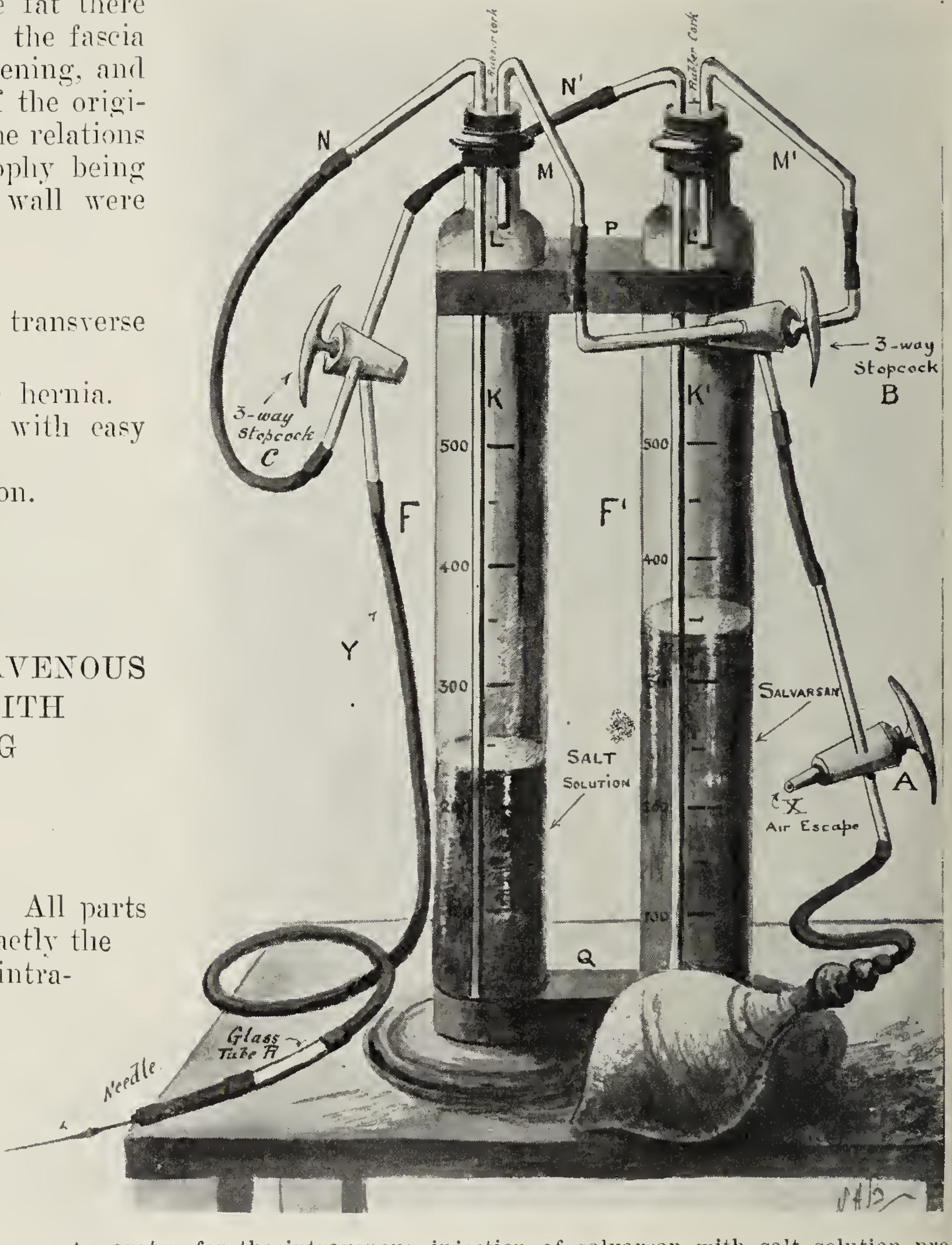
W. B. DAKIN, M.D.
CHICAGO

The operation of this apparatus is simple. All parts are sterilized and the solutions made up in exactly the same manner as for any other method of intravenous administration.

The apparatus consists of two cylindrical glass jars *F* and *F'*, each of 500 c.c. capacity. A rubber stopper fits accurately into the top of each jar and is perforated by two pieces of glass tubing, *K* and *L*, tubes *K* and *K'* reaching to the bottom of the jars, and *L* and *L'* extending only through the stoppers. By means of *L* and *L'* the air-pressure in the jars is increased or diminished. Tubes *K* and *K'* are connected by short pieces of rubber tubing *N* and *N'* with the three-way glass stop-cock *C*. About three feet of small caliber rubber tubing connects stop-cock *C* with the injection needle. Glass tube *R* is inserted about 2 inches from the needle and enables the operator to see the back flow of blood when the needle enters the vein. The glass tubes *L* and *L'* are connected by short pieces of rubber tubing to stop-cock *B*. Stop-cocks *A* and *B* are connected in a similar manner and an ordinary atomizer bulb attached to *A*. Stop-cock *A* differs from *B* and *C* in that it has an air exit at *X*. On turning *A* in the proper direction air will escape from jar *F*. This avoids removing the atomizer bulb and hastens the back flow of blood at *R* when the needle enters the vein. The blocks of wood, *P* and *Q*, made to fit accurately between jars *F* and *F'*, are held in place with adhesive plaster. This enables the apparatus to be handled as a one-piece affair.

The salvarsan solution and the salt solution kept at a temperature of 98.6 F., are placed respectively in jars *F* and *F'*, and the entire apparatus placed in a large jar of sterile water at a temperature of 110 F. By the time the fluid escapes into the vein, through the needle, it is at the proper temperature.

The patient being prepared and all connections on the apparatus made, the stop-cocks *B* and *C* are set so that salt solution will be forced out of jar *F*. This is accomplished by pressure on the atomizer bulb. As soon as the saline solution escapes from the needle, stop-cocks *B* and *C* are adjusted so that salvarsan is forced out of jar *F'* to just beyond the stop-cock *C*. With one hand the rubber tubing leading to the needle is constricted at point *Y*, and *B* and *C* again adjusted for saline solution to escape from jar *F*. The operator then releases his hold on the rubber tubing at *Y* and saline solution is allowed to flow through the tubing until it escapes from the needle at the proper temperature. Meanwhile the needle is held above the apparatus so that all air escapes from the tubing.



Apparatus for the intravenous injection of salvarsan with salt solution preceding and following.

The rubber tube from *C* to the needle is now clamped off at *Y* with artery forceps and stop-cock *A* turned so that air escapes from jar *F* at *X*. The apparatus is now ready for the operator to insert the needle into the vein.

After the vein is punctured and blood appears in glass tube *R*, the tourniquet is quickly removed from the patient's arm and stop-cock *A* adjusted so that air may be forced into jar *F*. Pressure is now made on the atomizer bulb and 20 to 30 c.c. of saline solution forced out of the jar. If no swelling appears around the vein, stop-cocks *B* and *C* are properly adjusted and salvarsan solution injected. As soon as the desired amount of salvarsan solution has been injected, stop-cocks *B* and *C* are again so adjusted that saline solution is injected. About 20 to 30 c.c. of this is allowed to flow into the vein before the needle is withdrawn. If the vein has been exposed, the wound is irrigated with saline solution and then sutured.

The advantages of the combined apparatus are:

1. Salvarsan solution is not injected until the needle is positively in the vein.
2. No salvarsan escapes into the tissues on withdrawing the needle from the vein.
3. Accurate amounts of the drug may be given.
4. Positively no air or foreign particles can enter the vein.
5. The apparatus is compact, all within reach, and the injection, if need be, can be given without assistance.

I wish to acknowledge my indebtedness to Dr. L. E. Schmidt for the privilege of using this apparatus in about 100 cases.

64 West Randolph Street.

FUNGOUS TRACHEOBRONCHITIS

GEORGE HOWARD HOXIE, A.M., M.D.
AND
FREDERICK C. LAMAR, B.S., M.D.
KANSAS CITY, MO.

Recently there have come under our observation two cases of bronchitis in which careful examination of the sputum revealed the presence of fungus-stalks as the only causative organism. Attempts to grow the fungi failed, and therefore their identity was not definitely established. The absence of literature on the subject and the failure of our cultures caused us to be doubtful as to the correctness of our conclusions. But the recent paper by Dr. Norman Bridge on streptothrix,[1] in which he calls attention to the difficulty of cultivating and identifying such fungi, leads us to publish these case reports.

In the first case (that of Dr. Hoxie) the symptoms were those of a tracheobronchitis with spasmodic cough that faintly reminded one of pertussis. The age of the patient and the relief obtained by discharging the pin-head-sized nodules made such a diagnosis improbable.

In the second case (that of Dr. Lamar) hemorrhage was the prominent symptom. But the complete absence of tubercle bacilli from the sputum, and also of râles and dulness in the chest, together with the finding of these stalks and round bodies in the sputum led us to believe that it was a fungous disorder rather than a tuberculous one.

The case histories are as follows:

CASE 1 (reported by Dr. Hoxie).—*Patient.*—J. R., a railroad freight agent, aged 55, called at my office Sept. 10, 1910, and stated that he had had a "cold" for a week and that for the last four nights he had had spasmodic closure of the windpipe; that is, he would retire and fall into his usual deep sleep; and after about three hours would be suddenly awakened by a feeling of suffocation which could be relieved only by very violent coughing and retching. He felt that the closure was located under the sternal notch. The patient was a vigorous man, healthy except for a chronic postnasal catarrh with accompanying deafness (chronic otitis media). He spends his spare time in his garden cultivating flowers and vegetables. His diet is chiefly vegetable. His work is in a very dusty part of the West Bottoms.

Examination.—The patient's temperature, pulse, and respiration were normal. Inspection of the throat and larynx was negative. Auscultation of the chest revealed an occasional respiratory "flutter" at the sternal notch. The sputum was usually colorless and frothy, but after the severe coughing paroxysms contained many small particles the size of a pinhead, yellowish-white in color, hard to break up on the slide, resistant to antiformin. Under the microscope such portions of the sputum presented stalks of a fungous type in great abundance. No other pathogenic organism was discovered.

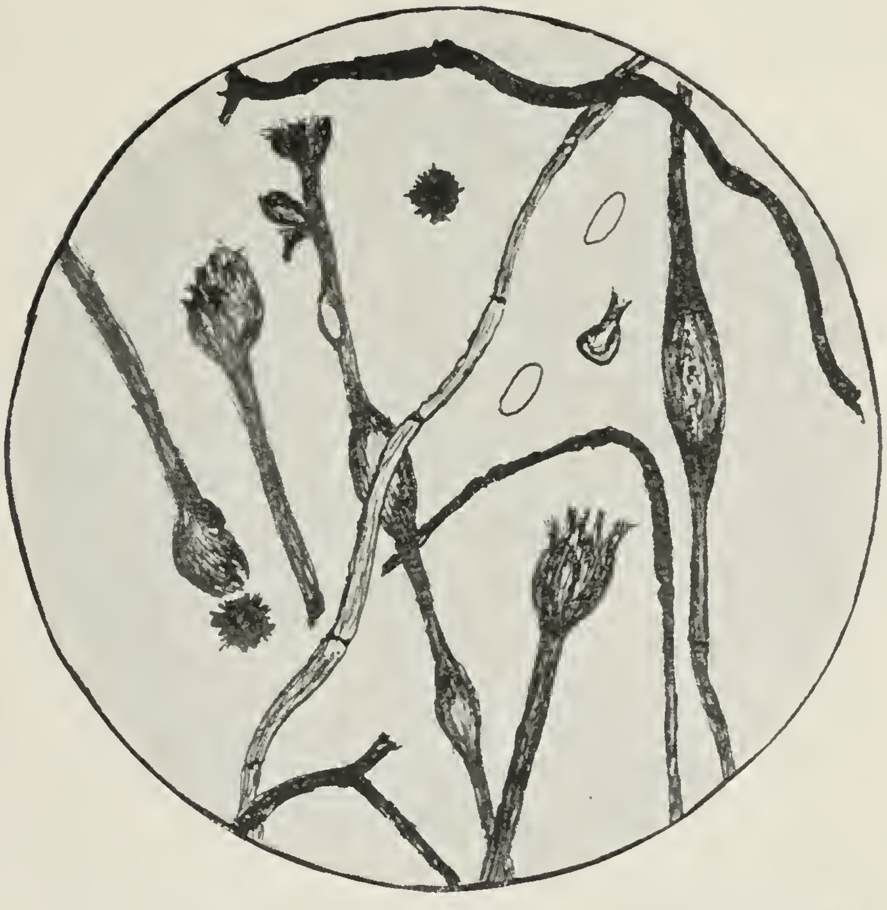


Fig. 1.—Fragments of fungus found in sputum of patient in Case 1.

Treatment.—In spite of the usual sedative treatment the attacks grew worse until the patient was afraid to sleep more than an hour at a time and had the nurse waken him in order to cleanse out his throat and bronchi. He was kept in his room at an even temperature day as well as night. At the suggestion of Dr. J. E. Sawtell, who saw the patient at this time (Sept. 16, 1910), adrenalin inhalant was sprayed frequently into the larynx and trachea and the compound tincture of benzoin inhaled with steam. The bromids had no effect. Heroin and morphin had only a temporary quieting effect. On September 18, a fifteen-drop dose of the saturated solution of potassium iodid was ordered every four hours, and the inhalations were continued. From that time the patient gradually improved and after two weeks was allowed to go back to his work.

Course.—In January he still occasionally coughed up the stalks, but by the aid of sprays and inhalations was fairly comfortable.

May 12, 1911, he reported that he still had "tickling" in the throat. But the sputum was frothy and no stalks were found.

Sept. 19, 1911, patient reported that he had been free from trouble since the spring. He had taken seventeen office treat ments from a rhinologist for his postnasal catarrh. The rhinologist had found no traces of a fungus; nor did he treat the throat.

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[1] THE JOURNAL A. M. A., Nov. 4, 1911, p. 1501.

Attempts to grow the fungus were unsuccessful. Besides the stalks there were in the sputum many oval bodies the size of epithelial cells. That the seat of the infection was below the pharynx was shown by the fact that scrapings from the tongue and mouth did not reveal the stalks; nor did the sputum contain them except after the strangling cough. Probably the fungus was an aspergillus.

Case 2 (reported by Dr. Lamar).—*Patient.*—Mrs. W., aged 39. Whooping-cough and the regular diseases of childhood during early life. For several years she had suffered from stomach trouble, for which she was persuaded six years ago, by a friend, to take treatment at a sanatorium, where she spent two months adhering strictly to the vegetarian diet; she has continued to do so to a marked degree since her return home five years ago.

History.—For one year she has noticed a soreness of the throat, consisting, as she describes it, of a dryness or constant irritation and located directly opposite the sternal notch or about the bifurcation of the bronchus. The trouble itself has not been severe but fearing tuberculosis she has taken treatment, consisting of fresh air, oil-emulsions and reconstructives for the past nine months. Coughing is frequent and of a dry hacking nature—occurring as the patient states, more frequently at night on going to bed; that is, it is aggravated by the reclining position.

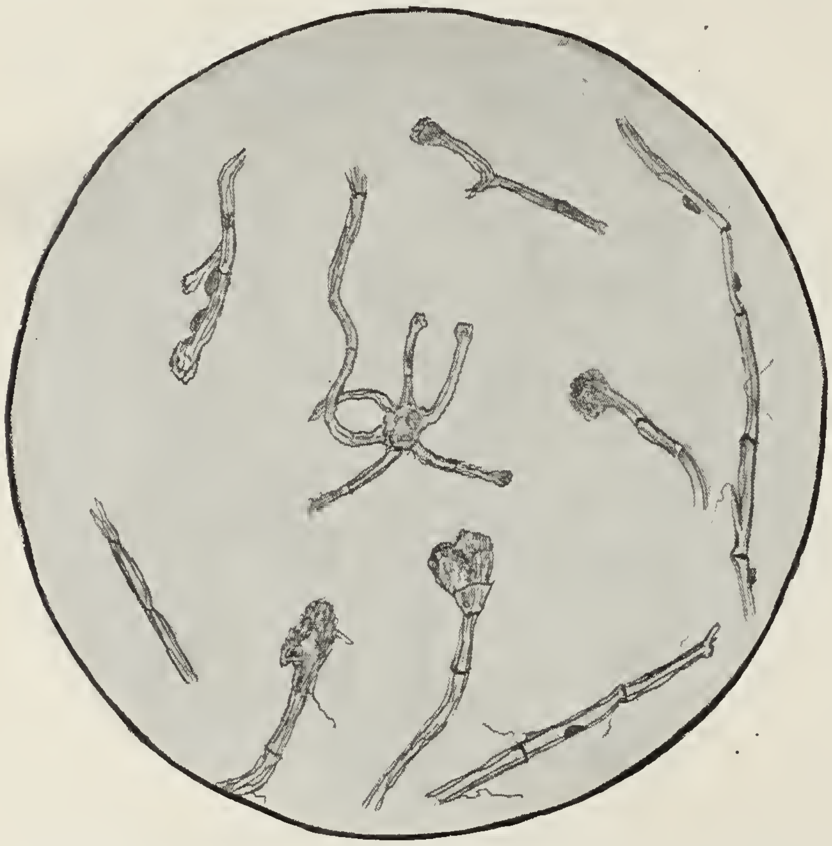

Fig. 2.—Fragments of fungus found in the potato culture from Case 2.

Examination.—July 7, 1911, during an attack of coughing quite a profuse (?) hemorrhage occurred. I was called to the home the next day. The examination of the lungs was negative and the other conditions found did not justify a positive diagnosis of tuberculosis. Specimens of the sputum were submitted to Dr. Trimble of the University of Kansas, who reported that he found no tubercle bacilli, but on the contrary, did find a fungus which he could not identify. The temperature arose in the afternoons to 99.5 F. or 100.5 F. In the morning, on one occasion at least, the temperature was subnormal. Pulse and respiration were normal.

Blood Findings.—Hemoglobin 90; coagulability normal; red cells 4,248,000; white cells 7,600; polymorphonuclears 68; eosinophils 4; lymphocytes 6; mononuclears 21; mast cells 1.

At frequent times since, on coughing, the material cleared from her throat has been streaked with blood, but usually it is of a grayish frothy nature containing small white bodies in which we have found these stalks of a fungus. In general, however, expectoration is comparatively scant.

Treatment.—There are slight voice changes, the voice having a slightly hoarse and husky tone, but the laryngoscopic examination was negative. The treatment consisted in outdoor sleeping, the strengthening of the patient's diet by the addition of meats and the administration of iodids in the form of syrup hydriodic acid (potassium iodid was not tolerated by the patient's stomach). Iodin inhalations were given in the form of Parke, Davis & Co.'s iodin inhalant.

Course.—Under this treatment the patient felt comparatively well, except on cold rainy days. On such days she had an aggravation of the coughing and soreness of throat and the expectoration of the blood-streaked sputum. At the beginning of October the patient went to Arizona for the winter.

We were able to secure a potato culture of the fungus found in the second case, but in this culture nothing but the roots and stalks appeared, consequently we could not identify the growth. On agar no growth resulted. Professor Billings, of the University of Kansas, also failed to secure a satisfactory growth on potato and was rather of the opinion that the stalks were those of the Mucedineæ. Some slides from our potato culture were submitted to Professor Ravenel, of the University of Wisconsin, who reported that he was unable to make anything out of them.

In these two cases the source of infection may have been the food, because the patients were both vegetarians. In Case 1 the patient had a parrot as a pet; but this was not a possible source of infection in Case 2. These findings contrast with those of the French, who found the fungous infections chiefly among pigeon growers.

The literature on fungous infection of the trachea and bronchi seems very scanty. In the standard text-books on medicine only Kelly and Dieulafoy mention the subject. The former merely refers to recent work on the subject. The latter goes into the matter of aspergillosis of the respiratory tract very thoroughly. Rolleston and Latham[2] summarize the British experience with the fungi and in particular with aspergillosis.

We have no American case reports except those on streptothrix (as, for instance, Case 13 in Dr. Bridge's report mentioned above).

We believe that the condition is more frequent in America than its absence from medical literature would indicate. We make this report in the hope that it will call out reports of similar experiences and lead to the identification of the fungi responsible for the condition.

Argyle Building.

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[2] Rolleston and Latham, in Allbutt's System, 1909, v, 440.

Monstrosities.—The Chaldeans read in the starry heavens the secrets of the future and rapidly learned to transfer to the monstrous infant, born under this or that astral combination, the meaning of the stellar message, and so in ancient Babylonia the birth of a babe of doubtful sex meant an approaching calamity to the land, while the appearance of one with an imperforate anus proclaimed a famine. Similar astrologic beliefs were in vogue in Europe during the Middle Ages; but they did not reign alone, for a transference of teratologic powers had, it was thought, taken place from the deity to the devil, and to the malign influence of the Tempter and his emissaries were ascribed monstrous and malformed births.—J. R. Torbert in *Boston Medical and Surgical Journal.*

CONVULSIVE MOVEMENTS OF THE FACE: THEIR DIFFERENTIAL DIAGNOSIS

EFFECT OF ALCOHOLIC INJECTIONS

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Convulsive movements of the face present themselves under three principal forms: spasm, tic and epileptic twitchings. As to the latter, they are usually associated with generalized epilepsy or with focal epilepsy in which the arm or leg or both on the same side are affected. Cases in which the epileptic fit is confined to one side of the face may at times present some embarrassment in diagnosis. But, on one hand, the paroxysmal character of the twitching, the presence of other symptoms characteristic of epilepsy, such as pallor of the face, mental hebetude, loss of consciousness, postepileptic exhaustion —on the other hand, the absence of the characteristics of plain spasm of the face, which will be discussed in detail later, will render the diagnosis of epilepsy quite easy. Thus the deviation of the ala nasi, the depression of the chin, the paradoxic synergy, etc., are totally absent. The most important differentiating feature, however, lies in the successive and progressive contraction of the different muscles of the face, but not of a simultaneous contraction of the entire half of the face which is seen in facial spasm of non-cortical nature. Thus for example, at the time of the attack the lower lip is turned up first, then the angle of the mouth is drawn, then the musculus frontalis contracts, finally the eye closes. The disfigurement which the face undergoes in any spasmodic contractions of its muscles is here done successively and progressively, contrary to that of facial spasm of non-cortical nature. The closure of the eye in epileptic attacks and the wrinkling of the forehead are bilateral and asymmetrical, while in facial spasm they are confined to the side of the face involved and in palpebral tic the closure of the eyes is bilateral, but symmetrical.[1]

Tic and facial spasm are two phenomena which are very frequently encountered. Their recognition and differentiation are of considerable importance from a therapeutic standpoint. The state of our knowledge of these two facial manifestations is at present so far advanced that an error in diagnosis is exceptional.

TIC OF THE FACE

Tic of the face is characterized by a sudden and abrupt contraction of one or of several muscles of the face. What is important is that the muscular contraction is always and invariably the same as to the range and location, but the invaded area does not correspond to a well-defined anatomic distribution of a certain nerve or nerves, contrary to what is observed in spasm. The movement of tic usually reproduces certain automatic acts of physiologic nature, accomplished for a certain purpose, but in an exaggerated manner. For example, tic of the eyelids produces exactly the act of their sudden closure done to protect the eye from penetration of a foreign body.

Tic has a tendency to spread and invade other functions, so that the twitch of the face may be accompanied by a sudden protrusion of the tongue, or by a laryngeal noise, by a scream or by a certain gesture in other parts of the body than the face, such as a sudden outstretching of the fist or a kick of the foot. Gilles de la Tourette described various tic movements accompanied by coprolalia, viz., by enunciation of profane words or sentences for which the patient finds an irresistible impulse.

Another characteristic feature of tic is the fact that the twitchings can be controlled to a certain extent by an effort of the patient's will. Inhibition is therefore possible. The reason of it lies in the cortical nature of the phenomenon. Tic is a psychic malady and the patient's mental state can participate largely in inhibiting it. On the other hand, when a patient makes an effort to arrest or rather to prevent the convulsive movement for a certain time, the sensation of satisfaction he experiences after he has exhausted the inhibition and has given vent to the tic movements is another proof of the presence of a psychic factor in tic. The desire of indulging in tic movements after a more or less prolonged period of voluntary repression is great. The patient's tic becomes thus a habit, and the German name for this malady, viz., *Gewohnheitskrankheit,* is well appropriated.

To sum up, one may say that the chief characteristic feature of tic lies in exaggeration or disfigurement, so to speak, of physiologic gestures or of mimicry.

FACIAL SPASM

An altogether different condition is observed in facial spasm. Here one fails to find the least tendency to reproduce physiologic acts; otherwise speaking, there is no purposive act. Quite on the contrary, we observe here opposite to normal or to physiologic acts. When, for example, normally one eye closes voluntarily, the corresponding brow descends. In facial spasm the inner portion of the brow is elevated at the moment the eye begins to close.

Let us analyze the facial spasm as shown in Figures 1 and 2. At first glance it can be seen that their spasm is illogical and without any reasonable expression; there is no resemblance to ordinary normal mimicry of the face. In the woman the entire left side, in the man the entire right side of the face is involved. The forehead on the affected side is wrinkled, the orbicularis palpebrarum closes the eye; there is a simultaneous contraction of the frontalis and orbicularis palpebrarum (paradoxical synergia of Babinski); the zygomatic muscles deviate the angle of the mouth and according to the mode of the muscular contraction the angle of the mouth is either drawn laterally or elevated. The nose is curved toward the affected side and the chin presents a characteristic depression on the diseased side. The latter cannot be seen on the man, as it is masked by his beard.

A close study of these two faces shows that while the spasm affects an entire half of the face in both, nevertheless there is an essential difference in the character of the muscular contractions. In the woman the affected side, while being drawn up, presents at the same time, so to speak, a fascicular muscular contraction. Otherwise speaking, the half of the face is in a tremulous state. It is a condition identical with what one not infrequently experiences when one's eyelids tremble. It is practically a very rapid clonic contraction. Indeed, the patient's half-closed eye illustrates to the best advantage the state of the surrounding muscles. If we compare her eye with that of the man, the above-mentioned fascicular or tremulous contraction becomes very evident. In the man the eye is also half closed as in the woman, but his eyelids are at rest while the surrounding muscles are contracting. The contractions of his muscles are manifestly of wider range; they are coarse. The latter is probably due to less rapid twitching than in the woman, as can be seen from the number of wrinkles and from their depth. The muscles of the cheek in the woman present, except the nasolabial fold, no wrinkles at all, while in the man the entire side is deeply wrinkled. We must therefore conclude that while both faces are affected with a hemispasm, nevertheless two kinds of muscular contractions may occur: one fine or fascicular or tremulous, the other gross or coarse. This peculiarity has not been pointed out by writers, but the photographs presented here justify my contention.

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[1] Vincent: Rev. Neurol., 1907, p. 1299.

It has been mentioned above that the muscles involved in tic do not correspond as a rule to a well-defined anatomic distribution of a nerve. In facial spasm, on the contrary, the convulsive movements are produced solely in the area of distribution of the facial nerve and, according to the case, they predominate in the upper or the lower portion of the nerve. In the first case the frontalis and the orbicularis palpebrarum alone will be involved, in the second case the muscles of the lower part of the face will be involved. When the lower facial nerve is involved, in addition to the muscles of the face, also the muscles of the neck on the same side not infrequently participate in the spasmodic twitchings.

Another peculiarity of facial spasm is its occurrence during sleep; also any effort of will or attention is incapable to arrest, interrupt or prevent an attack. This circumstance, as we have seen, does not occur in tic. In the latter a psychic element plays a certain rôle: in the former a psychic influence has no bearing on the condition. Curiously enough, in the majority of cases of tic we find a hereditary predisposition to the same affection or to some other nervous disorders; also in the patients themselves is observed a special mental makeup, such as eccentricities or other bizarre features, in other words, a mental instability.

If the view concerning the nature of tic is well established, the pathogenesis of facial spasm is still debatable. If the facial muscles supplied by the seventh nerve are in a state of stimulation, the latter may originate either in the seventh nerve itself or in its nucleus, or else in any of the sensory fibers of the fifth nerve. A reflex arc is established; an irritation of the sensory fibers of the palpebral mucosa, or of the cornea which are supplied by the fifth nerve, is transmitted to the nucleus of the seventh nerve, and thence to the facial nerve itself. As the latter supplies the orbicularis palpebrarum, a spasm will ensue. As another illustration of the existence of this reflex arc we may mention "tic douloureux." Here the twitchings of the face are the result of excitation of the sensory fibers of the fifth nerve, viz., of the centripetal fibers of the arc. But a close observation will show that the convulsive movements of "tic douloureux" are of an altogether different character. They do not resemble and are therefore not identical with those of facial spasm. The former do not present the distinguishing features of the latter, such as fascicular or coarse muscular contractions, deviation of the nose, depression of the chin, closure of the eyelid, elevation of the angle of the mouth, etc. The muscular contractions accompanying the neuralgia are not of the type of facial spasm, but of tic. On the other hand, it seems reasonable to admit that an irritation of sensory or centripetal portion of a reflex arc should be followed by a motor symptom. If it could be demonstrated, says Babinski, that a lesion of the trigeminus alone is followed by a facial spasm, the dependence of the latter on trigeminal neuralgia will be established. Such an observation exists. Bouchaud[2] reports a case in which a dental affection developed a trigeminal neuralgia; convulsive movements of the face typical in all particulars of facial spasm followed each attack of neuralgia brought on by mastication, by cold air, etc. There was no indication of a lesion of the seventh nerve. Here the cause of the spasm lay exclusively in the fifth nerve. The irritation of the sensory nerve produced by a carious tooth is transmitted to the nucleus of the seventh nerve. This observation proves, I believe, that Brissaud's contention is correct. This author claimed for a long time that an irritation of any segment of the reflex arc is apt to cause a facial spasm, whether it is in the centripetal, centrifugal or in the nucleus of the nerve. Babinski, on the contrary, believes that an irritation of the peripheral portion

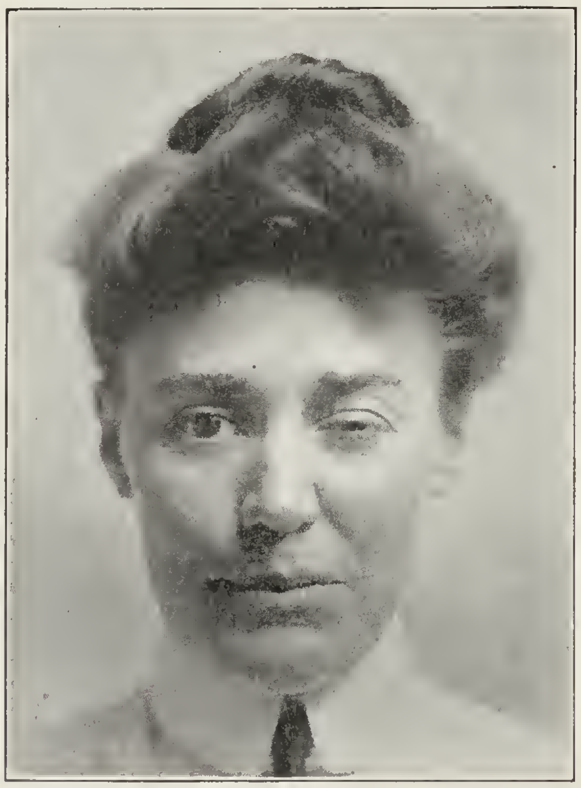

Fig. 1.—A woman suffering from spasms involving the entire left side of face (Case 1).

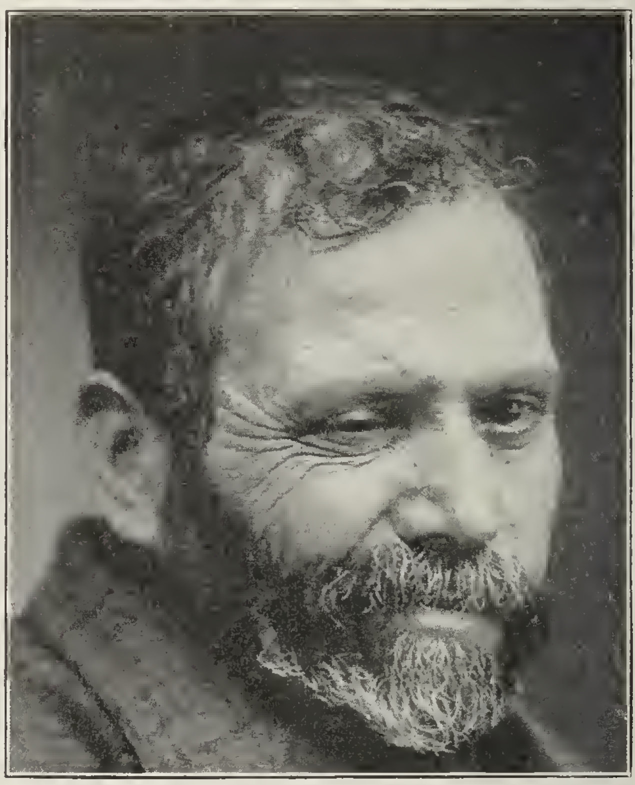

Fig. 2.—A man suffering from spasms involving right side of face (Case 2).

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[2] Bouchaud: Rev. Neurol., 1908, p. 901.

of the seventh nerve is the sole cause of facial spasm. Bouchaud's observation speaks against the latter's exclusivism. It is true that in the majority of cases the affection is peripheral. It can be demonstrated that by electrical stimulation of the seventh nerve a facial spasm with all the characteristic symptoms described above can be reproduced with great precision. The occurrence of spasmodic contractions in cases of facial palsy is also in favor of a peripheral cause of the spasm. Not infrequently we observe that a facial spasm develops on the side of a palsy of long standing. Also facial spasms may precede the onset of facial paralysis or paresis. In such cases evidently the facial hemispasm and palsy depend on the same cause, and there must be a lesion of a destructive or irritating nature in the nerve trunk itself or in its nucleus. In two cases reported by André Thomas,[3] there was a neuroma on the facial nerve. In both cases facial palsy was complicated by spasm. These observations, of course, tend to prove that the facial spasm is a peripheral affection in which the centrifugal end alone of the reflex arc is involved. In fact, this is the most frequent occurrence. Nevertheless, we must not omit the fact that cases have been observed in which the lesion was in other portions of the reflex arc. The above-mentioned Bouchaud's case, for example, proves conclusively that the sensory centripetal fibers of the arc may be the direct cause of facial spasm. Besides, in a certain number of observations recorded we find facial spasm associated with other phenomena, indicative of organic lesions of the central nervous system. Thus Brissaud, Sicard and Tanon report[4] the history of a patient who, in the course of a meningo-mesencephalitis, developed a complete facial palsy on the left and a facial spasm on the right side. This case shows that the spasm was of intracranial origin, and that one lesion is apt to provoke, according to its irritative or destructive effect, either a spasm or a palsy. In Claude and Lejonne's case,[5] there were symptoms of pseudobulbar palsy with spasmodic laugh and cry. The patient presented also typical attacks of facial spasm, as it can be seen from the photographs in their article, but those spasms occurred together with spasm of muscles of pharynx and larynx, and only at attempts of deglutition or phonation. The authors believed that there were two irritative lesions: one in the cerebral peduncle, the other in the geniculate bundle. Brissaud and Sicard[6] report three cases of crossed facial spasm, viz., spasm of one-half of the face and motor disturbances in the limbs on the opposite side. The lesion was probably in the mesencephalon, affecting the pyramidal fibers on one side of the pons and involving also the nucleus of the facial nerve on the same side.

The anatomo-clinical facts discussed here lead to the conclusion that while in the majority of cases the cause of spasmodic contractions of the face is of a peripheral character, nevertheless an irritation of any segment of the reflex arc, as well as organic lesions higher up in the cerebrum, may also be considered as etiologic factors in a certain number of cases.

The facial spasm discussed here concerns the well-known form in which one-half of the face is involved (*hemispasm*). But there are other varieties. Sicard[7] reports a case of "double spasm." Here both halves of the face are affected, either alternately or simultaneously. Meige[8] speaks of a case in which a facial spasm disappeared from one side of the face to reappear on the other side. The same author calls attention to another variety of spasms, i. e., "median facial spasm," which presents some features of the ordinary facial hemispasm and some of tic. It consists of bilateral convulsive movements, but predominating near the median line of the face. The orbiculares palpebrarum are most markedly involved. Their contractions are sudden and tonic at first (blepharotonus), and then followed by rhythmical movements. The attack lasts from a few seconds to several minutes, so that the patient is obliged to raise his head in order to be able to use his eyes, which are interruptedly closing and opening. Frequently the condition does not remain confined to the palpebræ. Other muscles participate in the spasmodic contractions, but always *bilaterally*, and to a considerably lesser extent than the orbicularis. Curiously enough, almost all muscles situated toward the *median* line of the face are displayed except the zygomatici, which are very rarely affected. Objectively, the contractions present the characteristics of spasm with this difference, that they can be controlled by mental inhibition, disappear during sleep, and that they are bilateral. On the other hand, they do not resemble tic, although the psychic factors play a certain rôle and the patient's mentality is frequently altogether analogous to that of individuals suffering from tic; also a prolonged psychomotor training gives satisfactory results. The bilaterality of the condition speaks against a peripheral lesion, and the fact that the spasmodic contractions of the face are not infrequently associated with muscular contractions in other regions than on the face, such as pharynx, floor of the mouth, tongue, jaws—one is prone to admit an irritative process in the mesencephalon as the cause of this form of spasm.

TREATMENT

The management of epileptic convulsions of one side of the face is that of focal epilepsy. In the majority of cases, whether the arm and leg on the same side are involved or not, focal epilepsy of the face is justifiable of surgical intervention on the opposite side of the skull over the motor area. Treatment with medications is of no avail in such cases, with the exception of syphilitic cases, in which mercury, iodids or salvarsan may be of benefit.

TIC

This affection is very rebellious to medications. Coal-tar products, gelsemium, opium, bromids have been tried, but unsuccessfully. Bromids, however, in conjunction with other measures which will be mentioned later, may be of benefit as a general sedative of the nervous system. Hypnosis has been experimented, but again without appreciable results. Electricity, if it ever gave any result in tic, is rather a psychotherapeutic procedure. Personally, I met with absolute failure in quite a large number of cases. Massage is equally useless. Hydrotherapy and general hygiene, appropriate in other functional nervous diseases are undoubtedly indicated as measures whose purpose is to elevate the general nutrition and that of the nervous system. In discussing the symptomatology of tic, I called attention to the relationship between the convulsive phenomenon and the mental state of the patient. I said that the tic movement can be inhibited by the patient, and that it disappears during sleep when the conscious cerebral functions are arrested. Since, there-

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3. Thomas, André: Rev. Neurol., 1907, p. 1273.
4. Rev. Neurol., 1906, p. 779.
5. Claude and Lejonne: Encéphale, 1907, p. 269.
6. Brissaud and Sicard: Rev. Neurol., 1908, p. 87.
7. Sicard: Rev. Neurol., 1910, p. 119.
8. Meige: Rev. Neurol., 1910, No. 21.

fore, the morbid manifestation is associated to a certain extent with the psychic life of the individual, it is to be supposed that a methodical mental discipline could be utilized for therapeutic purposes. The initiative in this direction belongs to Brissaud. In 1893 he elaborated a certain method which, when judiciously applied, gives very satisfactory results. It consists of two procedures, i. e., voluntary immobilization of the affected muscles and movements of the immobilized muscles.

According to the first procedure, the patient is taught to immobilize his face for a gradually increasing period of time. The sittings are held daily, at first only for a few seconds and only two or three times a day. Gradually the number of daily exercises is increased and the duration of each is prolonged. Considerable patience and persistence are required, and particularly no haste should be made. The duration of each sitting should be increased very gradually. If the patient is a child, the treatment must be carried out by some trained person. An adult can be taught how to proceed. I usually advise to place himself before a mirror and watch his immobilization procedures. When a certain amount of control has been obtained by the patient, or, in case of a child, voluntary immobilization is accomplished at command, the other method, viz., voluntary movements, is taken up. The individual is taught to produce slow, regular and correct movements of those muscles which are affected by the tic.

We know that the twitchings of tic are reproductions of automatic physiologic acts accomplished for a certain purpose, but in an exaggerated and disfigured manner. By being voluntarily contracted, but in a slow, deliberate and correct manner, the affected muscles fall under control and thus become trained. Here, again, the first séances and their duration must be brief and even very brief. In this procedure, as well as in the first, fatigue must be avoided. Gradually the duration as well as the number of daily exercises are increased. The mirror method can be also utilized here as in the first procedure. The patient's training must be continuously watched, as the least error with regard to the kind of movements, to the rapidity and frequency with which they are accomplished, must be corrected without delay. There is no doubt that many a patient loses patience, gets discouraged at the slowness of improvement, and thus is apt to abandon the treatment. Continuous encouragement is essential on the part of the physician. The treatment is unquestionably slow, but it is certain in results in the majority of cases. Perseverance and enthusiasm in the method are two requisites indispensable for success.

TREATMENT OF FACIAL SPASM

In the majority of cases this affection, as we have seen, is due to an irritation of the peripheral trunk of the seventh nerve. Carrying a remedy directly to the nerve itself is the most appropriate mode of treatment. By analogy with the painful affection, which is the result of an irritation of a sensory trigeminal nerve and which is relieved by injection into the nerve, or in its vicinity, of alcohol as advocated by Schlösser, Baudoin and Lévy, Valude, Ostwalt and Dupuy-Dutemps, a similar injection into the seventh nerve for relief of facial spasm which is produced by an irritation of the facial nerve, gives sometimes satisfactory results.

CASE REPORTS

Case 1.—*Patient.*—The first of my patients thus treated is a young woman (Figs. 1 and 3) who first came under my observation in July, 1910. For four or more years she suffered from spasmodic contractions of the left side of the face occurring a great many times a day. There was no pain. The condition made her very uncomfortable, besides the esthetic inconvenience which she experienced. The character of the spasm and its various features were described above. No special cause of the spasm, such as injury, could be traced. Her history is free from any other nervous affection and she always considered herself healthy. As the condition was typical of facial spasm and consequently due to a direct involvement of the facial nerve, I proposed to her the treatment with injection into the nerve of alcohol.

Treatment.—Accordingly, Sept. 21, 1910, 5 minims of 80 per cent. alcohol were injected with an ordinary hypodermic needle, directly into the stylomastoid foramen supposedly into the facial nerve. Seven such attempts failed to produce the desired facial palsy. This was an indication that the nerve itself was not reached. Only the eighth injection was completely successful. Immediately after the injection a facial palsy was noticeable. The paralysis was of the peripheral type, viz., the entire nerve was involved; the face was drawn to the right side and each individual muscle of the entire left side of the face was paralyzed. It was particularly seen when the patient attempted to wrinkle her forehead; the evidences of a typical Bell's palsy were present. Patient was unable to frown, to wrinkle her forehead, to masticate properly, as food would run out of her mouth on the left side. she could not blow, whistle, etc. Briefly, she suffered the same inconveniences as in ordinary facial palsy from any other origin. The spasm disappeared on the day of the successful injection and has not returned since then.

Course.—For a period of six weeks the facial palsy remained unaltered. I then began to use faradic electricity on the palsied muscles. At first the latter were stimulated only two or three times a week but later every day. Each sitting lasted but ten or fifteen minutes. Massage of the face was also added at a still later period. The first improvement of the facial paralysis was noticed about three months after the alcoholic injection. Since then the improvement kept on making rapid progress. After using electrical stimulation of the face for three months the recovery became complete. At present the recovery from the facial palsy is accomplished and at no time since the successful injection of alcohol has there been a return of spasmodic twitchings, which, prior to the treatment, had been in existence for a period of over four years. Patient is able to wrinkle her forehead, to eat without losing her food, to blow, to whistle, to smile, to close her left eye and there is no trace of disfigurement of the face. The sole abnormal phenomenon to be noticed is the involuntary associated movements of the orbicularis palpebrarum and zygomatic muscles. That is, all contractions of the orbicularis, reflex or voluntary, are accompanied by synchronous contractions of the zygomatic muscles.

The reason of the phenomenon lies probably in the fact that regeneration of some of the nerve fibers distributed in the orbicularis is defective and their stimulation is transmitted to the nerve fibers distributed in the zygomatic muscles. Associated movements is a common phenomenon observed in the course of recovery of facial paralysis. They may remain for months and years, as I have seen in two cases, or may eventually disappear. The latter probably corresponds to complete regeneration of the nerve fibers.

Case 2.—*Patient.*—Man of 52, a neuropathic individual, developed a facial spasm on the right side of the face which persisted for two and a half years. (For details of the spasm see Fig. 1.)

Treatment.—Twelve attempts were made to inject alcohol into the right facial nerve at its exit from the stylomastoid foramen, but they were all in vain, as the surgeon could not strike the nerve. The twelfth injection was followed by a very slight deviation of the face toward the left, but this paresis lasted only about one hour. Curiously enough, after this last attempt the patient was almost completely free from the spasm for a period of five months. Only occasionally could be observed a slight fascicular tremor in the vicinity of the outer angle of the right eye. Evidently none of the twelve injections reached the nerve, and the last was probably done in the close proximity of the nerve trunk, compressing slightly the nerve and producing a transient facial palsy. Nevertheless the cessation of spasm for five months is an indication of the beneficial effect of the alcohol being in contact with the nerve and inhibiting thus the irritation of the nerve. With the beginning of the sixth month a new attempt was made and this time the success was complete. The injection of 5 minims of 80 per cent. alcohol was made directly into the nerve and a facial palsy immediately followed.

Course.—In Figure 4 is seen the complete involvement of the entire right side of the face. The patient is seen in the act of raising and wrinkling his forehead with a total disability of the right musculus frontalis. Besides, he could not whistle, blow, masticate properly as food and liquids ran out of the right angle of his mouth. The spasms ceased entirely. There has been no return since the successful injection of alcohol. Similarly to the treatment in the first case, a course of electrical stimulation was instituted at the end of six weeks and by the end of three months complete disappearance of the palsy took place without recurrence of the spasm.

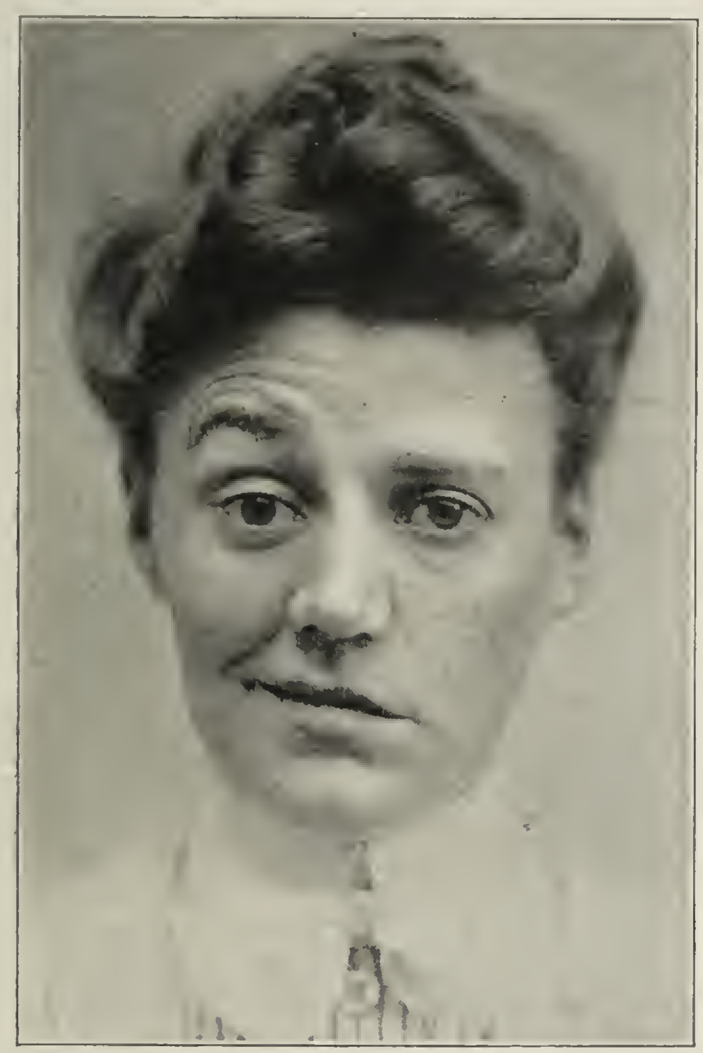

Fig. 3.—Facial palsy produced in a woman after eight injections with alcohol as a treatment for spasms (Case 1).

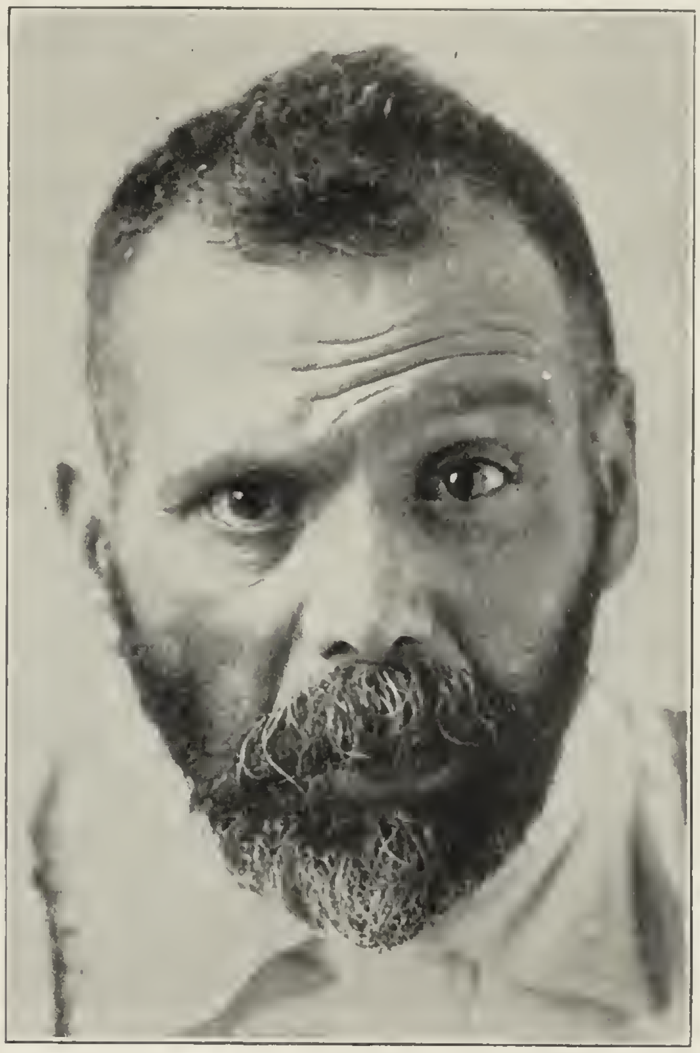

Fig. 4.—Facial palsy in a man after thirteen injections with alcohol in a treatment for spasm (Case 2).

The treatment of facial spasm with injections of a few minims of alcohol is a very important addition to our therapeutic armamentarium. The affection, while not painful itself, is one of the most disturbing. Besides the esthetic consideration on account of the disfigurement, there are also great inconveniences. While the individual is eating, conversing, lecturing, he is suddenly seized with a drawing up of one-half of his face, which may last a minute or two, or else repeat itself incessantly for several minutes. Fatigue has a great influence over it. My second patient, who was a watchmaker, was obliged to give up his work in the afternoon, as being then somewhat tired, he suffered almost continuous twitching of his face; the closure of the eye during his work disturbed him considerably.

The operation is not a difficult one. It requires knowledge of topographic anatomy of the exit of the nerve from the stylomastoid foramen. As a point of departure can be taken the end of the mastoid process. The foramen is situated in front and inward of the process. When the patient lies on a table during the operation and his head is turned to one side, the hypodermic needle should be directed immediately beneath the mastoid process, first inward, toward the median line, and then slightly forward. As we have seen above, it is not an easy task to strike the nerve. It required in my two cases a great many injections before the nerve was caught. A facial palsy must follow immediately if the injection is successful. Consequently, if after an injection no deviation of the face is observed, there is a failure. The injection must be repeated until the paralysis is obtained. Five minims of 80 per cent. solution of alcohol is the amount required. Repeated injections of alcohol do no harm. In my first case seven and in the second case twelve injections showed no untoward symptoms, except a slight burning, which disappeared promptly, and a certain amount of tenderness which may last several days. No permanent damage to the tissues has been observed. In cases of bilateral facial spasm, such as Meige[8] has described, alcoholic injections may be tried on each facial nerve separately. That is, one nerve should be treated first; the facial palsy which follows must disappear completely before attempts are made to inject alcohol into the other nerve. In cases of facial spasm associated with lesions in mesencephalon, similar treatment may be applied, as besides the facial paralysis (which eventually disappears) there are no permanent injuries to the nerve.

Only a genuine facial spasm can be treated with alcoholic injections, as the irritating influence is found in the nerve itself. No other convulsive movement of the face can derive any benefit from it. Tic, being associated with and somewhat dependent on the psychic status of the patient, cannot *a priori* derive any benefit from this treatment. As an example, I may mention a patient with facial tic of several years' duration in whom I produced a facial palsy which lasted three months. During that time occasional twitch of some of the paralyzed muscles could be noticed which of course does not occur in palsies produced in cases of facial spasm. Moreover, as soon as the facial paralysis disappeared, the tic movements returned with all their intensity. A rigorous differential diagnosis between facial spasm and tic must be established before the above-mentioned treatment is undertaken.

As to the intimate action of alcohol on the nerve or on its center, nothing definite can be said at present until experimental investigations will come to our aid.

At the time of writing these notes the patients are free from spasm; thirteen months in the first, nine months in the second case having elapsed since the successful injections of alcohol.

1430 Pine Street.

THE PREVENTION OF POSTOPERATIVE GYNECOLOGIC PSYCHOSES

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Postoperative nervous phenomena are not infrequent complications in gynecologic cases. The severity of the psychoses has called forth an occasional commentary case-report, though the subject in general has received little or no attention from the abler writers on gynecologic problems. The well-known tendency to derangement of the nervous mechanism in gynecologic cases naturally predisposes to postoperative psychic sequelæ. Insomnia, hysteria, acute and chronic melancholia, neurasthenia and suicidal mania are a few of the unfortunate complications that may arise following operation on the female pelvis. Permanency of cure in gynecologic cases is frequently determined by the absence of postoperative psychic sequelæ.

Frequently, of course, the nature of the pelvic pathologic conditions will obviate any possibility of operative relief of associated nervous lesions, and the nature of the gynecologic disease may portend continued or exacerbated manifestation of the psychic disturbances. I believe, however, that in a great majority of cases, the mild or even severe derangements may be prevented or in large part allayed by more careful attention to this feature in the management of gynecologic cases.

There lies in the foreground of our minds knowledge gained by experience that we unconsciously apply to the management of our female cases with the object in view of making for the peace of mind of both patient and operator, both through the period of hospital residence and through after-life. This preventive treatment is naturally instituted with the first meeting or correspondence of patient and operator. Tactful management of correspondence, consultation, anamnesis and examination, all conducted in a spirit of sympathy and assurance to the patient, frequently gains the confidence of the patient to such an extent that serious nervous outbreaks are obviated from the beginning.

A judicious selection of time and place for the operation, the employment of a tactful nurse, a cool, quiet room, a short and comfortable preoperative hospital residence are all factors in precluding a stormy convalescence. The employment of a tactful, reassuring anesthetist in quiet surroundings carries the patient into the operation in proper mental condition for a short and peaceful postoperative experience. A short visit from the operator shortly after the patient regains consciousness, a short visit from one or two tactful relatives on the first day usually suffice to keep the patient in a normal mental condition.

Careful attention to the prevention or alleviation of postoperative pain, permitting free motion of limbs, latitude in change of posture, alcohol rubs or at most a mild sedative, will usually eliminate insomnia and thus the inception of far more serious nervous sequelæ.

Elimination of morphin therapy and the early and frequent use of the rectal tube, together with early evacuation of the bowels remove tympanites as a serious etiologic factor of psychic complications.

The substitution of a soft diet within a day or two after operation and a rapid return to the establishment of the patient's normal preoperative diet is not only excellent physiologic therapy but undoubtedly a great factor in disabusing the patient's mind of the old ideas of invalidism usually conveyed by the liquid "foodless food" régime of former days.

The early institution of the back-rest and removal to a chair within a few days after operation continue the dissipation of the "invalid idea." An early removal to the home not only establishes a shorter and more comfortable convalescence but removes the patient from contaminating associations with other female patients whose *idée fixe* is a devilish desire to impregnate the minds of all patients newly operated on with the hopelessness of their ultimate cure.

In conclusion, I feel that the percentage of patients in whom we effect an ultimate and permanent cure depends largely on personal study of the individual and constant endeavor to so conduct the case as to obviate the pathologic psychic element in the convalescence.

202 Conti Street.

A CASE OF PHENOL (CARBOLIC ACID) GANGRENE

F. BUCKMASTER, M.D.
EFFINGHAM, ILL.

Gangrene of the toes is occasionally caused by the application of weak solutions of phenol. The infrequency of this form of gangrene on other parts of the body is the reason for reporting the following case:

The patient, Mr. J. H. McC., aged 66, is a carriage manufacturer and a resident of St. Louis. Father died of cancer at 67; mother in confinement at 38. There is no other cancer history in the family. Patient is a very healthy-looking man, of good habits, looking much younger than age given, and weighs about 175 pounds. He has had eczema several times, but otherwise has never been sick.

Present trouble: About Aug. 1, 1911, while alighting from a railway train he slightly bruised and abraded the anterior surface of his right leg, just below the knee. Thinking it amounted to nothing at the time, he cleansed it with hydrogen peroxid and placed sterile gauze over the part. About two days later, when he took the dressing off, he asked his druggist to give him something to apply over the surface, as there was still a little tenderness in the part. The druggist gave him what he thought was the ordinary phenolized petrolatum of the drug shop, kept in stock by all of them. After applying this preparation a few times, the tissues broke down into a progressively enlarging gangrenous ulcer, which continued to get larger and deeper, in spite of the care which he gave it. He came for medical attention about it two weeks after the receipt of the bruise.

At that time there was a deep, ragged, gangrenous ulcer, about 2 inches below the patella on the right leg, very much larger than a dollar, with a wide zone of diffusing redness and edema surrounding it; otherwise the patient's condition, including urine, was negative. This ulcer was cleaned out and cared for, for about four weeks, when it was almost healed. He later reported that it was completely healed in one week after he left here. Then it remained healed for about four weeks, or until the middle of October. About that time, while the patient was in Oklahoma on business, he noticed the site of the old ulcer gradually becoming numb, more and more for two or three days, when the part became slightly blistered, leaving a dead-looking sore, as he described it, as large as a dollar, at the site of the old ulcer. He again kept this carefully cleansed with hydrogen peroxid and tincture of iodin and dressed with sterile gauze, but it did no good.

The tincture of iodin, when applied, caused no pain of any kind; the patient came back on November 2, immediately on his return to St. Louis from Oklahoma. At this time the ulcer was dark, dry, shallow, indurated, non-sensitive and painless. This was non-inflammatory and came without known cause. In other words, it was to all appearances suspiciously of a malignant tendency. There were no glandular enlargements with the second ulcer. Urine and general condition was still negative. This ulcer was now given x-ray treatment every other day, and after the second treatment, a decided improvement was observed. At the end of two weeks of x-ray treatment the ulcer was again almost entirely healed, when the patient returned again to his home. This patient's condition will be carefully watched for many months for further evidences of a possibly malignant condition of the part.

A similar case of gangrene from phenolized ointment was reported recently by Dr. Brown,[1] of Decatur.

HEMIATROPHY OF THE TONGUE WITH DEFECTIVE SPEECH [*]

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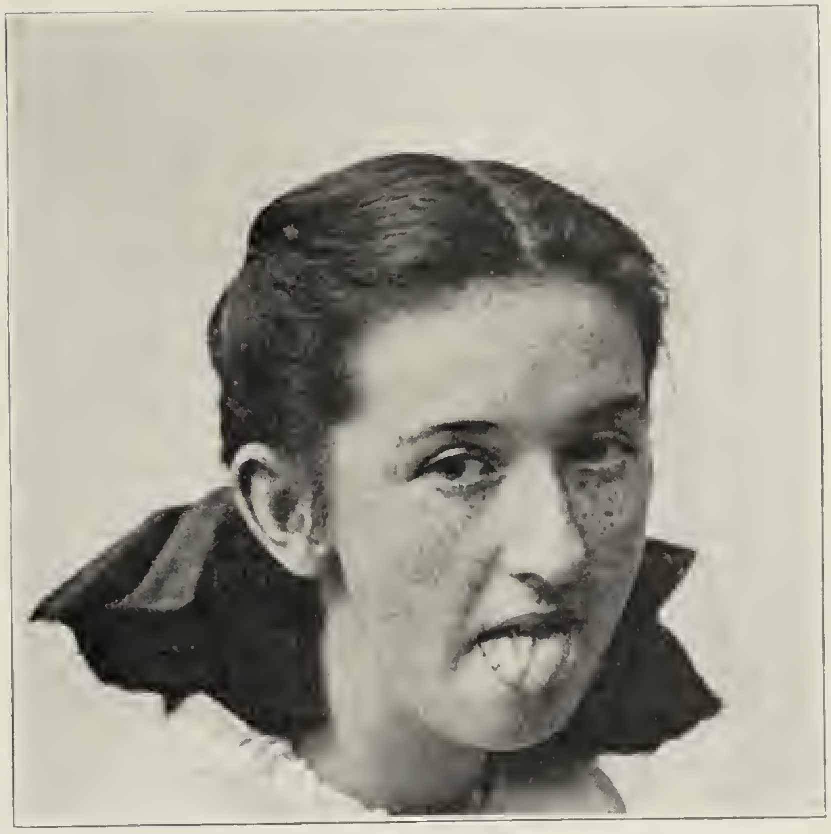
Patient.—A girl, J. M., aged 15, was brought to the Vanderbilt Clinic on account of her defective speech. There was also a suspicion that her intelligence was not fully normal. The patient's birth was normal. She was the third of five children, all the others being normal. At 6 weeks old she had had whooping-cough, with two severe spasms, lasting for five minutes. She had had abscesses three times on the left side of her neck at 1½, 3 and 10 years of age.

Examination.—Her speech was very indistinct, owing to her inability to enunciate properly the sounds of *t, d, s, sh*. Her facial expression was dull and sad. She was unresponsive and very timid. There was marked atrophy of the right side of the tongue with fibrillary twitchings. On protrusion the tongue deviated to the right, as shown in the illustration. The movements of the tongue were clumsy. The right side of the soft palate failed to rise as far as the left side. There was no laryngeal defect. The girl could not whistle; in trying to blow out a flame she failed to pout her lips; there was thus apparently some weakness of the orbicularis oris. It was impossible to decide whether there was any weakness of the muscles of the cheeks. There also seemed to be an indication of weakness of the right sternocleidomastoid, but the point could not be made certain. The face was slightly asymmetrical, but it could not be said that the right side showed any atrophy. The reflexes were all normal and there were no nervous defects, except those noted. An examination of the girl's intelligence by the Binet tests showed the intelligence proper for her age. The conclusion was certain that she had no intellectual defect. The apparent dulness and sadness can be explained as the results of the constant reproof and shame to which her defective speech subjected her. The inaccuracy in producing the sounds of *t, d, s, sh* was evidently due to the atrophy. Usually a weakness of the muscles of the tongue does not produce a marked defect in speech, because the person can generally manage to use his tongue well enough to produce normal sounds. This patient had failed to make the necessary compensations, possibly from timidity or some similar cause.

Treatment and Course.—The diagnosis of the speech defect was that of organic lisping, that is, incorrect enunciation due to defects in the speech organs. The treatment consisted in appropriate exercises. The patient in a few weeks progressed rapidly toward a complete cure of her speech trouble.

The cause of the hemiatrophy cannot be readily given. Weakness of the lips is often observed in connection with atrophy of the tongue. This may be a case of congenital defect of the nucleus of the hypoglossus, which supplies also some of the fibers of the orbicularis oris (Gowers[1]). It may be due to progressive bulbar palsy which up to the present had affected only the hypoglossus. Against this is the fact that the speech trouble had been noticed since early childhood and had not become worse. Another possibility is an anterior poliomyelitis; still another is that of encephalitis.



Hemiatrophy of tongue in patient with defective speech.

130 West Seventieth Street.

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[1] Brown, Everett J.: THE JOURNAL A. M. A., Nov. 11, 1911, p. 1613.

[*] Address before the New York Neurological Society.

[1] Gowers: Diseases of the Nervous System, ii, 50.

Drug Dupes.—A cardinal rule in prescribing should be, never prescribe a preparation of whose exact composition we are ignorant. Yet how few of us live up to such a rule. How often are we the dupes of the drug manufacturers in this respect; we accept what their preparations are said to contain without anything but faith in the honesty of the manufacturer to support our belief.—Stephen F Hale in the *Mask*.

THE TREATMENT OF WOUNDS, WITH REFERENCE TO TETANUS PROPHYLAXIS *

OSCAR BERGHAUSEN, B.A., M.D.
AND
CHARLES E. HOWARD, M.D.
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In June, 1910, the late Dr. N. P. Dandridge proposed the systematic handling of all wounds, punctured, penetrating or lacerated, with the aim of ascertaining the best methods of treating such cases at a large general hospital, particularly with reference to tetanus prophylaxis. As is well known, to avoid the development of tetanus we must begin by treating, in a thorough surgical manner, the wound received. The use of antitetanic serum as a prophylactic agent was resorted to in a large series of cases, in order to test its value.

The following list of instructions were placed in each surgical ward:

> The interns will please carry out the instructions mentioned below for the following classes of cases.
>
> 1. All perforating, penetrating or lacerating wounds contaminated directly by soil or manure, especially those contracted in the streets or about stables.
> 2. All blank-cartridge and giant-cracker perforating and lacerating wounds.
>
> INSTRUCTIONS
>
> 1. In all cases above mentioned remove the clothing and foreign material about the wound.
> 2. Cleanse the surrounding parts with green soap, alcohol, ether and sterile water.
> 3. Remove with sterile forceps any foreign material lying superficially in the wound.
> 4. Cleanse the wound with 5 per cent. phenol (carbolic acid)-0.5 per cent. hydrochloric acid solution.
> 5. Enlarge the opening by free incision if necessary to thoroughly cleanse the wound, or for the removal of foreign substance.
> 6. Use a general anesthetic whenever indicated.
> 7. Pack the wound lightly with gauze soaked in the phenol-hydrochloric acid solution, and dress. Change the dressings daily.
> 8. Immediately after dressing the wound on the first day give 1,500 units of antitetanic serum subcutaneously. This serum can be obtained at the laboratory.
> 9. A careful record must be kept and sent to the laboratory when the patient is discharged.
> 10. In the case of doubt or on the appearance of symptoms resembling tetanus, notify me [Berghausen] at once.

Heretofore such injuries were opened, cleaned and treated with strong phenol solution. The object of using the hydrochloric-phenol mixture as recommended in the text-books was to test its efficiency, since it is attended by less necrosis of tissue. Experience has shown us that treatment of all wounds after the above fashion was sufficient. Particular care was taken to clean out all wounds thoroughly, opening by incision if necessary, to remove all foreign material. Particularly is this necessary in blank-cartridge wounds when wads may have entered. In such cases, in two instances, wads were removed on successive days by different interns, each one thinking that he had removed the last wad. In these cases a general anesthetic may become necessary.

To ascertain how many wads were present in each blank cartridge, four different specimens were bought and examined. In each one two wads were found, but these were found to be rather loosely made and could easily be torn into fragments.

ANTITETANIC SERUM AS A PROPHYLACTIC MEASURE

Owing to the experience of others, we have used only one injection of 1,500 units, usually given in that part of the anatomy nearest the wound. We repeated the injection in three cases in which suppuration persisted. In this connection we wish to quote the results of Sir D. Semple,[1] who says:

> Many people in apparently good health harbor spores of tetanus in healed wounds or in the intestinal tract, and that hidden away in the tissues the spores remain alive and retain their virulence, but do not grow into toxin-producing bacilli. . . . The leukocytes do not always destroy the spores, but when a local suppuration has ceased they may be able to wander away with the spores still in them. . . . Spore-carriers are in danger of suffering from tetanus (a) on the occurrence of great fatigue or exposure to heat or cold, which diminish their resistance; (b) when the site where the spores are lodged becomes converted into a medium, which from being anaerobic and from a failure of phagocytosis, is favorable for the growth of the spores into toxin-producing bacilli; and (c) when a focus of dead tissue forms in a part of the body at a distance from the site where the spores are lodged.

Quinin given hypodermatically may produce a local tissue necrosis; soluble non-irritating substances do not. Semple further asserts that from 10 to 15 c.c. of antitetanic serum renders a patient passively immune for a period of from two to three weeks, and has found it a valuable prophylactic agent when using quinin hypodermatically.

SERUM REACTIONS

These were noted in several cases and were marked by local redness, swelling, urticaria-like eruptions and fever. Owing to patients not reporting as directed, we were unable to obtain complete statistics in this regard. With the aim of preventing such symptoms or of ameliorating them when once developed, atropin sulphate (gr. 1/100-1/120 three times a day, in children less) was given hypodermatically, particularly when numerous injections of serum were made in cases of developed tetanus. We have found that this drug possesses undoubted value in preventing such symptoms. Itching, redness and urticarial eruptions frequently disappeared when atropin was given. We therefore adopted this measure as a routine before all repeated injections of serum. At times such eruptions will appear following the use of atropin sulphate, but never to a very marked degree.

TABLE 1.—CASES IN WHICH SERUM WAS USED PROPHYLACTICALLY; GOOD RESULTS

Character of Injury	Total No. of Cases	Serum Used, in Units
Punctured wounds (mostly made by nails)	72	1500.
Contused and lacerated	4	1500
Cannon-cracker wounds	2	1500
Gun-shot wounds	6	1500
Blank-cartridge wounds	7	1500
Powder burns	5	1500
	96	

In Table 1 will be found a list of cases of patients treated at the hospital with the aim of preventing tetanus after the method described in the foregoing.

Not one case of tetanus developed in the above series of patients.

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* From the Serological Department, Cincinnati Hospital.

[1] Semple, Sir D.: The Relation of Tetanus to the Hypodermic or Intramuscular Injection of Quinin, Paludism, Simla, January 1911. No. 2, p. 32.

In Table 2 will be found those cases in which serum was not used as a prophylactic measure, and in which the local treatment of the wound was good. Of this list not one developed tetanus.

TABLE 2.—CASES IN WHICH SERUM WAS NOT USED PROPHYLACTICALLY; GOOD RESULTS

Character of Injury	No. Cases	Result
Punctured wound—nail	3	Good
Blank-cartridge	3	Good
	6	

In Table 3 will be found those cases in which serum was not used as a prophylactic measure, and which later developed tetanus.

These patients were first seen by us after tetanus had developed, excepting cases 1 and 6. Case 7 occurred in the private practice of Dr. George Krieger of Madisonville, by whom we were consulted and to whom we are indebted. Case 5 occurred in the service of Dr. Casper Hegner at the City Hospital.

Two cases in which serum was used prophylactically, the one caused by a cannon-cracker wound of the neck and followed by extreme cellulitis before admission, the other, caused by stepping on a nail and followed by cellulitis before admission, resulted in sudden death. No autopsy could be secured, but death was evidently due to an embolus, no symptoms of tetanus developing and no anaphylactic phenomena.

TABLE 3.—CASES IN WHICH SERUM WAS NOT USED PROPHYLACTICALLY AND TETANUS DEVELOPED

Cases	Character of Injury	Incubation Period (days)	Early Treatment of Wounds*	Serum (in units) Used Therapeutically (Subcutaneously)	Phenol (Carbolic Acid) Injections in gm.	Albuminuria†	Duration of Illness	Result
1	Multiple puncture wound made by shot	7	—	0	0	—	14 hours	Death.
2	Lacerated wound	4	—	20,000	0.24	+	5 days	Death.
3	Punctured wound (nail)	5	—	0	0.14	+	30 hours	Death.
4	Punctured wound (pick-ax)	8	—	3,000	0	—	4 days	Death.
5	Cut by a barbed wire	14	—	50,000	0	—	14 days	Recovery.
6	Crushed foot	10	+	27,000	0	—	2 days	Death.
7	Cut by a scythe	8	0	27,000	0	—	About 2 weeks.	Recovery.
8	Compound fracture; infected	6	—	27,000	0	?	2 days	Death.

* In this column + means "good," — means "poor" and 0 means "none." † In this column + means "present," — "absent" and 0 "doubtful."

RESULTS WITH AND WITHOUT PROPHYLACTIC SERUM TREATMENT

In the ninety-six cases properly treated locally and by the prophylactic administration of antitetanic serum, not one patient developed tetanus.

In the fourteen cases (Tables 2 and 3) treated without the prophylactic administration of antitetanic serum, eight patients developed tetanus of whom six died.

In the cases (only six, however) properly treated locally and without the prophylactic administration of antitetanic serum, not one patient developed tetanus.

Patient 6 (Table 3) was thoroughly treated locally, but did not receive the prophylactic serum injection and succumbed to tetanus.

We had the opportunity of assisting in the treatment of eight patients with developed tetanus during the past fifteen months, and feel that the information gained is of some value. The usual methods of treatment were employed, antitetanic serum and phenol subcutaneous injections (2 per cent.) included. Briefly stated, our observations are as follows:

Although the cases with a short incubation period offer the least hope, such cases are not necessarily fatal. Case 7 was seen by Dr. Krieger, the first physician consulted in the case, two days after symptoms of tetanus had developed, and yet the manifest symptoms disappeared after one week's careful treatment.

If antitetanic serum is to be used at all, large doses must be employed, although enormous doses, as recommended by those interested in its sale, were not used by us.

Atropin sulphate has some value in controlling serum reactions and is deserving of further trial.

The subcutaneous administration of phenol, 2 per cent. solution, is followed by an early appearance of albumin in the urine. This possibility of damaging the kidneys must be taken into consideration when the injections are used. In the future we shall follow such injections by the rectal administration of a hypertonic neutral salt solution to limit, if possible, this damage to the kidneys, in accordance with the results obtained in experimental nephritis, by Prof. Martin H. Fischer, of this city.

We feel, after a careful study of such injuries as listed in the foregoing, that no wound of such a nature should be treated lightly by any physician. By carefully cleansing each wound, using a general anesthetic if necessary to remove all foreign material, and employing a diluted antiseptic to prevent sepsis, and then treating each one as an open wound, the physician has done much to prevent tetanus. By employing one immunizing dose of 1,500 units of antitetanic serum, to be repeated only when suppuration has not ceased after a week, he can practically assure the patient perfect safety from tetanus.

19 West Seventh Street.

Public Health.—Public health is the foundation on which rests the happiness of the people and the power of the state. Take the most beautiful kingdom, give it intelligent and laborious citizens, prosperous manufacturers, productive agriculture; let arts flourish, let architects cover the land with temples and palaces; in order to defend all these riches, have first-rate weapons, fleets or torpedo boats—if the population remains stationary, if it decreases yearly in vigor and stature, the nation must perish. And that is why I consider that the first duty of a statesman is the care of public health.—Disraeli.

ADIPOSIS PITUITARY SYNDROME OF LANNOIS WITH NARCOLEPTIC FITS, BUT WITHOUT GENITO-URINARY SYMPTOMS

PRELIMINARY REPORT

TOM C. WILLIAMS, M.B., C.M. (Edin.)
AND
JOHN DUNLOP, M.D.
WASHINGTON D. C.

History.—After suffering for a year with vague malaise and headache, a sales-girl of 25 years had for four months fattened enormously, so that her weight increased from 141 to 184 pounds. After seeking advice from various sources without benefit, she consulted Dr. Dunlop, an orthopedist, for she believed that she had sciatica, because of the heavy pain in her back and the dragging weight and tenderness of her legs. Headaches of a dull and heavy type interfered with her pleasure and interest in life, and produced a marked loss of memory and absence of mind. Now and then, indeed, she would fall suddenly fast asleep, even falling over, utterly unable to resist the torpor which seized her. Sometimes in those attacks, she spoke absurdly and even sang. It was this behavior which led to the consultation with me. Vomiting was rare and there was no true vertigo. Now and then the vision dimmed suddenly, and the lines she read would blur. The headache was said to be deep and low in the middle of the head, and felt sometimes like a bursting.

Examination.—The organs were intact; there was great hypertrophy of the body fat which was tender on pressure, but of none of the bones or the mucous tissues. The increase of size was asymmetrical without preponderance on either side. Thus the left thigh measured 28½ inches, the right 28¼; the left knee 16 inches, the right 17⅛, and the left ankle 9¾, the right 9 inches, etc. The veins of the thighs were congested; so was the conjunctiva. The *x*-rays showed a deepening of the sella turcica. We diagnosed a neoplasm in or around the pituitary body, because of the deep headaches, the heaviness and sleepiness, the hypertrophy of the fatty tissues, and the changes in the visual field.

Treatment.—The treatment followed that of Béclere and Jaugeas, consisting of exposure of the pituitary region for about ten minutes every week to Röntgen rays from four different points of the temporal region. The narcolepsy at once ceased, the headaches were diminished, the reflexes became less active and the visual field improved. In spite of some interruption to treatment, the patient was well some six months later, though the weight had not diminished with a restricted diet. We now intend to administer thyroid gland in the hope of increasing the metabolism.

1758 K Street N. W.—1309 Connecticut Avenue.

HEMOPHILIC BLEEDING CHECKED BY FOREIGN BLOOD

J. H. SAYER, M.D
COZAD, NEB.

Patient.—A boy, aged 13, of Danish parentage, with frequent attacks of rheumatism during the last few years. He of a hemophiliac and gives the history of several hemorrhages treated by physicians and dentists, with no complete control of hemorrhage in less than fifteen days. One of the worst was from the tongue, and was finally controlled by actual cautery after two weeks of bleeding. Two days before my visit, the boy had been struck above the right eyebrow by a pump handle. The extravasated blood gravitated to the upper eyelid and formed a tumescence which projected at least 1 inch from the forehead. This burst at school and I was called twenty-four hours later.

I found projecting from the eyebrow a hollow cone formed of blood which had slowly coagulated, from the end of which blood was dropping at the rate of one drop per second.

Treatment and Result.—I removed the cone, cleansed the parts, and found an opening in the skin, three-eighths of an inch long, from which the blood ran freely. I applied in succession hot compresses, ice, epinephrin, iron, caustics and collodion dressings following pressure, none of which had any effect for over five minutes at a time. I then determined to try the following experiment: I cleansed the wound thoroughly and had a hot compress applied with considerable pressure. I then made an incision in the third finger of my left hand, under sterile conditions, and removing the compress, allowed my blood to drop on the wound. A clot formed immediately and not one drop of blood again escaped. After assuring myself that the effect was not temporary, I applied a light dressing and left the patient.

Thirty-six hours later the patient, in his sleep, tore away the dressing and reopened the wound. I was then called and found the hemorrhage as profuse as in the beginning. I again used my blood with the same instantaneous result. I then made a Gifford eye-shield, which I removed three days later, and found the wound completely closed.

This procedure may not be a new one, but it was so to me, and may be of interest to those who are dealing with this class of cases.

RECURRING ADENOIDS IN CHILDREN

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The recurrence of adenoid vegetations after thorough curettage of the rhinopharynx suggests a diseased soil. Why should vegetations recur in some cases and not in others? The neuropathic child in which improper respiration and imperfect oxygenation of the lungs are factors invites reinfection by reason of a tendency to take cold because of subnormal conditions. Imperfect metabolism, especially the metabolism of fat and proteid, will give a deficient structure, which deficiency invites bacterial invasion. A weakened structure will permit the entrance of pathogenic bacteria, hence catarrhal or suppurative manifestations result therefrom. If structural weakness exists and the body is not given the proper food element, then restoratives will be demanded.

When such precautions are neglected after the removal of adenoids, we are not surprised to find a recurring adenoid vegetation. Occasionally we run across children with recurring adenoids, despite the fact that they have been given proper restorative treatment. If no organic lesion is found and a negative history as to syphilis is elicited, then a blood examination should be made to exclude the suspicion of a latent syphilitic infection. It is in such cases that a Wassermann reaction will be appreciated. We must not be satisfied with a negative clinical history regarding syphilis, but must confirm our suspicion of the presence of syphilis by a positive Wassermann reaction. The importance of a positive diagnosis of syphilis will be apparent because a syphilitic child requires treatment. The absence of specific treatment means the growth of the diseased structure with its deficient nutrition.

The coexistence of syphilis and adenoids suggests cause and effect. The frequent coryza in syphilitic infants is well known. We also know that adenoid vegetations *per se* discharge through the nose and throat sufficient to suggest a rhinitis, and this discharge owing to its local irritating properties gives rise to excoriation and results in what is commonly termed artificial eczema. As a rule, we find the cervical glands sufficiently enlarged to become palpable. The general appearance of the skin is sallow and suggests anemia. Eruptions are by no means rare and should be looked for. It is therefore a mistake to presuppose, because a given child has adenoid vegetations, that this condition is due only to local manifestations, and that the only course to pursue is the curettage of the rhinopharynx.

The examination of the patient should consist in looking for syphilids in addition to palpating the liver and spleen. The family history should be carefully inquired into. Recurring adenoids are the source of a great deal of criticism inasmuch as the skill of the previous physician will be questioned.

It is useless to remove by curettage a mass of adenoid vegetations which may be due to or have an underlying foundation of syphilis. Specific treatment also is indicated and must be employed.

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AIMS, PURPOSES AND PROBLEMS OF THE STATE BOARD OF MEDICAL EXAMINERS

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In round numbers there may be said to be two thousand doctors in North Carolina. The average number granted license every year is nearly one hundred. There is, therefore, nearly 5 per cent. of new blood introduced into the profession every year.

The standard of the North Carolina Board of Medical Examiners is somewhat higher than that of some of her neighboring states. On the other hand, many of the northern states have a standard higher than ours. The average number of failures before the North Carolina board (about 18 per cent.) is less than the average of all the states (18 to 20 per cent.).

The Board of Medical Examiners of the State of North Carolina was created by a special act of the legislature in 1859. In point of age it comes third among the state boards of the nation. The Maryland Board was created in 1799, and that of the District of Columbia in 1838. In 1885 it became a misdemeanor to begin the practice of medicine in North Carolina without a license. In 1899 a law was passed forbidding nongraduates to appear before the board. In 1907 came the reciprocity clause, and in 1909 the "limited license" act. Under the last-named, non-graduates may be licensed to practice in the sparsely settled mountain districts.

DIFFICULTIES WITH WHICH THE STATE BOARD HAS TO CONTEND

The responsibility placed on an examining board is enormous. Many of the applicants coming before the board are poor. For four years, probably, they have struggled to keep themselves at college, or they may have borrowed money and their only hope of repaying this is by the practice of their chosen profession. Again, applicants may be married, may have families to support, or their resources may have been exhausted. For such applicants, the board knows that rejection is a serious matter. But sympathy with individual applicants must not result in a lowering of standards.

Again, some of the applicants have strong and influential friends, both in the profession and out of it, who may urge the board to use more leniency. The board may have to face the tears of the wife and the resentment of the friends of a certain applicant whom they have rejected. Again, some who are rejected are sure to insist that partiality or prejudice has been shown and it may be difficult to convince them that the papers were graded without any knowledge of the names of the writers. Such applicants are often ready to believe that the intervention of some influential friend would have secured them license.

Again, many of the applicants are the sons, pupils or special friends of physicians. The rejection of such applicants may not only create enemies for the board, but too frequently their fathers in medicine are led to believe that injustice has been done. Even threats may be used. Twice during the past year in North Carolina, members of the board have been told by physicians that if certain men in whom they were interested were not granted license an appeal would be made to the legislature for their relief. One applicant threatened the board with the courts, while a great many undertake to appeal to the personal sympathy of the members. Such are some of the conditions and influences which tend to prevent the board of medical examiners from enforcing the medical practice act.

THE BOARD'S SOLE RESPONSIBILITY IS TO THE PUBLIC

When a man is granted license to practice medicine he is given a certificate of proficiency. That man goes at once to his chosen field of operation. Unlike the young lawyer, he does not have many years to wait for important cases to come into his hands. His first calls are emergency calls—a leading citizen is shot, a prominent woman has puerperal convulsions or an infant is burned. Such are the calls which a young doctor receives during his novitiate. On his skill and knowledge may depend the life of the patient. To stamp the seal of approval on an ignorant man means the hurrying of many innocent victims to the grave. To license such a man simply because he is poor or in need, means that he will sell knowledge that he does not possess, and that every dollar which passes into his hands has been fraudulently obtained from people whose condition is far more pitiable than his.

The board of examiners undertakes to ascertain an applicant's competency to be entrusted with the care of the sick, and where license is refused it is because the applicant is believed to be unfit for such a responsibility.

To grant license to incompetent men, moreover, tends to lower the standards of the medical profession. The Medical Society of North Carolina is a body, to be a member of which any man may justly feel proud. There is no demand on the part of the public for more physicians, but there is a demand within this society that we from year to year become better physicians. There is a demand that the young graduate of medicine be better prepared to practice than we were at his age. This demand on the part of the medical profession is not only reasonable, but is necessary for the self-respect of our profession. Thousands of competent men are being turned out from our high-class medical schools every year. They are looking for unoccupied fields. Many of them have been born and bred in this state, and because of their superior training they will make highly desirable citizens. There is also a host of poorly prepared men who have attended inferior schools, because the latter were cheap, required no preliminary education and rejected very few applicants for graduation. Between the graduates of these inferior schools and an unsuspecting public stands the board of medical examiners.

Is it desirable that the board turn loose a horde of incompetents on the state while her intelligent sons are seeking homes in other parts of the nation?

QUACKS AND CHARLATANS

Again the medical profession must hold itself aloof from the increasing number of quacks and charlatans, as well as from the many medical cults with which the land is infested. How absurd are the claims made by such cults of a special knowledge of disease obtained by a six-weeks' course of study! And marvelous advantages are always proclaimed by the promulgators of the latest cult, the followers of which frequently meet with an ephemeral success.

But let us not be discouraged. A medical diploma from a reputable school and a certificate from a reputable board mean something beyond the reach of these people, and they know it. Let us not bridge the gulf which divides us from these people by lowering our own standards.

NEED FOR HIGH STANDARDS

We have our limitations. No man feels his own ignorance when facing the great mysteries of life and death more than the so-called learned physician. The fight with death must ever be a losing one, and when the monster claims his victims our vaunted skill is as nothing, and our boasted learning but a bitter wail. And yet, ours is the profession which guards the interests of civilization and makes modern progress possible, while the various medical cults are as camp followers who prey on the wounded and loot the dead.

I repeat, therefore, that both our duty to the public and our duty to ourselves demand that we keep our standards high. As for the North Carolina board, it is quite seldom that a graduate from a reputable medical school fails in his license examination, but the incompetent should know beforehand that they cannot obtain license in this state.

THE POWER AND DUTIES OF THE BOARD

It will be seen, therefore, that the members of the board of medical examiners are merely public servants. The power which the board possesses is granted ostensibly by the laws of the state. Under our form of government the only real law is public opinion. The only people who have any opinion about medical laws—because they are the only ones who think about them—are physicians. Therefore, whatever power the board of medical examiners may possess is derived from the moral support of the medical profession. No one else is in a position to realize the seriousness of a non-compliance with the medical practice act. No illegal practitioner in any town or county will stand an examination if the physicians endorse him as he is.

If the medical profession should stand up and say, "We will have no board of medical examiners," undoubtedly the board of medical examiners would cease to exist. If that radical action were taken, straightway there would flock into every nook and corner of this state a host of medical parasites whose chief stock in trade would be the ignorance and credulity of the people on whom they practiced. The board of medical examiners is the barrier which is defending the public against them.

The board, therefore, is on picket duty. It constitutes the firing line and many are the problems it has to face. It is for the board to consider what preliminary education shall be required of the applicant; what medical schools shall be accounted as satisfactory; what allowance shall be made to applicants who have had a given number of years in practice; how the examination shall be made practical; to what extent reciprocity shall be established with other states; under what conditions the board shall consider the rescinding of a medical license; and how certain much-needed legislation can be secured.

NATION-WIDE PROBLEMS

The North Carolina board is not alone in facing these problems. They confront every state board of medical examiners in the country. There is a National Confederation of State Medical Examining Boards and there is a Council on Medical Education. These bodies are devoted to the problems of medical education and of medical examinations. Among their members may be found some of the ablest men in America, and they have done much to simplify and unify the work of medical colleges and examining boards. The members of the present examining board in North Carolina who have attended the Conference of the Council on Medical Education have returned to the state filled with enthusiasm, and with many practical suggestions for their work. Every state board should have at least one delegate at each annual meeting of the Council on Medical Education.

PRELIMINARY EDUCATION

Most states now require all applicants to have had some preliminary education, and every reputable medical school requires it. Twenty-eight medical schools in this country require students to have completed at least two years of collegiate work before entering the medical course. Thirteen other medical schools require one year of collegiate work for admission. Furthermore, the licensing boards of nine states now demand one or two years of collegiate work as their minimum requirement of preliminary education. Some states could not enter on reciprocal relations with North Carolina because we have no preliminary educational requirement. Repeated efforts have been made to insert the preliminary educational requirement in our law, but it has always been defeated under the mistaken idea that it is a kindness to the poor boy to permit him to enter on a profession for which he is not qualified.

PRACTICAL EXAMINATIONS

There has been a growing feeling in recent years that a written examination does not indicate an applicant's ability to practice medicine. It is felt that each examiner should give the applicant some practical work, and that the general intelligence, proficiency and personal equation of the applicant be taken into consideration. To meet this demand the North Carolina board employs the following methods:

1. The obstetric manikin has been in use many years. In addition to the oral and written work, it provides a satisfactory test of the applicant's knowledge of obstetrics.

2. In the practice of medicine and in surgery a few chronic cases may be found and employed as clinical material. But a healthy subject is more satisfactory. The method of making a physical examination and the pointing out of surgical landmarks quickly reveal the applicant's knowledge of these subjects.

3. In surgery an additional test is employed by requiring applicants to examine surgical instruments, tell their names and show how they are used.

4. The examination in histology is supplemented by use of the microscope; pathologic and bacteriologic specimens are also presented for microscopic examination.

5. In chemistry each applicant makes a practical urinary test and is questioned about other tests.

6. In materia medica the identification of drugs with a few remarks about the same has long been in vogue. With the addition of such practical work the written examinations are made shorter.

RECIPROCITY

The most difficult problem with which the state boards are now contending is that of reciprocity. In North Carolina the law is that the "board of medical examiners shall at their discretion issue a license" by reciprocity. On first thought it would seem wise for a given state to extend to licentiates of neighboring states the privilege of entering on the practice of medicine within her boundaries without an examination. If a man is qualified to practice medicine in one state, why is he not in another? Further consideration, however, shows many reasons why it is not well to thus throw open the doors to every comer who may hold a state license. Among these reasons the following will be considered:

1. With a few state boards the examinations are merely a matter of form. If reciprocal relations were established with these states, many applicants for the North Carolina license would go to these states, take the examination and then demand license in North Carolina by reciprocity.

2. Some states are the homes of very inferior schools. The graduates from these schools have easy sailing in their home state—else they could not exist—but great difficulty in obtaining license in other states. Reciprocal relations with such a state would mean that in many instances the graduates of these schools wishing to locate in North Carolina would after graduation take their examination in the state where the school is located and then apply for reciprocal license in North Carolina.

3. As a rule it is not the successful physician who moves from one state to another, but the man who has failed. Unconditional reciprocity with a neighboring state would be an invitation to every man who has made a failure in his home state to move into North Carolina.

4. There are not less than ten thousand itinerant quacks, moving from town to town, in this country. These men frequently have license in some of the states. There are a few of them in every state. We have them in North Carolina, and I regret to say that some of them are college graduates and licentiates of the state board. There are more of these men in states where there are large cities. To grant unconditional reciprocity to any state would make it possible for such men to move into this state and demand license, and to carry on their damnable traffic in human life protected by the laws of the state. They would be enabled then to present a certificate of approval signed by the board of medical examiners to all who might question their professional standing.

Under the present rules of the North Carolina board this condition of affairs is prevented. Reciprocity is granted on the merit of the individual with little regard to the state from which he comes. With five other states we have established conditional reciprocity, but the North Carolina board reserves to itself the privilege of rejecting any applicant who applies. It will not register any physician through reciprocity until he has appeared before the board in person and shown himself to be a man of intelligence and to have the outward appearance of a gentleman. If he is addicted to alcohol, morphin or other intoxicants he cannot secure a license. Thirty days before his appearance before the board he must have filed with the secretary an application showing his professional attainments, accompanied by certificates of character and of his value as a citizen. The secretary then makes inquiry concerning the applicant and secures absolute proof of his high standing both from a moral and mental standpoint. In this way those who have been for a number of years in reputable practice in another state, and whose educational attainments are regarded as satisfactory, can as a rule obtain reciprocal license in North Carolina. Itinerants, alcoholics and the unqualified are rejected.

The state board of medical examiners can revoke a license if the holder thereof has been guilty of "grossly immoral conduct." It is practically impossible for the board to take such action, however, unless the physician has been convicted in the courts. The reason for this is obvious. The board does not constitute a court and has no power to summon witnesses. It cannot compel a man to appear for trial, nor can it convict him without hearing his defense. It cannot force a man to stop practice, nor can it fine or imprison him. If a man's license were rescinded he could continue in practice until the courts compelled him to stop. During its sessions the board does not have sufficient time to consider these cases, nor would it receive compensation for holding an extra session. In dealing with any case of illegal practice the final appeal is to a jury. Every year the complaint is made that no jury will convict these men, which but shows the helplessness of the board in dealing with these cases. For the board to rescind the license of a man whom no jury will convict would probably result in a damage suit against the board.

EPIDEMIC POLIOMYELITIS

TWELFTH NOTE: THE VISCERAL LESIONS OF HUMAN CASES *

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Epidemic poliomyelitis has been viewed as a disease of the central nervous system in which general visceral lesions, if present, are inconspicuous and unimportant. The demonstration of the specific nature of the infection revives the question whether, after all, the significant attendant lesions are confined to the nervous organs. Accurate histologic studies of the disease in human beings and monkeys have shown that the lesions in the nervous system are widely spread and affect the spinal cord, intervertebral ganglia, medulla, pons, cerebellum, cerebrum, and meninges, and both the gray and the white matter of the spinal cord and brain are subject to injury. It is not surprising, therefore, to find that general visceral lesions are present in fatal human cases.

During the past summer the organs from eleven children, ranging in age from 3½ months to 9½ years, became available for study. Of the eleven children, ten died on the third to the eleventh day of illness, and one child, having survived the acute stage of poliomyelitis, succumbed two months later to laryngeal diphtheria. The cases occurred in the services of the Hospital of the Rockefeller Institute, the Smith Infirmary, Staten Island, and the New York Hospital. For the outside specimens we are indebted to Drs. Donovan and Elser.

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* From the Rockefeller Institute for Medical Research, New York.

LYMPHATIC SYSTEM

In 1888, Rissler[1] described the pathologic findings in three acute cases of epidemic poliomyelitis that had been observed clinically by Medin. Two were in children, aged 5 months and 4½ years, respectively, and one was in an adult 21 years old. Both children presented swelling of the agminated and solitary follicles of the intestine and enlargement of the mesenteric glands and of the spleen. The adult showed a swollen spleen, but no change was observed in the mesenteric glands. The liver and kidneys are stated to have shown, in all cases, cloudy swelling. There are no records of microscopic examinations. In 1910, Strauss[2] reported on the pathologic conditions observed in four children, ranging in age from 1 to 9 years, who succumbed during the acute stage of poliomyelitis. The findings, which were practically uniform, consisted of enlarged thymus, swollen mesenteric glands, hypertrophied agminated nodules of the intestine, and prominence of the Malpighian bodies of the spleen. The records of the microscopic changes are very brief. The spleen and mesenteric lymphatic glands are stated to have shown hyperplasia of the lymphoid follicles and "acute inflammation". Among the other students of the disease, Harbitz and Scheel,[3] and Wickman[4] may be mentioned as alluding to hypertrophy of the lymphoid tissue of the intestine and the spleen in children. In adults, this condition has either been little or not at all developed or overlooked at autopsy.

All the fatal cases examined by us showed some, and usually a high degree of hypertrophy of the lymphoid tissues. The affection of these tissues was wide-spread, if not universal, and included the tonsils, small intestine, thymus and the superficial and deep lymphatic glands. The glands about the trachea and bronchi and those of the abdominal cavity were usually much enlarged and definitely softened in consistence. The mucosa of the large intestine escaped affection, although the mesocolic glands did not. While the cervical, axillary and inguinal nodes do not become prominent, they all showed definite enlargement to the naked eye. The spleen was somewhat enlarged and the appearance was universally altered. The Malpighian bodies were prominent, and the pulp was increased and of dark or grayish hue. Defects in the intestinal mucosa were never observed. The necropsies were performed a few hours after death, so that the organs were secured in a state free from postmortem changes.

HISTOLOGIC EXAMINATION

The significant microscopic appearances are of two kinds: those affecting the lymphoid tissues and those affecting the parenchymatous organs. The former are not only generally present, but are also of quite uniform character. It should be stated, first, that the microscopic lymphoid nodules in the walls of the blood-vessels and bronchi in the lungs, and in the periportal connective tissue in the liver, tend to be increased. The characteristic lesions consist of hyperplasia of cells of the lymph-nodes and of the lymph-sinuses of the lymphatic glands and of the corresponding parts of the spleen and hemolymph glands. The most striking effect is that of the nodes, the centers of which show transformation into pale areas composed of cells of the endothelioid type. The histologic appearance is very much like that of the mesenteric glands in typhoid fever, as described and figured by Mallory.[5] The proliferated cells are probably those of the reticulum; and many are in a state of degeneration and disorganization. Where the latter process is advanced, a rich emigration of polynuclear leukocytes has taken place. The degree of cell-inclusion of lymphoid cells, cell-fragments and red corpuscles by the endothelioid cells, is small and far less than in typhoid fever. Mitotic figures are fairly frequent in the nodes, but they are far more frequent in the lymph-sinuses, where the same proliferative process is going on. There appears to be less necrosis of cells in the sinuses than in the nodes. This process is general throughout the body; it exists in the tonsillar tissue, in the intestinal mucosa and in all the superficial and deep lymphatic glands. In the intestine, the diffuse lymphoid tissue of the mucosa adjacent to the lymph-nodules is affected, but the proliferated cells do not invade the submucosa, muscle and peritoneum, as in typhoid fever, and the epithelial layer covering the swollen nodules is intact.

The characteristic appearances observed in the parenchymatous organs relate to the lungs and the liver. The lungs, in several instances, show within the capillary and other small vessels a considerable number of myeloid cells of the megakaryocytic type. Similar cells are found in some sections of the spleen. But the lesions in the liver are conspicuous and, apparently, constant. They consist of hyaline focal necrosis of liver-cells, followed by regeneration and invasion by lymphoid cells and polynuclear leukocytes. The number of areas of necrosis is remarkably large; the extent of the necrosis varies from a few cells to an eighth of a lobule. The liver-cells appear hyaline, stain deeply in eosin, are coalesced, and are sometimes in process of disintegration. The location of the necroses is remarkable; they are not infrequently adjacent to the portal spaces, but they are far more common about the central and sublobular veins. The smaller ones are readily overlooked; the larger ones resemble the "lymphoid-nodules," so-called, of the liver in typhoid fever. What is remarkable is the large number present in the sections—a dozen or a score or more of separate areas may occur in an ordinary section. The rapidity with which regeneration is attempted is a striking feature; proliferated nuclei of liver cells, arranged often in double rows so as to simulate bile-ducts, occur in all the specimens. When it is recalled that the obvious illness in some instances was only of three or four days' duration, and in most cases was less than seven days, both the wide extent of the necrotic injury and of the marked effort at repair are worthy of being noted.

SUMMARY

A study in children of the general visceral lesions of epidemic poliomyelitis leads us to place the disease among the affections in which the organs generally suffer injury. The main injury appears to be inflicted on the nervous organs, next on the lymphatic organs, and last on the parenchymatous organs. Of the last, the focal necrotic lesions of the liver are especially impressive. Whether the organic lesions, exclusive of those of the nervous system, are to be attributed to parasitic action or to the action of toxic elements of parasitic origin, is, at present, a matter of conjecture. But the polymorphonuclearcytosis of epidemic poliomyelitis is caused not only by the lesions of the nervous system, but also by lesions of the lymphatic tissues and liver. This consideration will serve to explain certain discrepancies in the cell-findings in the cerebrospinal fluid, removed by lumbar puncture, and in the circulating blood.

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[1] Rissler: Zur Kenntniss der Veränderungen des Nervensystems bei Poliomyelitis anterior acuta, Nord. med. Ark., 1888, xx, No. 22, p. 1.

[2] Strauss: The Pathology of Acute Poliomyelitis, Report of the Collective Investigation Committee on the New York Epidemic of 1907, p. 68.

[3] Harbitz and Scheel: Pathologisch-anatomische Untersuchungen über akute Poliomyelitis, Christiania, 1907.

[4] Wickman: Die akute Poliomyelitis, etc., Handb. d. Neurol., Berlin, 1911.

[5] Mallory: A Histologic Study of Typhoid Fever, Jour. Exper. Med., 1898, iii, 611.

Sixty-Sixth Street and Avenue A.

REPORT OF A CASE OF PAROXYSMAL TACHYCARDIA *

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Last year I published a paper on paroxysmal tachycardia[1] in which I reported one case which had been under observation for about three years. This patient has a mitral stenosis. She is still seen occasionally, has better general health than for several years, but is subject to these attacks at regular intervals. Another case came under my observation last May, and it presents certain interesting features which prompt me to report it.

History.—This patient, a married woman of 29, came to me complaining of a distressing irregularity of the heart. A few weeks previously she had had a miscarriage followed by a peritonitis. I did not see her during this time. At my first visit she complained of weakness, shortness of breath, and pain in the cardiac region in addition to the irregularity mentioned above. I found no murmur, the heart slightly enlarged to the left (nipple line), sounds at the apex diffuse, with some tenderness in the fifth intercostal space just outside the nipple line. There was no arhythmia but an apparent unevenness in the force of the beats, as though the ventricular contraction were incomplete. In view of the later developments, this seemed to be an interference with nervous impulse rather than muscular insufficiency. The patient gave an interesting cardiac history. At the age of 13 she had jumped rope until her heart gave out. She was confined to bed at this time and was very sick. At intervals since she has had attacks of rapid heart, or "palpitation." These attacks always begin with a "thud" and she realizes instantly that an "attack" is on. It ceases as suddenly as it began, and is followed by a momentary faintness, after which the patient is conscious of no after effects. The duration varies from a few minutes to eight or nine hours. She sometimes wakes out of a sound sleep at night to find her heart racing, while more often it follows some severe exertion. These attacks have now persisted for sixteen years with no essential change. She has a few times noticed that the palpitation would cease after some sudden movement, such as jumping abruptly out of bed. From this story I made a provisional diagnosis of paroxysmal tachycardia and asked the patient to call me when she had an attack. Bearing in mind that the pathology of this condition is a fibrosis of the primitive cardiac tissue, it is not difficult to believe in the possibility of such a traumatic origin as that mentioned.

Treatment and Result.—October 29 I was fortunate enough to see her in what she called a typical attack. Her pulse was 192, regular, embryocardial, no murmur; patient anxious, skin moist, breath short. She thought this attack was lasting too long; it had already persisted three hours. As soon as I was sure of the condition, I explained to her that no drugs were known to have any effect on the immediate attack and suggested trying the postural methods referred to in my previous paper. She was first placed with her head down and instructed to take deep breaths, to hold and to push. This only choked her. After several other positions were tried without success, I advised the patient to continue these efforts at intervals and was putting on my overcoat to go, when she sat up in bed to try again. She folded her arms tightly across her chest, the right arm passing directly over her heart, leaned forward, took a deep breath, closed her glottis, and then compressing her chest with her arms, pushed as hard as possible. Then instantly she looked up and said, "It has stopped." I grasped her wrist and found that her pulse, which two minutes before had been 192, had now dropped to 96. In two minutes more she was walking about the room feeling as well as ever and discussing her attack as though it had been weeks before.

The interesting points in the case are:

1. The persistence of the attacks for sixteen years, in a person otherwise well and in a heart without valvular defect.
2. The unusual traumatic origin.
3. The interruption of the nodal rhythm and immediate relief by the deliberate and persistent attempts of the patient to increase her intrathracic pressure under medical direction.

32 Adams Avenue, West.

PUBLIC AGITATION AND SOME UNNECESSARY ADENECTOMIES

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There is no abnormal condition pertaining to childhood that has received greater publicity during recent years than that of adenoids. The profession has known for many years the evils attending this particular lymphatic enlargement, and has done much to enlighten the public on its harm. The newspapers and magazines must be given credit for the wide-spread dissemination of information among the laity, while public lectures by physicians in the larger cities, notably in Chicago, have had good effects. This agitation has reached the stage at which city health departments, acting through salaried inspectors, are practically excluding from the public schools children thus afflicted until the defect has been remedied. It is doubtful if there is anywhere within the domain of medicine and surgery a class of cases that show such uniformly satisfactory results as these. It has been my privilege to witness results of the adenoid operation in thousands of cases and such an experience must necessarily convince one of its great usefulness in properly selected cases.

Without depreciating in the least the good work done in this important field, however, I would like to sound a note of warning. The diagnosis of adenoid enlargement is relatively easy and for this reason is undoubtedly arrived at in many cases by the "snap-shot" method. The clinical picture is well known—the open mouth, protruding upper teeth, high-arched palate, the staring expression, history of sleeping with open mouth, snoring, restlessness, night terrors, imperfect development of the nares, impairment of voice tones, and in many cases faulty mentality. In brief, there are evidences of interference with nasal breathing and proper oxygenation. These signs are so clearly apparent in many cases that an actual, painstaking examination of the child is not made.

The steady increase in the number of children who apply to the free clinic for treatment, with a ready-made diagnosis and a prearranged method of procedure, has forcibly called my attention to the careless tendency to omit proper diagnosis. It is by no means unusual for parents to volunteer the positive information that their children have adenoids and request immediate operation. They know something of the signs and symptoms and have made their own diagnosis, perhaps with more or less assistance from the neighbors. To convince some of them that they are wrong is not always easy, and to refuse to operate in certain cases causes evident disappointment and often a parting threat to have the desired operation performed elsewhere. Then there are the cases that have been passed on by the school inspectors. To their credit it must be said that they are usually correct in their instructions to parents, but they have many children to examine within limited hours and it is no doubt lack of time rather than lack of caution that is to blame for a small percentage of diagnoses that may be disputed. Still other cases of this sort are brought in by visiting nurses, who themselves have discovered what seem unmistakable signs of adenoids. A common source of fault is the presumption that, because in a given case there is enlargement of the faucial tonsils there must necessarily be troublesome enlargement of adenoids. A careful examination of the patients coming from various sources to the dispensary for adenectomy shows a few to be suffering from some obstruction to breathing other than adenoids. This paper is written in the interest of these occasional cases in which the adenoid operation is not clearly required.

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* Read before the Wayne County (Mich.) Medical Society, December, 1911.

[1] THE JOURNAL A. M. A., June 4, 1910, p. 1861.

Adenoids, also referred to as the pharyngeal tonsil and Luschka's tonsil, occupy a position in the vault of the pharynx, or nasopharynx, and are found variously distributed over the posterior wall. The adenoid mass, the two faucial tonsils and the lingual tonsil at the base of the tongue make up the lymphoid ring of Waldeyer, so called because of forming a more or less complete circle at the entrance to the pharynx. That there is a definite relationship between these various groups of lymphoid tissue cannot be disputed. Hypertrophy of one is usually accompanied by enlargement of the others to a variable degree, but this is no reliable criterion. For instance, many cases are observed in which the faucial tonsils are considerably enlarged, but without a noticeable increase in size of the pharyngeal tonsil. Again, we frequently find cases which demand attention because of a large adenoid mass, but in which there is no history of tonsillitis or sufficient change in the size or structure of the faucial tonsils to warrant their removal at the same time. Another exception to the alleged constant relationship between these lymphoid masses is that hypertrophy of the lingual tonsil is rare in childhood, during that period of greatest activity on the part of the other lymphoid structures. On the contrary, the lingual tonsil is prone to hypertrophy in adult life, at a time when its neighbors are quiescent. Therefore, reasoning from these well-known facts, it is my belief that we should take nothing for granted, but make our examination of these cases thorough before submitting a positive diagnosis and urging operation.

It is true that adenoid hypertrophy can often be diagnosed at a glance. The adenoid face or expression is pictured in every text-book on rhinology; but it is our ability to make a correct offhand diagnosis in most of these cases that is likely to lead us into occasional error.

Broadly speaking, any other obstruction of the nose may produce the same symptoms, and, in course of time, the same outward signs as those attributed to adenoids. Hypertrophic rhinitis is quite as prevalent in childhood as at any other time of life, and every rhinologist has observed many children who were unable to breathe through the nose with any satisfaction because of enlargement of the turbinate bodies. Deflections of the nasal septum and spurs are common to childhood and cause nasal stenosis. Foreign bodies are also obstructive and may cause total occlusion of the nares. This calls to mind a clinical case in which a little girl was brought for operation on the advice of a physician who had pronounced it adenoids. The patient was unable to breathe through the nose and there was a constant profuse mucopurulent discharge. A better example of the "mouth-breather" would be hard to find. The mother said that the same condition had then persisted for a year. Examination of the nose showed a foreign body firmly imbedded in the right nostril well posteriorly. It proved to be a shoe-button which, as a source of irritation and infection, had effectually closed both nostrils. Normal breathing was restored in a few weeks without an adenoid operation.

Another factor that may lead to error is the high arched palate and irregular protruding front teeth. This deformity is invariably associated in the literature with adenoid enlargement, but such association may as often be fanciful as real. That the two are frequently coexistent is acknowledged, but to make a diagnosis of adenoid hypertrophy from a casual inspection of the hard palate is the height of presumption.

Another cause of difficult nasal breathing is some congenital or acquired deformity in that region. For example, a slight anterior deviation of the spine so as to encroach on the nasopharyngeal space has been known to produce the symptom-complex of adenoids. Furthermore, a considerable hypertrophy of faucial tonsils, even in the absence of any appreciable adenoid enlargement, may easily confuse one without a careful examination.

Every child has normally a small mass of lymphoid tissue in the nasopharynx. This may vary in size from a few nodules no larger than peas to a growth the size of a hickory-nut, or even larger. As to its location, the bulk of the mass may be located in the median line with smaller collections to either side, the bulk may be laterally placed, or, in a certain class of cases, there may not be much enlargement, but such tissue as there is has located most disadvantageously over one or both Eustachian orifices. Occasionally the adenoid tissue may be found clinging to the choanæ or may extend downward sufficiently to be seen directly behind the uvula.

The symptomatology of adenoid enlargement covers a wide range, depending largely on the relation between the size of the mass and the dimensions of the nasopharyngeal cavity that contains it. For example, little or no disturbance of nasal breathing may arise from a fair-sized adenoid growth within a spacious nasopharynx. On the other hand, a small nasopharynx cannot accommodate much adenoid tissue without blocking the nares and causing marked ill effects.

It is not intended here, however, to attempt a detailed consideration of the various symptoms, the pathology or treatment. The purpose of this paper is merely to urge that we be not carried away by agitation or by enthusiasm, or by the desires or opinions of others, but that every suspected case of adenoids be placed on its own individual merits, that it be subjected to a careful examination to determine whether or not that particular child must undergo even so slight an operation. Indiscriminate operating in this class of cases is all the more objectionable in the light of our limited knowledge of the physiology of these tonsillar structures.

15 East Washington Street.

SYNCHRONOUS LIGATION OF SUBCLAVIAN AND CAROTID FOR ANEURYSM OF INNOMINATE

REPORT OF A SUCCESSFUL CASE WITH NEW TECHNIC

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COLUMBUS, O.

Statistics afford only the most gloomy prognosis in the treatment of aneurysm of the innominate, and ligation of the subclavian in its first portion gives a mortality that is simply frightful. Thus Bryant, in his "Operative Surgery," gives twenty-one operations with nineteen deaths, and it is probable that while all successful ligations have been reported, many of the unsuccessful have failed to find their way into print. Binnie ("Operative Surgery") declares the first portion of this artery "unsuitable for ligation," and gives no technic for the operation. The only treatment, however, of innominate aneurysm requires ligation either of the innominate or of the subclavian and carotid, and notwithstanding the dangers of the procedure the operation must be undertaken in suitable cases.

Patient.—Mrs. F. M. R., aged 52, married 34 years, consulted me May 14, 1910, having been referred to me by the late Dr. A. W. Jones of Westerville; ten children, of whom eight living, in good health, the youngest, aged 10. Two children had died of summer complaint. Labors had been natural; two miscarriages without trouble. Patient's appetite was usually good; bowels usually constipated; kidneys normal; menstruation normal. In the previous December patient had first noticed a throbbing in her neck on the right side. Had no pain there, but discovered the lump accidentally. She had consulted Dr. Jones two weeks before, who made a diagnosis of aneurysm and referred her to me.

Examination.—An aneurysm was shown, involving apparently the beginning of the carotid and subclavian. It extended about 1½ inches above the clavicle. Radiographs confirmed the diagnosis and showed the involvement of the innominate. The matter was explained to the patient and her husband, and operation was accepted.

Operation.—May 19, 1910, under ether anesthesia. I had decided that the best exposure could be made by an incision nearly at right angles to the clavicle rather than by the classical incision recommended by the text-books. This incision was accordingly made directly over the space between the two attachments of the sternocleidomastoid. I had planned, if it became necessary, to cut one of these attachments, but this was unnecessary. A single superficial blood-vessel was controlled by a hemostat, and after that there was no hemorrhage; the field of operation was entirely dry, and the exposure perfect. The distal end of the innominate, with its bifurcation into the subclavian and carotid, was directly in the center of the field. A ligature could have been placed with utmost ease on the innominate, but it seemed safer to ligate its two branches, and accordingly these vessels were ligated with kangaroo tendon, using a double ligature to each, the ligatures being about one-fourth inch apart. Care was taken to use only sufficient force to occlude the vessel without injuring its coats. Incision closed without drainage.

Postoperative History.—Pulsation at the wrist at once disappeared. After some three or four days it could be detected faintly. (Even now, nearly thirteen months after operation, the pulsation at that point is decidedly weaker than on hte opposite.) Patient recovered from the anesthetic nicely, and her only complaint was of headache. This headache was at first quite severe, but gradually diminished and was gone before she left the hospital. The right arm was a little cooler than the left, but at no time was there any danger of gangrene. The incision healed by first intention, and the patient left the hospital June 9.

Course.—At the present time, Dec. 4, 1911, patient's health seems to be perfect. There is a small lump in the region of the operation, which conveys to the finger the impression of an impulse coming from the aorta. This lump is presumably the obliterated innominate. Patient has no pain, is doing her own work as usual, and feeling entirely well now, more than eighteen months after the operation.

In reviewing the literature on this subject, previous to operating, I was somewhat disturbed by the suggestion of Halsted that in cases of this kind the blood-vessels should not be ligated, but should be merely compressed for several days so as to determine whether ligation would be safe. Could compression for only a few hours enable one to determine its safety, the proposition would seem to be feasible, but since we know that disaster may follow a good many days after ligation, it seemed to me very evident that this preliminary compression would not be practicable, at least in a case of this kind. The danger of failure in the collateral cerebral circulation cannot be anticipated or guarded against, but must be accepted as one of the risks of the operation. I have no doubt that had I resorted to preliminary compression, with the onset of the headache I should have felt that the collateral circulation could not be established, and would have released the compression and abandoned the operation.

The method of exposure which I adopted was certainly the best possible in this particular case, but I can find no record of its having been adopted by any surgeon previously.

405 E. Town Street.

MARKED HEMORRHAGE FROM THE BOWEL IN FIVE CASES OF TUBERCULOSIS *

LeROY S. PETERS, M.D.
AND
E. S. BULLOCK, M.D.
SILVER CITY, N. MEX.

Until the past five months, from an experience covering a period of fifteen years in the treatment of tuberculosis, a case of marked hemorrhage from the bowel has never occurred among our patients. Nor in a systematic search of the literature have we been able to find reference to such a condition. Dr. Sherman G. Bonney of Denver has sent us a report of two cases coming under his observation. Col. George E. Bushnell, Maj. C. E. Koerper and Capt. E. H. Bruns, of the United States General Hospital for Tuberculosis, Fort Bayard, N. Mex., all inform us that no such condition has been met with in their work there. Beginning with June, 1911, however, we have had three cases which, together with those of Dr. Bonney's, form the basis of this report.

Case 1 (Bonney).—Patient dead after marked hemorrhage from bowel.

Case 2 (Bonney).—Male, aged 42. Tuberculosis for fifteen years. Marked fibrosis with cardiac dislocation and cavity formation. No fever. No evidence of intestinal disturbance for some months previously. Tarry stools reported for some time before copious hemorrhage from bowel.

Patient became thoroughly exsanguinated, but under immediate stimulation, rest in bed six to eight weeks with regulated diet and opiates, recovery eventually took place.

Case 3 (Peters and Bullock).—Male, aged 23. Tuberculosis for three years; Turban stage iii. Temperature, 102; pulse, 100; blood-pressure, 116. Tuberculosis of intestines.

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* From the New Mexico Cottage Sanatorium

Three to four movements a day with pain, mucous and blood-streaked stools. Severe hemorrhage from bowel, Nov. 4, 1911, which ended in death.

Case 4. (Peters and Bullock).—Admitted March 9, 1911. Male, aged 27. Tuberculosis two years; Turban stage iii. Temperature 100.1; pulse, 90; blood-pressure, 144. Tuberculosis of the intestines, fistula in ano, seven to eight movements a day with pain and gas. Mucous and blood-streaked stools. June 15, severe hemorrhage from bowel with rise of temperature to 103. Several smaller hemorrhages covering a period of three months in all.

With absolute rest, liquid diet and opiates patient went on to good recovery. All symptoms of tuberculosis of intestines disappeared; patient gained 13 pounds. Feels well, appears well; temperature, 99; pulse, 80; hemoglobin, 100. This patient had several small pulmonary hemorrhages at the onset of the disease.

Case 5 (Peters and Bullock).—Admitted Aug. 2, 1911. Male, aged 29. Tuberculosis six years; Turban stage iii. Temperature, 99.2; pulse, 100; blood-pressure, 138. No symptoms of intestinal tuberculosis.

Temperature suddenly rose to 104, followed by severe hemorrhage from bowel with two smaller hemorrhages on the two succeeding days. Temperature fell by lysis and under absolute rest, liquid diet and opiates, patient made good recovery. There were no further symptoms of bowel condition.

It is interesting to note that in one of Dr. Bonney's cases and in one of ours, no symptoms of tuberculosis of the intestines were noted, the hemorrhage being the first evidence of the disease. The fatal case in our series was that of a far-advanced consumptive who was too weak to stand the loss of blood and whom we expected to die at any time as a result of his general weakened condition. Whether or not this is true of Dr. Bonney's case we are unable to state. Our other patients, as well as Dr. Bonney's remaining patient, made good recoveries and suffered apparently no ill effects from the bleeding. In all of our cases a Widal test was made to satisfy ourselves of the non-existence of typhoid, although the symptoms were never at any time characteristic of that disease.

A CASE OF DOUBLE TUBAL PREGNANCY

EDWARD T. MILLIGAN, M.D.
DETROIT

The patient, Mrs. G., aged 29, was the mother of three children. All her confinements had been normal. She nursed her last child, now 15 months old, until it was 9 months of age. One month from the time she ceased nursing her baby, the patient menstruated every twenty-eight days. July, 1911, menstruation was absent. She believed it was due to pregnancy.

September 30, the patient was seized with intense pain in the abdomen, followed by a feeling of profound exhaustion. After expelling a great quantity of gas and taking a swallow of whisky, she regained her strength.

October 16 I was called to see her at 4 a. m. and found her suffering from severe shock. I found a soft mass occupying each side of the uterus and made a diagnosis of ruptured extra-uterine pregnancy. She was removed to St. Mary's Hospital and the next day, on opening the abdomen, an ectopic pregnancy of the right and left tubes was revealed. There was a three months' fetus in each tube. Recovery was uneventful and the patient returned home, Nov. 1, 1911.

687 Jefferson Avenue.

And There Were Giants in Those Days.—We occasionally run across funny things in manuscripts; here is one: "While walking along a street in Pittsburgh, a man who was cleaning windows fell from the fourth story and landed on the patient."

Therapeutics

RECTAL ALIMENTATION

When a patient is unable to take an adequate amount of nourishment by the stomach, or, having taken it, is unable to retain or digest it, the physician is obliged to try to assist nutrition by way of the rectum.

Instances have been related in which patients have survived when fed entirely by the rectum for periods of from several weeks to many months, but such cases are rarely seen at the present day, and it is believed that at least some of these reports were made under a misapprehension of the true state of affairs.

It is customary to estimate the amount of food required to maintain an equilibrium of nutrition by a patient at rest at 1,800 calories. Dr. David L. Edsall, basing his opinion on observations made by himself and Dr. Caspar Miller (*Am. Jour. Med. Sc.,* November, 1906, p. 679), has estimated the amount of nutriment which can be absorbed from the colon and rectum in twenty-four hours as from 200 to 300 calories; so that if these figures are correct, it is perfectly apparent that it is entirely impossible to maintain adequate nutrition of the body by this method of feeding alone.

The later researches of Dr. L. M. Gompertz, of New Haven, Conn., reported in the Transactions of the Connecticut State Medical Society, 1910, p. 240, show that iodid of potassium dissolved in water and injected into the rectum is absorbed, and excreted so rapidly in the urine and saliva, that it may be detected after intervals varying from eight to twenty-five minutes. He also showed that solutions of dextrose varying in strength from 3 to 15 per cent. were absorbed very freely by the rectal and colon mucous membrane. He found that when 200 or 300 gm. were injected in 10 or 15 per cent. solution, from one-half to three-fourths of the entire amount was absorbed, so that in this way he was able to provide about one-third of the necessary number of calories to sustain the body while at rest.

Patients often acknowledge that they feel very much better after they have received a nutrient enema. This is probably due to two causes. One is the psychical effect of feeling that they are taking nutriment. The other is the increase in the total fluids of the body, due to the absorption of the watery part of the enema. This deficiency of fluids in the system is one of the sources of great discomfort experienced by patients who are not taking the usual amount of solid and liquid food.

One of the first questions is as to what extent food injected into the rectum is digested. It is probable that this change occurs to a very limited extent, if at all. It has been pointed out that the mucous membrane of the rectum contains the follicles of Lieberkühn and also solitary glands, and that possibly under the stimulation of the presence of food in that organ, their function may be stimulated, so that they may take some part in the digestion of the food. Furthermore, it is possible that some of the enzymes secreted in the small intestine are not entirely utilized in that part of the digestive tract, but pass on into the large intestine and act on any undigested food present there. It is also pointed out that when a nutrient enema is retained in the colon, frequently a reverse peristalsis is set up, so that the food is carried back as far as the cecum, and there is considerable evidence to prove that in very rare instances this reverse peristalsis may continue until the food which is injected into the rectum is expelled from the mouth.

When nutrient material injected into the colon is carried by reverse peristalsis into the small intestine, it probably undergoes some digestion in the same way as when taken by the mouth.

In the usual absence of any digestive change in the food injected into the rectum it has been observed that very little of the fat is absorbed, that somewhat more of the protein is absorbed, but the exact amount of this has not been definitely determined, and evidently varies in different individuals. The ordinary forms of carbohydrate are also absorbed to but a very limited extent. On the other hand, as already mentioned, water is very freely absorbed, and sodium chlorid in solution in water is also very completely absorbed.

Another objection to the administration of undigested food by the rectum is that it is liable to undergo fermentation, with the production of gas, and this is likely to cause irritation, congestion and inflammation of the colon mucous membrane, so that the nutrient enema is retained with difficulty, or not at all.

At the present time there seems to be good reason to believe that ordinary food, undigested, is not very freely absorbed by the rectal and colon mucous membrane; consequently most practitioners who employ this form of alimentation use a predigested food. Milk and eggs are readily available for this form of nutrition. A formula attributed to H. C. Wood is as follows:

℞	Gm. or c.c.		
Pancreatini	|30	or	gr. v
Sodii bicarbonatis..................	1|30		gr. xx
Aquæ ....30|			fl. ʒi

M. et Sig.: Add to 1 pint of milk.

To this may be added the whites of one or two eggs, and the whole kept at a temperature of 110 F. for from one to two hours, the longer time permitting more complete digestion.

Besides water, peptonized food, and salt, alcohol is often an ingredient of a nutrient enema, and is frequently indicated.

The definite observations referred to would seem to show that the most important ingredients of a nutrient enema are water, sodium chlorid, dextrose, alcohol and peptonized milk and egg. Of course these are not all to be combined at one time, but a judicious combination must be selected according to the individual indications in each case.

Before the first nutrient enema is given the rectum should be washed out by an enema of simple warm water or normal saline solution. Usually one pint of water will be sufficient for this purpose. This cleansing enema should be administered one hour before the nutrient enema. Some advise giving the cleansing enema before each nutrient enema; others advise giving it twice a day; and still others once a day. Care should be used not to give it too frequently, lest the mucous membrane of the rectum become irritated so that it will not retain the nutrient enema. The nutrient enema should not be administered either cold or hot, because cold or hot fluids are likely to stimulate the muscular coat of the rectum and lead to their expulsion. The best temperature is between 95 and 105 F. Probably, if the attempt is made to introduce it at the latter temperature, the actual temperature when the fluid enters the rectum will be nearer 95 F. The injection should be administered with a fountain syringe, and should be allowed to enter the intestinal canal slowly. A long tube should be used, so that the fluid may be deposited about the sigmoid flexure or as near to that part of the large intestine as possible. The fluid absorbed at this point passes into the portal vein and goes to the liver where it undergoes assimilation. When it is absorbed from the lower part of the rectum it enters the vena cava and is less favorably assimilated. Furthermore, the higher up in the large intestine the enema is placed, the greater chance is there for reverse peristalsis, and consequently better digestion and absorption.

The amount of each enema must vary according to the tolerance of the lower intestine of each individual patient. Some patients can retain a pint of warm fluid, but for most patients 6 or 8 ounces is a safer amount to use. This may be increased if well tolerated. Some advise repeating the injection at intervals of from two to three hours, but intervals of four hours are better, and a total of from four to six in the twenty-four hours is generally as many as it is practicable to use.

The patient should, of course, be lying in bed while the enema is being administered, and should retain the recumbent position for at least an hour after the operation is completed. J. B. Murphy advises administering medicinal or nutrient enemata, drop by drop, for several hours (The Journal, April 17, 1909, p. 1248).

Indications for the use of nutrient enemas as presented by Dr. T. J. Bennett, of Austin, Texas (*Texas Med. News*, June, 1906) are:

1. Any temporary obstruction to the entrance of food into the stomach, such as swellings about the throat, growths, foreign bodies, etc.
2. Paralysis from diphtheria, delirium, coma, or conditions of the insane in which refusal to take food is persistent.
3. Gastritis, gastric ulcers, cancer, or any kind of obstruction at the cardiac or pyloric ends of the stomach, or along the alimentary canal above the rectum.
4. Reflex vomiting when unduly prolonged, as from seasickness or pregnancy.
5. Conditions of exhaustion from wasting diseases in which defective absorption and extreme anorexia are present, as supplemental to stomach feeding.
6. And surgical operations on the stomach and upper alimentary canal.

Between thirty and thirty-five years ago the subject of rectal alimentation excited considerable interest in New York City, and Dr. Andrew H. Smith (*Med. Rec.*, March 29, 1879, p. 308) reported a number of cases in which he had used defibrinated blood in securing supplementary rectal alimentation. He used from 1 to 3 ounces of the blood at a time, and repeated the injections at intervals of from two to three hours, in acute cases. In chronic cases he used from 3 to 6 ounces, once or twice a day. He found that when 3 or 4 ounces of blood were injected into the rectum, it was "completely absorbed within eight or ten hours, and no trace could be found in the following fecal evacuation." If eight or ten ounces were used, a part of it "appeared in the feces as a black mass."

The nutrition of the patient cannot be maintained by rectal alimentation, although frequently patients feel better for several days, and perhaps at the end of that time acquire the ability to take food by the mouth. Yet in cases in which there is not a considerable probability that this power of taking food by the mouth will be regained, and in which an operation is indicated, as in stricture of the esophagus, it is unwise to postpone the operation in the hope that by rectal alimentation the patient may be brought into a better condition for the operation.

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[*For other information see second page following reading matter*]

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NATURAL AND SYNTHETIC SALICYLIC ACIDS

For many years, a discussion has been going on, especially in this country, as to the relative merits of natural and synthetic salicylic acids and the salts made therefrom, the claim being frequently made that the synthetic is not only less effective, but more dangerous and more toxic than the natural. This discussion has been at times of a character almost bordering on the ridiculous and reminding one of the old lady who was confident that she could detect a difference between "naturally" and "artificially" hatched chickens. The belief that there is such a difference has also been sedulously cultivated by certain firms which believe they have, or assert they have, the natural acid to sell—at a price about seven times that of the synthetic product. Physicians have frequently in this, as in other instances, too readily accepted as true the oft-repeated statements of the manufacturers and of the uncritical. There is some room for confusion, for, as Waddell shows in a recent paper,[1] up to the present time there has not been a single serious, unbiased attempt to solve the question of a difference between the two acids by accurate and controlled clinical observations; furthermore there has been but one experimental study on the subject, that of Charteris and Maclennan, and this Waddell shows to be very inconclusive on account of the methods employed. The experiments of Charteris and Maclennan were, moreover, performed twenty-two years ago, so that even if they had been satisfactory they would throw but little light on the synthetic salicylic acid on the market at present.

It goes without saying that the so-called synthetic salicylic acid and the salicylates were more impure twenty-two years ago, for the production of salicylic acid from phenol was at that time a relatively new process; and further, the phenol then available is known to have been far from pure. It is therefore absurd to speak of the "synthetic" salicylic acid and salicylates as impure and dangerous because the products of over twenty years ago may have been so. Yet the experiments of Charteris and Maclennan are still extensively quoted as though they had a distinct bearing on the present-day problem.

It is an encouraging sign of the changing order of things in therapeutics that such beliefs, based on a mixture of mysticism, commercial exploitation, misinterpretation and tradition, no longer remain unchallenged. The paper of Waddell is part of an extensive chemical, experimental and clinical study of the natural and synthetic salicylic acids undertaken by the Research Committee of the Council on Pharmacy and Chemistry, the clinical experiments being carried out by competent clinicians at some of the largest hospitals, the chemical experiments, which include the various products on the market, being performed in the Association laboratory. While the clinical work will, no doubt, add to our knowledge regarding the therapeutic value of salicylates, it is not probable that it will affect the conclusions brought out by the pharmacologic experiments, that there are no differences in the toxicity of natural and synthetic salicylic acid, such as might become manifest in the clinical use of the drug.

The present paper deals only with the experimental side of the subject and contains an account of an extensive series of experiments on the toxicity of sodium salicylate of different origins. The drugs employed were obtained from four sources: one sample undoubtedly derived from genuine oil of birch, one a commercial "natural" product and two samples of the ordinary synthetic salt. The experiments were performed on three widely different classes of animals—cats, rabbits and rats. Not the slightest difference either in toxicity or in any of the symptoms produced by the four samples could be detected.

Other experiments, as stated above, will deal with the relative efficiency of the different acids in clinical cases and with a thorough chemical examination.

In discussing a powerful drug like sodium salicylate it is important to remember that untoward symptoms may result from the best of preparations when pushed to the limit of tolerance; that such symptoms have been observed more frequently after the use of the synthetic than after that of the natural drug is readily explained by the fact that the former is used so much more extensively than is the latter. Moreover, there are indications that both the natural and synthetic products undergo some change in the course of time and under some conditions. It is further quite probable that the improperly purified synthetic as well as the natural may at times contain by-products of an injurious nature. Physicians who have samples of the drug, the purity or efficiency of which they have cause to suspect, are invited to send them to the laboratory of the American Medical Association.

The first feature of the present investigation, however, is not the question whether there are impure or adulterated specimens of the synthetic salt on the market, but whether there are essential differences between the pure natural and the pure synthetic drugs; the answer of the present investigation to this question is emphatically a negative one as far as toxicity is concerned.

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1. Waddell, J. A.: A Comparative Investigation of the Effects and Toxicity of Sodium Salicylates of Natural and Synthetic Origin, Arch. Int. Med., Dec., 1911; see abst., this issue, p. 143.

THE REFEREE BOARD REPORT ON SACCHARIN

The publication of the detailed report[1] of the investigations carried out by the Referee Board in response to questions raised by the Secretary of Agriculture bearing on saccharin and the public health affords numerous data of interest aside from the immediate purpose for which the work was planned. The main general conclusions reached by the scientific experts are summarized as follows:

"1. Saccharin in small quantities (0.3 gram per day or less) added to the food is without deleterious or poisonous action and is not injurious to the health of normal adults, so far as is ascertainable by available methods of study.

"2. Saccharin in large quantities (over 0.3 gram per day and especially above 1 gram daily) added to the food, if taken for considerable periods of time, especially after months, is liable to induce disturbances of digestion.

"3. The admixture of saccharin with food in small or large quantities has not been found to alter the quality or strength of the food. It is obvious, however, that the addition of saccharin to food as a substitute for cane-sugar or some other form of sugar must be regarded as a substitution involving a reduction of the food-value of the sweetened product and hence as a reduction in its quality."

The decision of the government, already referred to in these columns, to exclude saccharin from commercial use in foods must appeal to everyone as correct and inevitable; one might well question whether this elaborate research was necessary to furnish occasion to forbid the use of a substance which can find little justification for its introduction except on the grounds of deception or concealment of inferiority. No intelligent individual can have supposed that a few milligrams of saccharin are the nutritive equivalent of the sugar, the absence of which it conceals; and the therapeutic uses of saccharin can safely be left in the hands of the medical profession.

As a scientific contribution to the physiology of nutrition, however, this report is worthy of more than passing attention. The experimental work was conducted by the late Professor Herter of New York and Professor Folin of Boston. The "small dose" of saccharin adopted was up to 0.3 gram (5 grains) per day, while the "large dose" ranged from 0.75 gram to 1.5 grams daily. These amounts correspond in sweetening power to approximately from 5 ounces to 1½ pounds of cane-sugar per day. Several of the human subjects took saccharin almost uninterruptedly with every meal for a period of about five months.

We cannot refer here in detail to the many points of physiologic interest touched on in the report. It is clearly emphasized, however, that the vaunted preservative effects of saccharin are at best extremely small. Thus the last plausible justification for its employment is made to fade away. Fortunately the very character of the compound serves as an effective barrier against its being used in large amounts; for its taste, an extreme sweetness in dilute solution, merges quickly into an intense and persistent bitterness when the concentration is materially increased. The lethal dose for rabbits lies beyond 10 grams. This in itself would be no guarantee of any innocuousness of the continued use of saccharin, except for the fact that all which is absorbed from the intestinal tract is rather promptly eliminated and that there is no storage of the substance in the body. Saccharin appears to be excreted unchanged, and a possible cumulative effect of the drug is thus made unlikely. These facts are of great value in considering the safety with which saccharin can be used in its legitimate sphere, namely, as a substitute for sugar by patients suffering from diabetes, or in certain treatments for the reduction of obesity.

The disturbances which, though by no means of constant occurrence, are charged to the use of larger doses include serious distaste for the substance, modifications of gastric functions (increased free hydrochloric acid), changes in the reaction of the feces, and occasional increase in the putrefactive products (indol, skatol, hydrogen sulphid) in the stools. Otherwise the findings are what may be termed "negative".

The elaborate analytical tables, which could scarcely obtain publication without the cooperation of financial support such as the government freely gives, incidentally bring renewed evidence of the validity of some of the well-known conclusions with respect to nitrogenous metabolism which were formulated several years ago by Professor Folin.[2] The constancy of the creatinin elimination in man as an index of metabolism, and the relative variability of the output of urea and ammonia compounds in dependence on the exogenous, or diet factors are clearly shown. Such data, to mention only a few, will serve a useful purpose quite apart from the immediate purpose of the investigation. Considered especially as a physiologic research, this report is a credit to American investigations in human nutrition.

WATER-DRINKING WITH MEALS

Pursuant to a tradition of long standing, it is a common custom to forbid the drinking of water at mealtime. There was a time when such advice appeared most reasonable. The grounds therefor are summed up in the following quotation from a recent writer:[1]

"We can lay down the definite and certain rule that it [water] should never be drunk at meals, and preferably not for at least one hour after the meal has been eaten. The effect of drinking water while eating is, first, to artificially moisten the food, thus hindering the normal and healthful flow of saliva and the other digestive juices; secondly, to dilute the various juices to an abnormal extent; and thirdly, to wash the food elements through the stomach and into the intestines before they have had time to become thoroughly liquefied and digested. The effects of this on the welfare of the whole organism can only be described as direful."

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[1] Influence of Saccharin on the Nutrition and Health of Man, U. S. Dept. of Agric., Rep. No. 94, Washington, 1911.

[2] Folin: A Theory of Protein Metabolism, Am. Jour. Physiol., 1905, xiii, 45.

[1] Carrington: Vitality, Fasting and Nutrition, Rebman, New York, 1908, p. 397.

It is, of course, obvious that the insufficient comminution of food in the mouth cannot easily be compensated for by the succeeding muscular activities of the alimentary tract. But there are numerous individuals who drink water liberally at meals, yet do not follow this practice for the purpose of washing down the products of incomplete mastication.

Professor Hawk and his pupils at the University of Illinois have been investigating, during the past few years, the validity of the current attitude toward this question, with results quite at variance with the traditional idea.[2] When the influence of water-drinking with meals was examined by direct experiment on man the alleged direful consequences were found missing. There were no apparent ill effects. On the contrary, the general conclusion from all the findings was that "during water ingestion with meals there is a better digestion and a more complete utilization of the protein food and that this effect is much less marked with a small water ingestion than with a large one. It is also more or less permanent, with the result that in an individual accustomed to taking considerable water with meals the effects of decreasing or increasing the volume ingested are not immediately obvious." Not only is there a more complete utilization of the protein constituents of the diet attributable to ingestion of large amounts (1,000 c.c.) of water with meals, but a "pronounced improvement in the digestibility of fat was observed." The decreased fecal output further involved a decreased excretion of carbohydrate and, what is most significant, a diminution in the output of bacterial substance in the stools.

Without attempting to emphasize Hawk's statement that "in general, the more water taken the more pronounced were the benefits," it may be pointed out that the essential feature, i. e., the absence of untoward results is, after all, quite in harmony with the trend of recent investigations of the gastro-intestinal activities. Water has been shown by Pawlow and others to stimulate, if anything, the flow of gastric juice and also to act as an excitant of pancreatic secretion. The dilution of the products of reaction is by no means necessarily detrimental to the progress of the chemical changes in the alimentary tract. One might therefore be prepared to admit as reasonable Hawk's statement that "the beneficial effects noted are probably due to the stimulatory action of water on the digestive secretions, to the increased dilution which facilitates enzyme action and materially aids in absorption, and to a conservation of the intestinal energy involved in the secretion of a diluting fluid which is necessary when insufficient water is ingested."

Since there is a constant tendency, at least among persons whose knowledge of the given subject is slight, to carry to extremes conclusions derived from experimental data, and since such conclusions are sure to reach the laity sooner or later, it seems worth while to add a warning against the indiscriminate and excessive use of large quantities of water. While the ingestion of moderate quantities of water with meals may be harmless in persons with good gastric motility, since the excess of water is rapidly expelled into the intestine, it is likely to be harmful in persons whose motor power is below par; and it is probable that there are many such who do not consider themselves ill enough to consult a physician. Furthermore, nothing that has been said is intended to lend any support to the American custom of drinking water that is ice-cold. The experiments of Hawk and his pupils indicate that our ideas with regard to the drinking of water must be revised, but we must still consider the individual case. We shall have to wait for reports of observations from a larger body of observers before it will be legitimate to put this revision into dogmatic form. In the meantime we may allow water more freely with meals, subject to the individual exceptions which experience reveals.

NEWER STUDIES AS TO THE NATURE OF COMPLEMENT

Though much has been written on the structure of complement, no good concise review of the subject seems to exist. To those of our readers who are laboratory workers on immunity, and to those who, though not working practically on the subject, try to follow the steps of progress, a brief summary may be of interest.

Buchner[1] had found that the bactericidal power of a serum ("alexin") was inhibited by dialysis, or by dilution with distilled water. Ferrata[2] opened up the subject of the structure of complement by testing the behavior of hemolytic serums under similar conditions, using a 4.5 per cent. glucose or 8.5 per cent. cane sugar solution to prevent mechanical hemolysis by the otherwise hypotonic solution. He found that corpuscles suspended in such sugar solutions fix amboceptor, if present; that is, they become "sensitized." The addition of dialyzed complement does not, however, cause even a trace of hemolysis in the sensitized corpuscles. The complement in the serum treated by dialysis has not been destroyed, for the addition of salt completely restores its activity. Dialysis, it seems, causes a separation into two fractions: a portion (globulin) precipitated by dialysis (called by Brand[3] the "middle-piece"), and a soluble fraction (albumin), the "end-piece." These fractions may be separated by filtration. Salt is added, in proper proportions, to the soluble fraction (albumin). The washed precipitate (globulin) is redissolved (*immediately* before use) in salt solution. The addition of either of these fractions alone to sensitized corpuscles (in salt solution) does not produce hemolysis; but, if both be added, the activity of the original complement is entirely restored and complete hemolysis results.

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[2] For the published papers in this series see: I. Hawk: Univ. Penn. Med. Bull., 1905, xviii, 7. II. Fowler and Hawk: Jour. Exper. Med., 1910, xii, 388. III. Rulon and Hawk: Jour. Am. Chem. Soc., 1910, xxxii, 1686. IV. Rulon and Hawk: Arch. Int. Med., 1911, vii, 536. V. Hattrem and Hawk: Arch. Int. Med., 1911, vii, 610. VI. Hawk: Arch. Int. Med., 1911, viii, 382. VII. Mattill and Hawk: Jour. Am. Chem. Soc., 1911, xxxiii, 1978. IX. Mattill and Hawk: Jour. Am. Chem. Soc., 1911, xxxiii, 1999. X. Mattill and Hawk: Jour. Am. Chem. Soc., 1911, xxxiii, 2019.

[1] Buchner: Ueber den Einfluss von Neutralsalze auf Serum-Alexine, etc., Arch. f. Hyg., 1893, xvii, 138.

[2] Ferrata: Die Unwirksamkeit der komplexen Haemolyse in salzfreien Lösungen und ihre Ursache, Berl. klin. Wchnschr., 1907, No. 13.

Brand[3] has shown that when sensitized red blood-cells are digested with the redissolved globulin fraction, they fix this fraction, provided that a sufficient amount of hemolytic amboceptor is used in sensitization. Then, if centrifugalized and washed, they are dissolved on addition of the albumin fraction. But, if they be first digested with the albumin fraction and washed, and if the globulin fraction be then added, no solution occurs. Thus, the albumin fraction cannot be fixed by the sensitized cells, nor can the latter be affected by the albumin fraction except through the intermediation of the globulin fraction. Hence Brand called the globulin fraction the "middle-piece" and the albumin fraction the "end-piece," considering the arrangement of the hemolytic constituents to be (red blood-cell)—(amboceptor)—(globulin fraction or middle-piece)—(albumin fraction or end-piece). There is, as a matter of fact, no conclusive evidence that the end-piece is actually fixed under any conditions, even when it is acting, that is, when hemolysis occurs. The two constituents, end-piece and middle-piece, are probably not combined in serum under natural conditions. Fixation of the middle-piece may occur when strongly sensitized cells are digested with whole complement at 0° C. The sensitized cells which have fixed the middle-piece are said to be "persensibilized" (Sachs and Bolkowska[4]).

Ferrata finds that the end-piece is destroyed by heating one-half hour at 55 C., but that the middle-piece is thermostabile. The thermostability of the middle-piece has since been disputed[3, 5]; recent work by Marks[6] shows that, when isolated by precipitation and redissolved, it is thermolabile, but when whole serum is heated, it is not destroyed. He also finds that it retains its activity for some time (at least seventeen days) on standing.

The middle-piece is usually present in excess, as compared with end-piece. A great excess may retard hemolysis. An excess of one fraction may apparently, however, partly compensate for a deficiency of the other. The middle-piece is not fixed by red cells which have not been sensitized by amboceptors in sufficient quantity.

Mechanical absorption of complement (e. g., by use of kaolin) removes both fractions completely.[5] Both end-piece and middle-piece are destroyed during or after ordinary hemolysis; this may be due, in part, to an action of the by-products of hemolysis, since much more complement may be destroyed than is necessary for the hemolytic process itself.

In specific complement-fixation reactions, and in the Wassermann reaction, the middle-piece only is fixed; the end-piece is not affected.[5] According to Liefmann and Stutzer,[7] in bacteriolysis, cholera bacilli can be dissolved by end-piece alone; the middle-piece, necessary in hemolysis, plays no part.

There is no evidence from the work thus far done in favor of specificity, or multiplicity of complement, in guinea-pig's serum. Relatively little work has been done with other serums, but as far as it goes, it indicates that their end-piece fractions are relatively very feeble, while their middle-piece fractions are about as active as the middle-piece of guinea-pig serum.

The end-piece is the active constituent of complement. According to the prevailing view, the middle-piece plays a passive rôle, acting as though it were a second, non-specific amboceptor, or sensibilizin. This is in accordance with the postulates of Ehrlich, as elaborated in his side-chain theory, in that complement, or at least one part of it, combines quantitatively with the red corpuscles in the process of hemolysis and is used up, just as is an acid when it combines with a base to form a salt. There are some facts, however, which support the opposing view which assumes that complement acts as a ferment, and is not quantitatively consumed in causing hemolysis.[8] Thus, fixation of the middle-piece cannot be demonstrated if relatively smaller amounts of hemolytic serum are used in sensitization, or if the hemolytic serum is obtained from an immunized goat, instead of from a rabbit. Furthermore, the amount of complement that is actually consumed in the process of hemolysis may be negligible, provided the titration for estimating it is made immediately after hemolysis is complete, and before the anticomplementary substances formed from the broken-up red cells have had time to destroy the complement remaining unused. The question as to the exact mechanism of the action of complement must be regarded, therefore, as still open for investigation.

Though the matter may not have very great practical importance immediately, it introduces an additional complicating factor in all hemolytic work. It is also interesting that, in the Wassermann reaction, the behavior of complement is the same as in the undoubtedly specific complement-fixation reactions.

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3. Brand: Ueber das Verhalten der Komplemente bei der Dialyse, Berl. klin. Wchnschr., 1907, No. 34.

4. Sachs and Bolkowska: Beiträge zur Kenntnis der komplexen Konstitution der Komplemente, Ztschr. f. Immunitätsforsch. vii, Orig., 778.

5. Skwirsky: Ueber den Mechanismus der Komplementbindungen, Ztschr. f. Immunitätsforsch., 1910, v, 538.

6. Marks: Complementoid and Resistance of the Mid-Piece of Complement, Jour. Exper. Med., 1911, xiii, 590.

7. Liefmann and Stutzer: Kurze Mitteilung über das bakteriolytische Komplement, Berl. klin. Wchnschr., 1910, xlvii, 1929.

8. Liefmann and Cohn: Das Verhalten des Komplements zu den Ambozeptor-beladenen Blutzellen (bei 0° und 37°) iii Teil, Ztschr. f. Immunitätsforsch. u. exper. Ther., 1 Teil, Orig., 1911, xl, 166.

THE APPLICATION OF CHEMOTHERAPY TO CANCER

Of such a fundamental nature is the principle of chemotherapy, as laid down by Ehrlich in his already classical contributions on this subject, that it was at once recognized as probable by all scientists that in this direction would be made our most rapid strides in the curative treatment of disease. It is so definite, so well based, and of such unlimited possibilities that it seemed that for its development to great practical results we had only to wait for the accumulation of experience by a considerable number of bacteriologists, pathologists and organic chemists who might be able to follow out the innumerable lines of investigation offered by this new principle. As this principle is, primarily, that of finding substances which have a greater affinity and toxicity for parasitic cells than they have for the host, it would seem that the more dissimilar and unrelated the parasite and host are, the more readily should "parasitatrope" drugs be found. Conversely, it did not seem probable that such closely related elements as tumor cells would be attacked successfully by this method. It is, therefore, with great surprise that we learn of the remarkably successful experiments of Professor A. Wassermann[1] and his colleagues in the chemotherapy of the experimental tumors of mice.

Starting out with the accidental observation that salts of the rare metals, selenium and tellurium, when in contact with tumors are taken up selectively by the tumor cells themselves, they went to work to devise methods whereby this element might be made to enter tumors in living animals and there exert its toxic effects specifically on the tumor cells. After a long series of trials according to the methods made familiar by the story of the discovery of salvarsan, they succeeded by using a compound of eosin and selenium, the exact nature of which is not disclosed in this preliminary report. Daily injections of this substance in 2.5 mg. doses in 15 gm. mice causes after the third dose a distinct softening of the tumor; by the tenth day, if the tumor is not too large, it will usually be totally resorbed. Sometimes when the tumors are large there occur severe, even fatal intoxications, apparently caused by the rapid absorption of the products of tissue disintegration. The recovered animals have now been observed for months, and when the tumor has totally disappeared under the injections no recurrences have been noted; if insufficient treatment has only partly destroyed the tumor, recurrence is rapid. These experiments have been performed with four different strains of carcinoma and one of sarcoma, all of which seldom, if ever, disappear spontaneously or under the influence of any form of treatment yet tried, except the new eosin-selenium compound. Experiments with two spontaneous tumors of mice also gave complete healing. The authors state that they feel justified, on the basis of the results which they have so far obtained, in making the following statement: "It is possible, by means of a suitable eosin-selenium preparation, administered by way of the blood-stream, to cause tumors actively growing in mice to become softened through disintegration of their cells, to be absorbed, and, when the tumor is not too large in proportion to the body-weight of the animal (up to the size of a cherry), to cause it to heal without recurrence."

In order to prevent premature conclusions, however, they take pains to make the following statement: "This merely establishes an essential scientific fact, namely, that the existing view that it may not be possible to have chemical substances specifically pass out of the vessels into a tumor and destroy it, is untenable. We wish most particularly, in order to prevent false hopes and excitement among persons with tumors, to emphatically point out that at the present time we have no evidence that this substance will act in the same way with human cancers. We have not yet investigated this question. It may well seem not impossible that an essential beginning has been made and a solid foundation established, extension of which along these lines may yield progress in human therapy."

Despite these judicial qualifications one cannot fail to see in this work, conducted by one of the best investigators known in modern medicine, the promise of great things. Whether this particular compound will favorably influence human cancer or not, the results obtained with the mice tumors as already reported constitute one of the most important contributions yet made to cancer research, and no one can doubt that it is a definite step in one of the greatest of human problems. But it must also be realized that, even at the best, it is but the beginning of a long series of most arduous investigations, which must be patiently continued with the least possible distraction by the impatient clamor which will be raised outside the walls of the research laboratory.

Current Comment

THE STATE MEDICAL LICENSING BOARD

Far above the necessity of better medical practice laws in this country comes the need for good men to enforce them—for the best available men on our state boards of medical examiners. The members of these boards should be appointed, not for political reasons, but because of their special fitness to conduct examinations and to perform the other duties involved. It is now quite generally known that the only legal barrier which stands between the people of a state and the hordes of ignorant, incompetent and unprincipled "doctors" of this, that or the other "system" of treatment, is the state board of medical examiners. Yet it is astounding to note how few of the states have provided anything like an adequate medical practice act and at the same time have competent men to enforce its provisions. Only a few states, apparently, have realized how serious is the menace to public health of incompetent doctors; in most states either the needs of the situation have not been realized or else the boards have been used in the building up of political fences. In fact, the chief reason that separate boards have been maintained in several states for different sects in medicine is probably that more places were thereby provided for political favorites. That such conditions have made it impossible properly to protect the people's interests in these matters seems to have been entirely overlooked or ignored. In but few states, also, has anything like adequate provision been made for the support of the board; hence the board must depend entirely on the fees received. In such cases efforts to improve the examinations tend directly to reduce the number of applicants and correspondingly the income of the board. Again, the duties devolving on the boards are by no means easy, and efficient work is sure to be followed by criticisms and revilings if not also by personal damage suits and troublesome litigation. Nor are instances lacking in which the board has been severely criticized by the very ones who should have given it support, so the exceptional instances in which an efficient officer has become discouraged are easy to understand. The many difficulties encountered by a board of medical examiners are well shown in the article appearing in THE JOURNAL this week from Dr. Benjamin K. Hays, on the "Aims, Purposes and Problems of the State Board of Medical Examiners." The men who are doing valiant work on state boards should be given most hearty and ample support, and in all states the boards should be strengthened by the appointment on them of the best men available—and this means men competent to conduct examinations. At the present stage in the development of medical education, efficient boards are particularly important factors. Many of the low-grade colleges which still exist are enabled to do so only because the practice act in that state is inadequate or because it is not properly enforced. In the interests, therefore, of better-trained physicians and better health officers who aim to prevent disease and to promote public health, as well as for a better protection of the public against ignorant and unscrupulous doctors, it is necessary to have, not only good laws, but competent and honest officials to enforce them.

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[1] Wassermann, A., Keysser, Franz, and Wassermann, Michael: Beiträge zum Problem: Geschwülste von der Blutbahn aus therapeutisch zu beeinflussen, Deutsch. med. Wchnschr., 1911, xxxvii, 2389; also discussed in our Berlin Letter of this week.

THE KEY TO THE SITUATION

In the Medical Economics Department of this issue appears a summary of the Owen bill as it now stands. A careful reading of this abstract will show that the bill will not do any of the things its opponents claim it will do. It does not create a "medical trust;" it does not interfere with the practice of any "healer" in any state; it does not compel any one to take any treatment of any kind. It will simply transfer to a new department three existing bureaus and coordinate their work by bringing them together — a simple matter, and one incapable of doing injury to any one. Why, then, has so much effort been made to prevent its passage? Why have the Homeopaths, the Eclectics, the Osteopaths, the Christian Scientists, the adherents of countless sects, all been duped into believing that this bill affects their interests? Why has the battle-cry of sectarian oppression been raised? Why has a great national organization, claiming 200,000 members, been created to oppose it? Why is an enormous campaign fund being raised to defeat this bill and to defeat for reelection every man in Congress who favors it? Surely there is no danger to any interests in transferring the Public Health and Marine-Hospital Service from the Treasury Department to a new department. Certainly the Division of Vital Statistics is harmful to no one, whether in the Department of Commerce and Labor or in a new department. It is not to oppose these that speakers, press-bureaus and paid agitators are working all over the country. But the Bureau of Chemistry of the Department of Agriculture! That's different! That is the bureau that is headed by Dr. Wiley, who enforces the Food and Drugs Act (when he gets a chance). For years, through political pull and commercial influence, by obstruction and delay, the "patent-medicine," proprietary-medicine and adulterated-food makers and sellers have hampered Dr. Wiley in every way. The recent investigation in Washington proved this. As long as Dr. Wiley is a part of the Agricultural Department, he can be annoyed and hampered. But suppose he were transferred to a new department which was run for the protection of the people and not for the commercial interests? What wouldn't he do to the adulterators, the lying advertisers, the manufacturers who use rotten and filthy material in their products and the men who swindle and cheat the sick? What has been done so far wouldn't be worth mentioning in comparison to what Dr. Wiley and his bureau would do, if it were transferred to a department where he was not and could not be hampered by politics or commercial influence. The men and interests whose fat profits he has affected know this. The influences back of this entire campaign against the Owen bill are advertising agencies and their patrons, the manufacturers of "patent" and proprietary medicines and adulterated food products, who are opposing the passage of any bill that might give Dr. Wiley greater freedom of action. Not daring to fight in the open, they have persuaded the sectarians, the faddists, the Christian Scientists and other enthusiasts that their rights are endangered by a bill which authorizes nothing that does not already exist, which does not increase the power or authority of any officer or employee of the government and which will have no effect on any individual, except to give us all purer food, purer streams and more knowledge. If, by arousing sectarian suspicion and jealousy and by deceiving the people, this bill can be defeated, the dishonest manufacturer and advertising agent will rejoice.

WHY THE OWEN BILL SHOULD PASS

It may, with good reason, be asked: Why, if the Owen bill is so simple and the changes effected by it so slight, is its passage of any great importance to the public? Why should the three bureaus affected be transferred and what advantages will result from the change? These questions are pertinent and timely. Fortunately, the answer is simple. The three departments affected are the Treasury Department, in which is the Public Health and Marine-Hospital Service; the Department of Commerce and Labor, which includes the Bureau of the Census with its Division of Vital Statistics, and the Department of Agriculture, with its Bureau of Chemistry. The keynote in the management of all three of these departments is material gain, commercial advantage. This is proper. These departments could not and should not be run on any other basis. But, in conserving the health of the people, there is another factor — humanitarianism. The reduction of disease and death will save money, it is true, but it will also save what is far more precious—human lives. The place for the bureaus concerned in life-saving is in a department where humanitarianism is the predominating motive. So long as they are in departments where material, commercial influences prevail, they will be hampered, and to a certain extent nullified! Witness the effort of the Treasury Department to suppress the findings of the Marine-Hospital surgeons in the case of the bubonic plague in San Francisco. Witness the efforts of the Department of Agriculture to hamper and discredit Dr. Wiley. Even in the Department of Commerce and Labor, statistics on iron and steel, coal and copper are more highly esteemed than figures on death and disease. Health activities have no place in departments guided by material considerations. In case of any conflict or objection, the first question asked is: Will this hurt business? The only place for the health work of the government is in a department of its own, where human life will come first, and business considerations will take second place. This is the main reason for the passage of the Owen bill. But this reason is sufficient.

ANOTHER JOINT-STOCK MEDICAL COLLEGE FOR CHICAGO?

During the last seven years at least forty-seven medical schools have closed their doors for lack of funds. It is clear to those engaged in investigation of medical schools that at least eighteen or twenty others are at present on the verge of bankruptcy. Furthermore, in the fifty or sixty leading medical colleges in this country —those doing good work — the cost of training each medical student far exceeds the amount he pays in tuition, the actual cost ranging from $250 to $600 or more each year, although the student pays in tuition fees only from $60 to $200 each year. Most surprising is it, therefore, to receive the announcement of the plan to establish another college on the stock basis, but that its proposed location is that prolific home of medical institutions, Chicago, is not so surprising. It would probably be impossible to establish it anywhere else in this day of enlightenment and advancement in medical education. But of course anything is good enough for Chicago. The circular sent out to solicit stockholders and a faculty announces that the purchaser of twenty shares, at the rate of $20 each, will be "eligible to a professorship," but if he purchases only five shares he will be entitled to a lectureship only. No questions seem to be asked regarding his ability as a teacher, but of course that is of too little importance to need consideration. There is another interesting feature in regard to this proposed medical school. Although the chief complaint coming from all parts of the country during recent years is that the medical curriculum is extremely overcrowded, nevertheless, this new school is to be a "sun-down" affair; that is, it is to run only during the late afternoon and evening. The enterprise apparently has been initiated by a Dr. Frederick A. Leusman, who thus creates and signs himself dean of the new institution. Hats off to the new dean, and the new "sun-down" college! Seriously, five or ten years ago such a proposition might have succeeded; happily conditions have changed.

MORE ENDOWMENT FOR MEDICAL EDUCATION

It is with a sigh of relief that we turn from the preceding comment to note that the advancement of medical education, most remarkable in recent years, is apparently going to be continued. Word has been received that the energetic campaign carried on by Western Reserve University for additional endowment has been successful and that a million dollars has been raised for its medical department. About a year ago Mr. Rockefeller offered to give $250,000 in case the university should raise $750,000 by December 31, 1911. The offer was accepted and work began. The first gift of $250,000 from Mr. H. M. Hanna gave assurance of victory and this was rapidly followed by two other gifts of $100,000 each, one subscription of $50,000, three subscriptions of $30,000, two of $25,000 each and others ranging from $10,000 to $1,000 each. The Medical Department of Western Reserve University has always stood among high-grade medical institutions and the above gifts prove that the people of Cleveland recognize its worth. Where could money be better invested, however, than in the production of better-trained physicians who are to do a most important work in the prevention of disease and the promotion of public health?

A PHYSICIAN PRESIDENT OF CHINA

Dr. Sun Yat Sen, elected president of the Chinese Republic at Nanking, is spoken of as a man of rare genius, who has converted China to democratic ideas. He is a Christian physician, a graduate of an English college in Hong Kong, but has practiced little, having given most of his life to his idea of making China a republic. Whether or not the republic proves to be a lasting one, Dr. Sun has a creditable history thus far, and his confrères in the medical profession can be proud of him.

A COUNTY SOCIETY COOPERATES

The pamphlets which the Association issues containing exposés of medical and medicinal frauds on the public are receiving hearty approval. As has been announced in our advertising pages[1] all this matter has been brought together, elaborated, freely illustrated and, with much additional matter, bound in a book called "Nostrums and Quackery." The problem is to get this book into the hands of the public, a problem that will be easily solved if we can have—as we should have—the cooperation of the physicians of the country. We are getting this help to an increasing degree, but we believe not to the extent that we should get it if the facts were more generally known. One of the most encouraging incidents that has occurred in connection with the distribution of "Nostrums and Quackery" is the action of the Los Angeles County Medical Association. This society has presented one of these books to each of its 570 members. We have no doubt that the great majority of the physicians of Los Angeles now have this book lying in their reception rooms where it is likely to be picked up by waiting patients who will thus be interested and enlightened. It would be decidedly helpful if all the large county societies were to follow the example which the Los Angeles County Medical Association has so admirably set.

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[1] See advertising page 39 of this issue.

RETIREMENT OF DR. SHATTUCK

Dr. George B. Shattuck has retired from the active editorial management of the *Boston Medical and Surgical Journal* after a service of thirty-one years. That periodical was issued under its present name first in February, 1828, and has always been maintained with dignity and as one of the high-class medical journals of the country, and under the long editorial service of Dr. Shattuck it has improved constantly and prospered accordingly.

Medical News

COLORADO

Hospital Saturday and Sunday Receipts.—The Hospital Saturday and Sunday Association of Denver received about $6,000 from its annual collection.

Deficit Made Good.—The Trustees of the National Jewish Hospital for Consumptives, Denver, have made up the deficit of $70,000, discovered after the death of the secretary in August last.

State Hospital Overcrowded.—The State Lunacy Board declares that the State Hospital for the Insane, Pueblo, is too overcrowded to receive the 100 insane patients now in Denver County Hospital.

Liquor License Required.—The internal revenue department has ordered the hospitals of Denver to take out liquor dealers' licenses as the result of the discovery that most patients are charged by itemized statement for liquors used.

Special Course in Ophthalmology.—The first special course in ophthalmology to be given by the University of Colorado, Denver, will begin June 23 and extend to August 2. The instruction will be open to all graduates of accredited medical colleges. Those desiring to take a degree, will be required to show one year of work in an eye clinic, besides a certain amount of mathematics and physical optics and an acquaintance with ophthalmologic literature, and must pass a satisfactory examination.

ILLINOIS

Personal.—Dr. Thomas W. Curry, Streator, has returned from Europe.——Dr. Charles Handley, Brocton, is said to have been adjudged insane.——Dr. Frank D. Rich has been elected president of the Joliet Antituberculosis Society.

Underground Emergency Hospital.—The first underground emergency hospital in Illinois was opened New Year's day in one of the mines in the Collinsville district. The hospital is built in the heart of the mine; its concrete walls are guaranteed against cave-ins and small explosions, and the hospital is fitted to care for such emergency cases as may occur in the mine.

Donation to State Society.—Dr. J. Palmer Matthews, Carlinville, has presented to the Illinois State Medical Society a file of the journal of that society, collected by his father beginning from the time of the Chicago fire, and also a picture of the members of the society taken immediately after the fire. This collection has been shipped to Springfield and will be placed in the Lincoln Library.

Chicago

Personal.—Dr. and Mrs. Roger T. Vaughan sailed for Europe, December 16.——Dr. Clara Dunn, physician at the Cook County Hospital for the Insane, Dunning, who was suspended under the charge of insubordination in October last, was ordered reinstated, January 4.——Memorial services for the late Dr. Hugh Blake Williams were held January 4 at the Press Club.

Ferguson Memorial Meeting.—The Chicago Medical Society proposes to hold a memorial meeting February 7 in honor of the late Dr. Alexander Hugh Ferguson. Dr. Joseph M. Patton will preside and Dr. Andrew McDermid will speak of "Undergraduate Life and Early Medical History;" Dr. Albert J. Ochsner on "Dr. Ferguson's Place in Surgery;" and Dr. Edward F. Wells on "Ferguson the Man."

Health of the Year.—The death-rate of Chicago during 1911 is reported to have been 14.55 per 1,000. The total deaths amounted to 32,672, 40 per cent. of which were due to preventable diseases. The deaths from these causes are more than 1,600 lower than the previous year. Pneumonia led the list of death causes, with 4,929; tuberculosis came second, with 3,726. Typhoid fever reached the lowest mark ever attained in the city, and is now 93 per cent. lower than it was twenty years ago. There was also a marked reduction in the deaths from diarrheal diseases in children under 2 years of age. The agencies which have aided to bring about this decrease are the educational work of the Department of Health, the Infant Welfare Service and the more general use of a safe milk-supply. Among the newer activities of the department is the educational exhibit, which has been seen and studied approximately by a million people. In the division of medical school inspection, 73,405 pupils were examined, and of these 31.240, or 42.6 per cent., were found defective. The principal defects noted were as follows: defective teeth, 27.676; hypertrophied tonsils, 15,097; defective vision, 11,524; enlarged glands, 11,459; adenoids, 3,465, and defective hearing, 959. The school nurses made a total of 90,249 visits and cared for 562,570 children. In the sanitary bureau 5,500 more plumbing inspections were made than during the previous year. A total of 1,043,456 were given baths at seventeen public free baths and 71,410 men were lodged in the municipal lodging-house. During the year, 113,079 examinations were made in the laboratory, of which 65,023 were bacteriologic and 48,056 chemical. There was a large increase in the number of rabies specimens sent in and an increase of 60 per cent. in the number of sanitary water analyses.

INDIANA

The Knabe Mystery.—The mystery connected with the death of Dr. Helene Knabe, Indianapolis, October 23, has not been solved and the coroner on December 29 filed his verdict that Dr. Knabe was murdered by a person or persons unknown.

Personal.—Dr. Frederick Nussel, Brazil, who has been ill in an Indianapolis hospital with ptomain poisoning, has recovered.——Dr. A. B. Mercer, Alexandria, is reported to be seriously ill.——Dr. Charles W. Stolzer, New Albany, has succeeded Dr. James W. Baxter, New Albany, ,resigned, as secretary of the Floyd County Medical Society.

Leprosy in Indiana.—Dr. Nelson D. Brayton has diagnosed a case of leprosy in Indianapolis; Dr. A. W. Brayton concurs in the diagnosis. The clinical examination was supplemented by several bacteriologic examinations. The patient, a colored woman, noticed blotches on her face, arms and legs one year ago and consulted a physician who treated her for lichen planus. Nodules first appeared on the face, arms and ears about three months ago. The source of her contagion cannot be determined; none of her relatives has the disease. She was born in Tennessee and has never been south of Chattanooga, where she visited once, nor north of Chicago, where she attended the World's Fair. She recently moved from Tennessee to Indianapolis. The city health authorities will isolate and care for the patient, but what final disposition will be made of the patient is not yet determined. This disease is not regarded as highly contagious and no alarm seems to be felt by the public over this case.

MARYLAND

Personal.—Dr. Bennett F. Bussey, Texas, has been appointed physician of the Baltimore County Almshouse, and Dr. Josephus A. Wright jail physician.——Dr. H. D. Purdom, chief resident physician at Bay View Hospital, has been appointed assistant physician and pathologist to the Springfield Hospital for the Insane, Sykesville.

For the Health of Maryland.—At the annual meeting of the Dorchester County Medical Society held in Cambridge, December 11, the governor-elect and a number of members of the legislature were told of the legislation which physicians of the state hope to have passed at the coming session. They will be asked to pass a bill authorizing the establishment of a medical laboratory in every county of the state and the appointment of a county health officer who is a trained pathologist. These officials will be required to make examinations of water and milk and to assist the local profession in making diagnoses of diseases.

Baltimore

Munich Physician in Baltimore.—Dr. Erwin Erhardt of the University of Munich is visiting Baltimore to study the methods of treating cancer. It is said that he intends to establish a special hospital for the treatment of that disease in Munich.

Health Department Banquet.—At the eleventh annual banquet of the employees of the health department, December 28, Dr. James Bosly, health commissioner, the mayor, the presidents of the first and second branches of the city council, and the comptroller were the guests of honor. Dr. William R. Stokes was toastmaster.

Personal.—Dr. Howard A. Kelly, who has been ill with typhoid fever, is now well on the road to recovery.——Dr. Harry Friedenwald, president of the Federation of American Zionists, who returned recently from Palestine, delivered an illustrated lecture, December 17.——Dr. John E. O'Neill has been appointed superintendent of the municipal tuberculosis dispensary system, to be conducted under the city health department, for which an appropriation of $6,000 has been made.——Dr. Warren P. Morrow, superintendent of the Sydenham Municipal Hospital for Infectious Diseases, has resigned to become superintendent of the Winnipeg (Man.) General Hospital, and has been succeeded by Dr. Robert A. Warner, formerly health warden.——Dr. William S. Baer is reported to be ill in the Union Protestant Infirmary.——Dr. Robert L. Keyser has been appointed coroner of the Eastern District, vice Dr. Thomas Sudler, deceased.

MICHIGAN

Office Building for Physicians.—The George Metz Building, Grand Rapids, which is nearing completion, is to be devoted entirely to physicians and dentists.

New Hospital Opened.—The new hospital for contagious diseases, Bay City, was formally opened for inspection, December 12. The institution has a modern equipment and can accommodate fifty patients.

Sanatorium for Jackson.—At a meeting of the Jackson Antituberculosis Society, it was decided to raise $10,000 to provide for the erection of a sanatorium for advanced cases of tuberculosis. Mr. John R. Bailey was elected secretary of the society, vice Dr. Henry D. Obert, resigned.

Milk Ordinance.—There has arisen a slight milk war in Kalamazoo, following the presentation of a drastic milk ordinance of the city council by the mayor, after he had visited cities which are attempting to furnish clean milk. The health board is able, thanks to the backing of the mayor, to exclude milkmen whose product does not come up to the requirement.

MINNESOTA

The Tuberculosis Situation in Minnesota.—At a meeting of the Minnesota Association for the Prevention and Relief of Tuberculosis, held in St. Paul, December 15, with delegates present from forty-five counties in the state, resolutions were passed setting forth that all advanced cases of this disease should be provided with beds in state-aided institutions; that these asylums should be near the homes of the people and should consequently be very numerous; that they should be maintained by the counties, municipalities or districts liberally assisted by funds from the state, and under state supervision and control; that every state-aided institution should maintain a free dispensary and have visiting nurses on its staff; that the state sanatorium should be completed by the addition of kitchen, laundry, dining-room, amusement hall and employees' home; that it should be enlarged from year to year until it can accommodate as many incipient cases as the county institutions desire to transfer to it; that registration of all cases be enforced; that a state lecturer on tuberculosis be provided for to carry on an active campaign of education throughout the state; that milk from herds not tested with tuberculin should not be sold, and that open-air schools should be provided in the cities for weakly and anemic children.

MISSOURI

Money for Nurses' Home.—A. R. Levering, who gave $35,000 to found the Levering Hospital, Hannibal, has placed an additional sum of $7,500 at the disposal of the board of control to be used for erecting a home for nurses.

Personal.—Dr. Samuel G. Meredith, Cowgill, is reported to be seriously ill with a chronic disease.——Dr. and Mrs. Adolf L. Korn, Carthage, have returned from Europe.——Dr. William B. DeJarnett, Columbia, is reported to be ill in his rooms with contagious disease.

NEW YORK

Large Contributions to Antituberculosis Crusade.—The National Association for the Study and Prevention of Tuberculosis and the State Charities Aid Association which in connection with the State Department of Health is conducting the campaign against tuberculosis in this state has issued a statement saying that during the past year $3,550,000 has been appropriated from public funds and donated by private charities to the various antituberculosis activities in the state.

Personal.—Dr. John M. Swan has resigned as medical director of the Glens Springs, Watkins.——Dr. Christiana M. Greene has been appointed assistant medical school examiner of Buffalo.——Dr. Earl G. Danser, Buffalo, has been reappointed medical examiner of Erie County and Dr. George B. Stocker, Buffalo, as deputy.——Dr. James W. May has assumed his duties as head of the State Lunacy Board.——Dr. O. Howard Cobb, assistant superintendent of the New York State Hospital for Crippled and Deformed Children, West Haverstraw, has been appointed superintendent of the Syracuse State Institution for Feeble-Minded Children to succeed Dr. James C. Carson, Syracuse, resigned.

New York City

Harvey Society Lecture.—The seventh in the present course of Harvey Society lectures will be given in the New York Academy of Medicine on January 20, by Prof. Henry Fairfield Osborn of Columbia University on "Unit Characters in Heredity as They Appear to a Paleontologist."

Herter Foundation Lectures.—Dr. Ludvig Hektoen of the University of Chicago delivered the six Herter Foundation lectures under the auspices of the University and Bellevue Hospital Medical College at the Carnegie Library, at 4 o'clock in the afternoon, from January 8 to 13, inclusive. The subject of the lectures was "Immunity."

Forbids Use of Common Towel.—Commissioner Lederle has announced that the Board of Health adopted a resolution at its meeting on January 5 amending the Sanitary Code to forbid the use of the common towel in railroad stations, ferry houses, schools, hotels, theaters, concert halls, dance halls, department stores, cafes, restaurants and saloons.

Personal.—Dr. Philip F. O'Hanlon, Manhattan, who was operated on for pelvic abscess, December 29, is reported to be making satisfactory progress toward recovery.——Dr. Patrick H. Bumster, Long Island City, was seriously injured when his automobile skidded across an ice-covered pavement, January 1, and collided with an iron trolley pole.——Dr. Charles F. Pabst, an intern in the Brooklyn Hospital, was presented with a set of instruments and a medical case by his associates in the hospital at a dinner given in his honor, December 30.

New York's Record Year.—The year 1911 has been the healthiest in the history of the city. There were 40,000 fewer cases of illness in the city during 1911 than during 1910. The death-rate for the year 1910 was 15.98 per 1,000 which was thought to be so low as to be irreducible, but that for 1911 was 15.13. Fifteen cases of small-pox occurred during the year, eleven of them during November and December, and 103,644 persons were vaccinated, one-third of them during the month of December. The case fatality in diphtheria has been reduced from 10.3 per cent. in 1910 to 9.5 in 1911. There has been a decrease in the infant death-rate of 10 per cent. over that of 1910. The department of health plans extension work for the coming year which will consist in the enforcement of pasteurization of all milk not certified or used for cooking; the further extension of hospital facilities for infectious diseases; the establishment of 40 milk stations provided for in the budget of 1912; the establishment of five clinics for children; and the sanitary control of venereal diseases.

Death Toll From Street Accidents Increases.—Vehicular traffic was responsible for the death of 423 persons and the injury of 2,004 others in this city during 1911 according to the report of the National Highways Protective Association. This is an increase of 13 per cent. over the fatalities of 1910. There was, however, a decrease of 7 per cent. in the number of children killed as compared with the record of 1910. The association will endeavor to have the legislature pass a constitutional measure fixing the responsibility of chauffeurs and drivers. During 1911 there were eighty-eight persons killed and 108 injured at grade crossings in New York and efforts are being made to eliminate these crossings as fast as possible.

PENNSYLVANIA

Addition to County Hospital.—There has recently been completed another building in connection with the Lancaster County Hospital, to be known as the Hospital for Communicable Diseases. This new building is 100 feet long by 30 feet wide, is one story high and is built of brick with limestone trimming. There are six rooms for patients, so constructed that the rooms do not communicate and each room accommodates two persons. In addition there is a fully equipped diet kitchen, doctors' gown rooms, patients' bath and doctors' wash rooms.

Officers Elected.—Montgomery County Medical Society has elected the following officers: president, Dr. George F. Hartman, Port Kennedy; vice-presidents, Drs. Joel D. Brown, Oaks, and Herbert A. Arnold, Ardmore; secretary, Dr. Harry H. Whitcomb, Norristown; corresponding secretary, Dr. Edgar S. Buyers, Norristown, and treasurer, Dr. Frank C. Parker, Norristown.——At the annual meeting of the Lancaster City and County Medical Society, January 3, the following officers were elected: president, Dr. Thaddeus M. Rohrer, Quarryville; vice-presidents, Drs. Lewis M. Bryson, Paradise, and Adam V. Walter, Brownstown; secretary, Dr. Horace C. Kinser, Lancaster, and treasurer, Dr. Theodore B. Appel, Lancaster.

Philadelphia

Personal.—Dr. William W. Keen has been reelected president of the Philosophical Society.——Dr. Richard H. Harte presented on behalf of the donors, a portrait of the late Dr. John Ashhurst, Jr., to the College of Physicians, January 3.

Open-Air School Established.—The first open-air school in the city has been opened at the Wilson School, Twelfth and Federal Streets, and the sickly children taught there are not only learning their lessons faster than they did in classrooms, but are gaining in weight. The school is being carefully watched by Dr. Walter S. Cornell, medical inspector of schools. There are frequent intervals for rest and lunch is served at noon every day.

Charity Agent Appointed.—Mrs. Lawrence Lewis has just received an appointment from the city as a special agent in the department of health and charities. Mrs. Lewis is giving her services gratuitously and will begin a systematic study of the family conditions of patients who are sent to the Philadelphia Hospital and who go to the almshouse. The aim of the work is to ascertain the status of those families applying to the city for and to discover the validity of their claim on the city's charity.

Clinic's Quarters Inadequate.—The Philadelphia Chest and Throat Clinic has made an appeal for funds to enlarge its building at 2114 Lombard Street. Here more than 700 patients have been treated for consumption, pneumonia, bronchitis and other chest diseases in the last two years and these patients made nearly 6,000 return visits. No charge is made for treatment and medicines are furnished at a nominal cost. To purchase the two sites adjoining the present building $25,000 is needed, and of this $9,000 has been pledged.

New Officers of College of Physicians.—The following officers and elective committees were chosen, January 3, by the College of Physicians of Philadelphia: president, Dr. George E. de Schweinitz; vice-president, Dr. James C. Wilson; censors, Drs. Richard A. Cleeman, S. Weir Mitchell, Arthur V. Meigs, James Tyson; secretary, Dr. Thomas R. Neilson; treasurer, Dr. Richard H. Harte; honorary librarian, Dr. Frederick P. Henry; councilors, Drs. Robert G. LeConte, David Riesman; committee of publication, Drs. Gwilym G. Davis, Thompson S. Westcott, William Zentmayer; library committee, Drs. William J. Taylor, S. Weir Mitchell, Francis R. Packard, George W. Norris, Astley P. C. Ashhurst; committee on Muetter Museum, Drs. George McClellan, Henry Morris, George P. Muller; hall committee, Drs. John K. Mitchell, Thomas H. Fenton, Alexander Randall, E. Hollingsworth Siter, J. Norman Henry; and committee on Directory for Nurses, Drs. Thomas G. Ashton, Frederick Fraley and John H. Gibbon.

GENERAL

New Officers for Bio-Chemists.—At the final meeting of the American Society of Bio-Chemists, held in Baltimore, the following officers were elected: president, Dr. Archibald B. Macallum, Toronto, University of Toronto; secretary, Dr. A. N. Richards, University of Pennsylvania; treasurer, Dr. Walter Jones, Johns Hopkins University, and councilors, Drs. Max L. Mendel, Yale, and H. Gordon Wells, University of Chicago.

Urologists to Meet in St. Louis.—There will be a meeting of the North Central Branch of the American Urological Association in St. Louis, February 5-7. The St. Louis urologists are hoping for a large attendance and are desirous that the invitations reach all who are interested in uro-genital diseases, whether specializing or not. The St. Louis members will entertain the association on the first evening with a dinner and a vaudeville entertainment at the Jefferson Hotel, which will be headquarters.

The New Surgeon-General.—The president has selected Dr. Rupert Blue as successor to the late Walter Wyman as surgeon-general of the Public Health and Marine-Hospital Service of the United States and his nomination was sent to the senate January 9. Dr. Blue was born in South Carolina in 1868 and was graduated from the University of Maryland in 1892. He became an intern in the United States Marine-Hospital Service in 1892 and was commissioned assistant surgeon on March 3, 1893. He became a passed assistant surgeon four years later and was made surgeon May 1, 1909. For the first eight years after Dr. Blue entered the service, he performed the usual service duties at various points in the United States. In 1903-4 he was detailed as executive under Surgeon Joseph H. White, who was in charge of the operations in eradicating bubonic plague in San Francisco, and there proved his ability as an executive officer. In 1905 he was detailed as a district officer during the yellow fever epidemic in New Orleans, and in 1907 served as director of sanitation at the Jamestown exposition and here again showed his ability as an organizer and executive officer by reconciling the divers interests at the exposition and making its sanitation a pronounced success. From Jamestown he went again to San Francisco, where he was placed in charge of the city and again rendered excellent service in the work against bubonic plague and here as before handled the situation admirably, avoiding friction and working in excellent accord with the municipal and state authorities. Dr. Blue's strong points have always been in preventive medicine and quarantine, rather than in the details of hospital service. He recently made a tour of inspection of Europe, in which he studied especially the question of emigration and quarantine management and while abroad he attended a course of lectures at, and graduated from, the London School of Tropical Medicine. Afterward he made a tour of South America, in which he studied the possibility and routes of importation of bubonic plague and yellow fever from these countries. His last detail was at Honolulu, from which he was recalled to Washington, when the question of the successorship to the surgeon-general became prominent. Dr. Blue has an engaging personality, is an excellent executive officer, a good organizer and has to a marked degree the faculty of making friends and of reconciling opposing interests.

FOREIGN

The Sudden Deaths at the Berlin Municipal Shelter.—The cable has reported the mysterious sudden death of a number of men at the municipal shelter at Berlin. Still later dispatches from Paris state that a number of vagrants have died under similar conditions at Leipsic, Hamburg and Milan, Italy, and the International Sanitary Commission has been asked for an official report on the subject. At Berlin the outbreak was thought to be due either to drinking wood alcohol or to ptomain poisoning, in the absence of other discoverable cause, but no scientific report has yet been received. The cable dispatches have reported over a hundred as dying rapidly during forty-eight hours among the 4,000 men gathered in the big municipal shelter.

Seventieth Birthday of Prof. R. Lépine of Lyons.—Raphael Lépine comes of a family with professional traditions in medicine and law, and his son has already entered on his medical career, while his brother is the well-known prefect of police at Paris. Lépine was *agrégé* professor of clinical medicine at Paris until called to the corresponding chair at Lyons in 1877. He has been one of the most prolific writers in France on clinical medicine and cortical localization. In 1877 he founded the *Revue Mensuelle* which in 1881 split up into the *Revue de Médecine* and *Revue de Chirurgie*. On the occasion of his seventieth birthday recently 112 of his pupils contributed articles to make the *Revue de Médceine* a festival number in his honor, which has just been issued.

Dismissal of the Chief of the Public Health Service in Denmark.—The profession in Denmark has been much exasperated by the summary dismissal of the able and efficient chief of the national public health service, Dr. N. Muus. One of his subordinates, Etatsraad Hoff, has been appointed to his place by the *justits-minister* who is the authority in the matter. His complaint against Muus is that he tried to shield a drinking confrère, Dr. Langhoff, and did not dismiss this confrère, who was a district physician. Muus explained that the statements made to him in regard to the drinking habits of the accused were only hearsay and came from persons connected with the administration of a local asylum who were prejudiced against Langhoff on account of reforms he had introduced in the asylum. The agitation is all traceable to a sensational onslaught made on the medical profession nearly a year ago by an editor, Reventlow, who stated that many of the members of the profession were addicted to morphin and alcohol, and later cited Langhoff's case in particular. Notwithstanding the sensation caused all over the country by the attack, no one presented any further evidence as to the truth of Reventlow's assertions, and he was forced to acknowledge that he did not know of any morphinist among the medical men in his part of the country. The medical societies have passed resolutions of protest against the dismissal of Muus, and the minister had to answer for his action before parliament, but a resolution to have the matter further investigated was finally voted down by a small majority.

LONDON LETTER

(From Our Regular Correspondent)

London, Dec. 30, 1911.

The National Insurance Bill

The hostility of the profession against the national insurance bill is near an acute crisis. At several large meetings members of the council of the British Medical Association who made attempts to defend or explain the action of the council were refused a hearing.

As often happens, however, when public feeling is deeply aroused and practically unanimously expressed the demonstrators were seriously mistaken. It is not the council or even the representatives of the British Medical Association which are at fault but the rank and file of the profession; those who are blaming others are themselves responsible. This is clearly shown in a letter published in the *Times* by Sir Victor Horsley and two other members of the council of the association, in which he gives the points he was prevented from bringing before a meeting. In dealing with the insurance bill the council was not responsible for the policy and public administration of the association. Ten years ago, largely on the initiative of Sir Victor Horsley himself, the association was completely democratized and reconstructed on a representative basis. The whole of the policy and public administration is in the hands of representatives who are elected by divisions all over the empire and form the representative body (numbering about 170) and similar to the House of Delegates of the American Medical Association. They determine every important step taken by the association and instruct the council, whose functions are therefore merely executive. That the council has faithfully executed its duties is shown by the following minute of the last representative meeting. "That the representative body expresses its grateful appreciation of the great services rendered by the council in connection with the national insurance bill." A second error is the statement that it was originally determined that the six points of the association should be included in the bill. The representative body instructed the council to consider what points should be secured if possible by specific provisions in the bill and what points should be kept open to be determined by the insurance commissioners. As a matter of fact, the association obtained the insertion in the bill of four of the six points and two have been kept open for negotiation with the insurance commissioners. A third error is that it had been originally determined that the wage limit and amount and method of remuneration should be stated and included in the bill and that the council was responsible for this not being done. This is not a fact. These points were considered at great length at the representative meetings and it was resolved that the council be instructed to use its best endeavors to have the $500 a year limit fixed by the bill with provision for a lower limit to be fixed locally, but failing this to obtain as best they could the fixation of the $500 as a maximum limit with such local option. Similarly the representative body decided that the rate and method of remuneration should be settled in each district by the local medical committee in negotiating with the local insurance committee. The representative body found it impossible to fix either a flat rate or a common method of remuneration. As no unanimity existed in the profession on these points the representatives felt that no fixed rates or methods of payment could be imposed by the bill. The representative body, however, informed the Chancellor of the Exchequer that a $1.25 capitation rate proposed was inadequate.

The rank and file of the profession has suddenly awakened to the view that the best policy is to refuse to work the act and not to attempt to obtain by regulation what it has failed to get by regulation. It made a mistake in not giving this mandate to its representatives in the first instance. Somebody must be whacked for the mistake and it has selected the council. The sanction of the appointment of their medical secretary under the bill has facilitated this operation. For this certainly the council is responsible. But, as shown in my last letter, it had good reasons.

Warning Against Improper Medical Certificates

The General Medical Council has issued a warning against the irregular issue of medical certificates. It appears that some doctors have given untrue, misleading or improper certificates of various kinds. Under this heading the council places certificates relating to the dead or the disposal of the dead, those under the lunacy, vaccination and factory acts, those in relation to children or excusing school attendance, in connection with certain friendly societies, workmen's compensation and naval and merchant shipping for the procuring of the issue of foreign office passports and for excusing attendance in courts of law, in the public service or in ordinary employment. Any physician who shall be known to have given any untrue, misleading or improper certificate, whether relative to the above or otherwise, is liable to be adjudged guilty of infamous conduct in a professional respect and to have his name erased from the register.

Tropical Disease Research

The Liverpool School of Tropical Medicine has decided to send Dr. Harold Seidelin, scientific secretary to the Yellow Fever Bureau, associated with the school, to conduct some new and important researches into the disease at Yucatan, Mexico. This is the twenty-eighth expedition connected with the school.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Dec. 22, 1911.

Appeal of the Five Suspended Students.

The five medical students who were suspended for three and six months for participation in the riots in Professor Nicolas' classes have decided to carry an appeal to the Superior Council of Public Instruction, on the ground that they have been punished already by the closing of the school, are liable to prosecution in the police courts, and should not be subjected to an indefinite number of punishments for the same offense.

Death of Dr. Paul Topinard

Anthropologic science has just lost one of its most illustrious representatives, Dr. Paul Topinard. He was born on Isle-Adam in 1830. When 9 years old, he went with his father to the United States. He received his early education in New Orleans, and at the age of 17 returned to France to study medicine. He became intern, and, in 1869, physician of the hospitals. He practiced in Paris until 1871. His teacher Broca, whose collaborator he became, held him in special affection, and caused him to be appointed curator of the collections of the Société d'anthropologie, then adjunct director of the laboratory of the Ecole des Hautes Etudes. In 1876 he was appointed professor at the Ecole d'anthropologie, and in 1880, at the death of Broca, he succeeded the latter as general secretary of the Société d'anthropologie and assumed the direction of the *Revue d'anthropologie*.

Topinard was known especially for his researches on the human races, on cranial capacity, and on the standardization of cranial measurements, and for his book on anthropology, which was translated into several languages. In 1901 he published a work called "Anthropology and the Social Sciences," in which he studied the animal societies and the earliest associations of human beings.

Death of Dr. Bornet.

Dr. E. Bornet, member of the Académie des sciences de Paris, has just died. He had acquired great reputation in the scientific world, especially by his work on cryptogamy, and he was for a long time considered one of the most eminent botanists of France. He was elected a member of the Académie des sciences in 1886 and belonged to the greater number of the foreign academies and had within recent years been elected member of the Royal Society of London.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Dec. 21, 1911.

Personal

Professor v. Franqué of Giessen has received a call to the chair of gynecology at Bonn as the successor of Professor Fritsch.

Regierungsrat Dr. Weber, who aided in the scientific organization of the Dresden International Hygiene Exposition, has been appointed director of the imperial health office (*Gesundheitsamt*) to succeed Professor Uhlenhuth, who is at present director of the hygienic institute at Strasburg.

Treatment of Cancer from New Standpoint

December 20, Prof. A. von Wassermann delivered an address in the Berlin medical society (*Medizinische Gesellschaft*), which dealt with the problem of exerting a therapeutic influence on tumors by way of the blood. At the same time, he published an extensive article on this subject in No. 51 of the *Deutsche medizinische Wochenschrift*, from which I extract the following extraordinarily interesting statements. In order to determine in his experiments whether carcinoma cells, removed by operation, could live longer in the blood of cancer patients than in the blood-serum of healthy persons, sodium tellurate and sodium selenate, salts first suggested for that purpose by Gosio, six years ago, were employed as indicators to show whether the carcinoma cells had retained their vitality or not; these salts have the special property of becoming reduced to a metallic form in the presence of living cells, and precipitating as a blackish or red sediment. By these experiments, it was shown that the reduction occurred in both the normal and the cancer blood-serum, so that the normal serum had not destroyed the tumor cells; but it was also shown, as the most remarkable result, that selenium and tellurium were precipitated only on the carcinoma cells themselves. The presumption that this peculiar observation was to be referred to a specially close relation between the tumor cells and the selenium and tellurium salts, was confirmed on living mice affected with carcinoma. Solutions of these salts were injected locally into the tumors. Thereupon, it was shown that a softening and liquefaction of the tumors occurred and the conclusion might be drawn from this that in selenium and tellurium, substances had been found which destroyed tumor cells as soon as they reached them.

The next problem consisted, not in injecting these salts directly into the tumor, because the prospects of healing a tumor by local treatment are extraordinarily slight; the possibility of reaching all of the tumor cells in this way seems almost hopeless, while on the other hand, a further growth takes place if only a few of the tumor cells remain alive. The problem of introducing selenium and tellurium into a tumor and saturating it with these bodies, can be solved only by the use of such chemical preparations as distribute themselves rapidly in the living organism and are diffusible. Mouse carcinoma, especially, is a very poorly vascularized tissue. For this reason von Wassermann selected as a transporting agent for the selenium and tellurium, dyes of the fluorescein group, of which he knew, from experiments which he had made some fifteen years ago with Ehrlich, that after injection into the circulation they distribute themselves very rapidly, even in such poorly vascularized tissues as the cornea and the aqueous humor.

After many painstaking experiments with hundreds of preparations, Wassermann obtained a preparation consisting of a compound of eosin and selenium which, however, it is claimed, needs careful chemical treatment for the development of its full activity. This substance is easily soluble in water. Healthy mice, averaging 15 gm. in weight, will tolerate 2.5 mg. of this substance injected into the caudal vein. As the most striking symptom there appears immediately an unusual reddening of the entire animal, which appears before the end of the injection and becoming more marked, causes the snout, the eyes and the paws to take on a lively red color. If, however, this amount is injected into a mouse affected with a tumor, there appears after the first two injections, which are made on successive days, scarcely any change. After the third injection palpation shows a marked softening of the tumor. This softening is still more marked after the fourth injection, so that there is no longer the feeling of a solid tumor, but rather that of a fluctuating cyst. Provided that the preparation is chemically good, there occurs after the third and especially after the fourth injection an absorption of the liquefied tumor content. The soft fluctuating sac becomes smaller, the tumor capsule becomes lax, being too large for its contents, and in moderately large tumors the configuration of a circumscribed tumor can no longer be distinguished, but only a long edematous cord can be felt. As the result of the fifth and sixth injections in favorable cases, the absorption and diminution proceed so that one gets the feeling of an empty sac, and in case no intercurrent disease occurs, the last remnant is absorbed and the animal is cured in about ten days with a disappearance of all remnants of the tumor. However, this undisturbed smooth healing does not always take place; with large tumors of the size of a plum and with those in which the liquefaction and softening of the contents take place very quickly the animals frequently become severely ill, feel cold and perish. This occurrence is so frequent and regular that there can be no doubt that this illness is connected with the absorption of the liquefied tumor contents. The animals in such cases succumb to the toxic action of material absorbed from their own tumors. With reference to recurrences in the healed animals, Wassermann has kept such animals for months without observing any sign of recurrence. It is important that all the tumor cells are actually destroyed. If a necropsy is made on a mouse in the stage at which the tumor is softened and gives the feel of a liquid, the tumor which ordinarily appears solid and of a grayish-white color is colored an intense red in marked contrast to the colorless or only slightly tinged surroundings. Thus it is seen that the remedy has been deposited selectively in the tumor, indicating a pronounced affinity of the remedy for the tumor cells. In mice in which there is the feeling of an empty sac in place of the previous tumor, there is found macroscopically a bacon-like detritus which has no resemblance to cancer tissue. Such a curative action is obtained with a good preparation in from eight to ten days. The next step was to determine whether mice whose tumors were not caused by inoculation, but which had become spontaneously affected with carcinoma, would be influenced by the preparation in a similar way. Two mice, one of which had a spontaneous tumor the size of a hazelnut and the other one the size of a plum, were cured; one of them is still living nearly three months after treatment, without any recurrence; the other died fourteen days after the cure, and at the necropsy no trace of the tumor structure could be found macroscopically.

On the basis of all these facts, Wassermann believes that he is justified in asserting that it is possible by means of a properly prepared eosin-selenium preparation, introduced by way of the circulation, to cure without recurrence fully developed tumors in mice, by the destruction of their cells with softening and absorption of the material, provided that the tumors have not already attained too large a size compared with the body weight (not larger than a cherry). With justifiable caution, however, Wassermann concludes with the warning that for the present we have no reason to believe that this remedy will act in a similar way on human beings affected with tumors. He has not investigated this question closely, but he is of the opinion that it does not appear impossible that by further work in the same direction progress may be made in human therapy. Wassermann's communication, which was received with great interest, was illustrated with very instructive drawings. It was also supported by the explanations included in the address made by Professor von Hansemann, who from the beginning carried out the anatomic investigation of the mice under treatment and at the necropsy. According to him, the eosin-selenium has a destructive action on the nuclei of the tumor cells, and thus the tumor breaks up into a detritus which is absorbed without residue. The remaining normal tissues of the body, according to the investigations of Hansemann, are not affected by the remedy. [This subject is commented on editorially in this issue.—Ed.]

Marriages

Edwin Morenhout Clinton, M.D., Soldiers' Home, Sawtelle, Cal., to Miss Etta P. Middleton of Venice, Cal., at Soldiers' Home, December 25.

David Arthur Sims, M.D., Fort Smith, Ark., to Mrs. Grace Rickard of St. Joseph, Mo., at Jacksonville, Fla., December 19.

Francis Rudolph Silver, M.D., Belmont, Boston, to Miss Mary Josephine Torpy of Everett, Mass., December 25.

Charles R. Mowery, M.D., Wallace, Ida., to Miss Doris Mathewson of Spokane, Wash., December 25.

Floyd B. McBride, M.D., Libertyville, Kan., to Miss Ivy Witham of Cherryvale, Kan., December 27.

Charles Kirtley Beck, M.D., to Miss Eugenie Jewell Carson, both of Louisville, Ky., November 23.

William R. S. Denner, M.D., Pittsburgh, to Miss Katheryn Danzglock of Baltimore, December 26.

Robert Henry Newman, M.D., Cleveland, Va., to Miss Lucy Gray of Lebanon, Va., December 19.

Cora White Carpenter, M.D., Spokane, Wash., and I. B. Jones of Aurora, Neb., December 21.

Ross H. Gregory, M.D., Nevinville, Ia., to Mrs. May Griffin, at Fontanelle, Ia., December 14.

Collin H. Wilcox, M.D., to Mrs. Elizabeth Baker, both of Princeville, Ill., December 25.

Aris Wellington Cox, M.D., to Miss Norma Johnson, both of Helena, Ark., December 16.

Hunter B. Spencer, M.D., to Miss Mary Kemper, both of Staunton, Va., December 25.

Deaths

John Charles Adams, M.D. Tulane University, New Orleans, 1857; assistant surgeon of the Thirty-First Mississippi Infantry, C. S. A., during the Civil War; rector of St. Mark's Church, Lake City, Minn., from 1868 to 1872; up to the time of his retirement from practice a year ago, a member of the Minnesota State Medical Association and the Wabasha County Medical Society; who was tendered a banquet by the members of the latter society and friends in 1906 on the occasion of his seventy-sixth birthday and was presented with a gold-headed cane; died at the home of his daughter in St. Paul, December 19, from senile debility, aged 79.

George Fayette Wright, M.D. Miami Medical College, Cincinnati, 1874; for several years a practitioner of Ellsworth, Kan., and at one time assistant surgeon, division surgeon and assistant chief surgeon of the Union Pacific Railway and in charge of the company's hospital in Denver; professor of orthopedic surgery in Gross Medical College; later a resident of St. Petersburg, Fla., and health officer of that city; died at his home in St. Petersburg, December 19, from colitis, aged 63.

William McVey Wright, M.D. Medical College of Indiana, Indianapolis, 1890; formerly head of the department of surgery in his alma mater and superintendent of the Indianapolis City Hospital in 1895; formerly chief medical officer of the Indiana National Guard, with rank of lieutenant-colonel; who had a cerebral hemorrhage in 1903, as a result of which he became an inmate of the Central Hospital for the Insane, Indianapolis; died in that institution, December 15, aged 48.

James Lyman Belknap, M.D. Harvard Medical School, 1902; of Wolfboro, N. H.; hospital steward during the Spanish-American War; assistant surgeon U. S. Navy from 1904 to 1908 when he resigned; assistant surgeon thereafter for a year in the Massachusetts General Hospital; died in that institution, December 28, from pulmonary embolism, a week after an operation for appendicitis, aged 37.

George M. Dakin, M.D. Eclectic Medical Institute, Cincinnati, 1862; founder of the city library of Laporte, Ind.; physician to the Ruth C. Sabin Home for Elderly Ladies, and the Northern Indiana Orphans' Home; for nearly fifty years a practitioner of Laporte; died at his home, December 21, from senile debility, aged 84.

Henry Kerr Hartzell, M.D. University of Vermont, Burlington, 1863; who after 1870 went into banking business and hematite ore mining; an authority on metallurgy and especially iron ores; president of the Lehigh Mills Corporation; died at his home in Allentown, Pa., December 20, from pneumonia, aged 72.

Andrew Davieson Estill, M.D. Jefferson Medical College, 1890; formerly a member of the American Medical Association; coroner and health officer for Rockbridge, Va., and health officer for Lexington; formerly a member of the Lexington town council; died at his home in Lexington, December 25, aged 57.

John J. Wilder, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1878; a veteran of the Civil War; a member of the Iowa State Medical Society and American Association of Railway Surgeons; formerly mayor of Kingsley, Ia.; died at his home in that city, December 22, from diabetic gangrene, aged 41.

William H. Ravenscraft, M.D. Jefferson Medical College, 1857; a practitioner of Frostburg and Oakland, Md.; once president of the Medical and Chirurgical Faculty of Maryland, and for several years mayor of Frostburg; died at his home in Denver, Colo., December 18, from paresis, aged 78.

George W. Little, M.D. Albany (N. Y.) Medical College, 1858; for more than half a century a practitioner of Glens Falls, N. Y.; coroner of Warren County for twelve years; physician to the Glens Falls Hospital; died at his home in that city, December 16, aged 76.

Chester F. Brown, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1890; a member of the Missouri Medical Association, and secretary of the Barton County Medical Society; died at his home in Lamar, December 21, from cancer of the throat, aged 63.

James Addison Wick, M.D. Jefferson Medical College, 1870; a member of the Medical Society of the State of Pennsylvania; vice-president of the First National Bank of New Bethlehem; died at his home in that city, December 24, aged 65.

William B. Sims, M.D. Kentucky School of Medicine, Louisville, 1879; a practitioner of Champaign County, Ill., since 1870; a veteran of the Civil War; for two terms police magistrate of Urbana; died at his home in that city, December 23, aged 75.

Augustus Villeroy Hill, M.D. College of Physicians and Surgeons, New York City, 1869; for several years deputy county physician of Hudson County, N. J.; died at his home in Woodcliffe-on-Hudson, December 24, from cerebral hemorrhage, aged 66.

Charles James Burke, M.D. Bellevue Hospital Medical College, 1894; for twelve years assistant registrar of vital statistics of the New York Board of Health; died at his home in Mount Vernon, N. Y., December 17, from pneumonia, aged 51.

Belford Wood Pickering, M.D. Medical College of Ohio, Cincinnati, 1877; for several years a member of the staff of the Athens (O.) State Hospital; died at his home in Gloucester, O., December 20, from cerebral hemorrhage, aged 58.

Isaac de Forest Nichols, M.D. Bellevue Hospital Medical College, 1866; surgeon of volunteers during the Civil War; for many years a practitioner of Fort Lee, N. J.; died in a hotel in Yonkers, N. Y., December 22, aged 67.

John Q. Mulford, M.D. Eclectic Medical Institute, Cincinnati, 1883; of Lebanon, O.; died at his home, December 10, aged 52, from injuries received in the caving-in of a tunnel between a heating plant and a greenhouse.

Benjamin F. Price, M.D. University of Maryland, Baltimore, 1857; for forty-five years a practitioner of Mount Carmel, Md., and later health officer of the Fifth District; died at his home in Mount Carmel, December 15, aged 76.

Calixte J. Baillargeon, M.D. Laval University, Montreal, 1905; a member of the York County (Me.) Medical Society and a resident of Sanford; died at the home of his brother, in Biddeford, Me., December 16, aged 35.

David F. May, M.D. Jefferson Medical College, 1856; of Petersburg, Va.; first superintendent of the Piney Grove Hospital for the Colored Insane, Richmond, Va.; died in the Petersburg Hospital, December 18, aged 76.

John Pickett Watkins, M.D. Vanderbilt University, Nashville, Tenn., 1911; who was preparing to practice in Helena, Ark.; died at the home of his mother in Jonestown, Miss., December 17, from malaria, aged 24.

Thomas Cloman Pugh, M.D. University of Pennsylvania, Philadelphia, 1859; surgeon in the Confederate Service throughout the Civil War; died at his home in Baltimore, December 28, from nephritis, aged 74.

Benjamin Perkins, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1867; for many years a practitioner of Croxton, Mo.; died at the home of his son in Bellflower, Mo., December 15, aged 82.

Benjamin Shurtleff, M.D. Harvard Medical School, 1848; a practitioner of Napa, Cal., for sixty-two years and once mayor of the city; died at his home in Napa, December 22, from senile debility, aged 90.

Charles E. Button, M.D. Rush Medical College, 1898, of Billings, Mont.; is said to have committed suicide by taking poison and shooting himself after having killed his wife, December 27, aged 53.

Edward Aloysius Haire, M.D. Baltimore University, Baltimore, 1898; of Brooklyn, N. Y.; was found dead in a hotel in Elkhart, Ind., December 8, from the effects of an overdose of a drug, aged 37.

A. Judson Palmer, M.D. New York University, New York City, 1854; for more than half a century a practitioner of Brooklyn, N. Y.; died at his home, December 26, from heart disease, aged 78.

A. Isaac Friedman, M.D. Bennett Medical College, Chicago, 1895; a specialist on diseases of the eye, ear, nose and throat, of San Antonio, Tex.; died at his home in that city, December 13, aged 52.

Herman Lewin, M.D. Eclectic Medical College of the City of New York, 1896; physician to the New York Letter Carriers' Association; died at his home in New York City, December 28.

William E. Williams, M.D. Medical College of Ohio, Cincinnati, 1873; a member of the Ohio State Medical Association; died at his home in Jackson, December 26, from pneumonia, aged 63.

Alexander M. Vail, M.D. Northwestern University Medical School, Chicago, 1882; of Rock Rapids, Iowa; died at the home of his sister in Chicago, December 17, from heart disease, aged 63.

James A. Flautt, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1881; for several years coroner of Jersey County, Ill.; died at his home in Otterville, December 24, aged 63.

James H. Turner, M.D. University of Pennsylvania, Philadelphia, 1851; one of the oldest practitioners of Virginia; died at his home in Front Royal, December 8, aged 83.

Orville Layne Rogers, M.D. Vanderbilt University, Nashville, Tenn., 1881; a member of the Medical Society of Virgina; died at his home in Covington, December 26, aged 52.

Leslie Martin, M.D. Albany (N. Y.) Medical College, 1864; formerly of Lysander and Baldwinsville, N. Y.; died in the Gowanda State Hospital, November 30, aged 69.

Sabinus Monroe Mathes (license, Arkansas, 1903); for twenty years a practitioner of Lawrence County; died at his home in Black Rock, December 9, aged 63.

Edward Payson Clark, M.D. New York University, New York City, 1890; died at his home in Utica, December 16, from cirrhosis of the liver, aged 48.

B. T. Laster, M.D. University of Tennessee, Nashville, 1890; of Jacks Creek, Tenn.; died in the West Tennessee Hospital, Lexington, December 20, aged 48.

George Henry McFarland, M.D. College of Physicians and Surgeons, New York City, 1902; of New York City; died in Denver, December 4, aged 35.

Charlotte Cole Jenkins, M.D. New York Medical College and Hospital for Women, 1879; died at her home in New York City, December 25, aged 78.

Charles P. Woodring, M.D. New York University, New York City, 1879; died at his home in Meadville, Pa., December 19, from arteriosclerosis, aged 58.

Joseph Alberic Genereaux, M.D. Medical School of Maine, Brunswick, 1886; died at his home in Southbridge, Mass., December 22, aged 50.

Eliza Henderson Lang McClure, M.D. Boston University, School of Medicine, 1877; died at her home in Philadelphia, December 12.

A. S. Tinsman, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1868; died at his home in Luray, Mo., December 17.

John H. S. Reiley, M.D. Medical College of Ohio, Cincinnati, 1867; died at his home in Sardinia, Ind., December 26, aged 64.

William A. Moore, M.D. Memphis (Tenn.) Medical College, 1888; died at his home in Quitman, La., December 13, aged 45.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

SOCIETY OF UNIVERSAL SCIENCE

A Pseudomedical Cult Giving Mail-Order Courses in the "Laws of Human Electricity"

For the past three years, a concern styled the Society of Universal Science has been doing a mail-order business in selling "courses" that purported to teach the "Laws of Human Electricity and Their Application to Health, Mind Power and Spiritual Growth." The president of this so-called society was one Andrew McConnell; in fact, McConnell seems to have been the "whole thing." Offices were maintained in New York and Chicago. Dupes were obtained by means of the usual newspaper advertisements, although this method was supplemented by the "free lecture" scheme. In connection with the lectures, McConnell seems to have succeeded in fooling a number of people, men who should have known better, and the names of these individuals have been used by him for the purpose of lending an air of respectability to his mail-order business.

Those who wrote to the "society" for information were sent a fifty-page booklet entitled "Organic Electricity—the McConnell Researches—Health Booklet," and a form letter of the style so much used by those engaged in operating mail-order medical businesses. Briefly, McConnell put forward the following proposition:

1. "Life power in the human body is electricity."
2. "Health is measured by the amount of electricity in each organism."
3. "The electric energy of life can be increased by following the laws of electricity."
4. "The electric energy of the human body is the great solvent power of uric acid."

McConnell claimed to have discovered these "facts" in his attempt to cure himself of "nervous prostration, heart trouble, etc." Like the lady in the "patent medicine" advertisement, he had tried "all the usual systems of healing" without avail. Then he discovered "organic electricity" and all was well. The booklet explains how marvelous cures are brought about by those who are willing to purchase the correspondence course sent out by McConnell.

Have you indigestion?

"We prove digestion to be entirely an electrical process which explains why the science of human electricity is curing all cases of indigestion."

Are you troubled with insomnia?

"We have discovered physical laws . . . by means of which one draws the energy from the brain to the vital organs and sleep is the inevitable result." [Evidently, to those embracing the McConnell system, the brain is not a vital organ.]

Possibly you are troubled with constipation!

"Constipation is primarily caused by insufficient electricity in the intestines . . . Through our method of teaching the student the scientific way of how to generate more vital force in the body, the intestines get the increased supply which increases the muscular activity, which in turn removes the cause of constipation."

Have you paralysis?

"We teach the student how to make the paralyzed part a magnetic center . . . This is the scientific way to cure paralysis. . . . The worst cases have been overcome in a few months."

Are you going blind?

"The eye power is largely regulated by the amount of electricity available in the body . . . Everyone can overcome eye weakness in a short time by learning to produce and direct more power to the eye . . . We have had most remarkable results in all types of eye troubles."

Are you in the last stages of consumption?

"When this dread disease reaches the last stages, its cure is arduous and difficult but still possible."

Do you suffer from uric acid poisoning?

"The electric energy of the human body is the great and only solvent power of uric acid."

In fact, have you any disease?

> "Vital increase and control will cure any known malady."

Has one of your lungs been partly destroyed by tuberculosis? Has the structure of your kidneys succumbed to the inroads of nephritis?

> "When we increase the vital production it becomes a simple matter to gradually rebuild any diseased part of the body."

All of these wonderful results may be accomplished—according to the McConnell booklet—by taking a mail-order course in "human electricity." Of course there are testimonials most of them from women who, apparently, have been cured of immaterial maladies at the expense of some material cash. Two or three individuals who place "M. D." after their names testify to the wonders of the McConnell system. One is a man whose name recently appeared among the incorporators of a "drugless healing" college that is being founded by the advertising manager of Peruna, C. S. Carr; the other M.D. is on the faculty of an institution that gives mail-order courses in "chiropractic."

Should the first form-letter to the prospective victim fail to bring to the Society of Universal Science the $25 that is asked for the "course," he is bombarded with the usual follow-up letters, so dear to the heart of the mail-order quack. The price is reduced to $15.00 and finally the "first and second lectures" are offered for $1.00. The supply of easy marks for a proposition of this kind is always large and the business has doubtless been a profitable one. As has already been said, McConnell succeeded in getting the endorsement of some men who should have known better.

One of such men was the Rev. Dr. Robert S. MacArthur, who stands high in the religious world. On July 7, 1908, at Carnegie Hall, in New York City, Mr. MacArthur is reported to have introduced Andrew McConnell to an audience of several thousand people in the following terms:

"This is an occasion of remarkable interest. It is the beginning of a world-wide movement . . . The days of medievalism are passed . . . I believe in the 163d psalm, which says that God healeth. How? By law working through human instrumentality. Dr. McConnell has gone through many forms of healing. He has found the force behind them all, has found the law, and when he found the law he found God Almighty himself . . . I believe that He has called Dr. McConnell to interpret God in the human body."

Besides the introducing clergyman there were many well-known citizens of the metropolis, all sympathetically interested in the founder of the "Universal Science," the "curative law."

In such an eminently respectable atmosphere, then, was the McConnell psychotherapeutic boom launched. How has it ended? A week or two ago this wretched man surrendered to the police of New York City. A pathetic figure indeed was taken into custody; his eyes red from weeping, his hair unkempt—McConnell was obviously a nervous wreck. He had, under the alleged impulse of delusions that she was interfering with his great "work," shot at his wife twice, one bullet striking her in the back of her head, as she was fleeing from him. At the time of his arrest his pockets were filled with testimonials praising his "system."

What other than gloomy comment is possible in these circumstances? Shall the Rev. Dr. MacArthur go unscathed? We have got by medievalism, declared he. Was there ever so complete a reversion to medievalism as this clergyman's exploitation of one who is evidently a paranoiac? Is such the kind of psychologic healing which the clergy would be understood as upholding, the kind they would themselves be considered proficient in? Moreover, the large audiences of McConnell were attended by many educated people. Yet if, among all those people of superior enlightenment, there was a single individual of training in psychology and mental therapeutics sufficient to estimate reasonably the claims put forth by McConnell, his identity has ever since been most sedulously concealed.

Apparently McConnell is an irresponsible paranoiac and, if so, should not be at large. But in these premises should not some responsibility rest on a clergyman who is probably the acknowledged head in these United States of a great division of the Christian church? Were not he, and those other "intellectuals" who listened so gravely to McConnell's idiotic vaporings about "life" and "health" and "electricity" and all the rest, who hailed this poor dement as the discoverer of a new philosophy and of an unprecedented healing art—were not they all together fostering the megalomania which has resulted in a homicidal frenzy of well-nigh fatal consequence?

Briefly, the matter amounts to this: Men and women who should have known better have lent the weight and respectability of their names to a scheme that was as bizarre and unreasonable as its originator was mentally unstable. Scores of ignorant people, and dozens of those not so ignorant, have been humbugged and swindled by the McConnell fake. The desperately ill, the hopelessly invalided, those who through the sickness of themselves or of those dependent on them are ready to grasp at any therapeutic straw, however worthless—those are the ones that are made to suffer mentally, physically, and financially by such schemes as McConnell's Society of Universal Science. Only those who have followed up specific instances of the harm done by pseudomedical cults know the tragedies for which such organizations are responsible. That such tragedies should be possible in this twentieth century is an anomaly and a disgrace.

Correspondence

The Army Canteen

To the Editor: I have read with interest the petition to the United States Senate and House of Representatives for the restoration of the beer feature of the canteen, published in The Journal, Dec. 16, 1911, also a letter from Dr. W. W. Keen of Philadelphia on the same subject, published Dec. 30, 1911.

As a champion of the beerless canteen or exchange, I feel it my duty to briefly reply. It is not my intention to enter into a lengthy discussion of the subject, for the reason that I published in the *Continent*, Dec. 7, 1911, an article entitled, "The Truth About the Beerless Canteen," which in my opinion supplies all the arguments necessary to combat the contentions made by the advocates of the restoration of beer. They claim that the absence of beer increases,

1. General sickness in the army.
2. Venereal diseases in the army.
3. Alcoholism in the army.
4. Desertions in the army.
5. The establishment of vile saloons and low brothels in the vicinity of the army posts.

In view of what I have written on the subject in the *Continent*, I do not think it necessary to reiterate the analysis of the figures given, because it would occupy too much space in The Journal. The summary, however, is as follows:

1. The sick rate of the army per thousand from 1867 to 1880, during the sale of alcoholics at the post traders' exchange was 2,039, while the sick per thousand from 1901 until 1910, during the prohibition of alcoholics in the posts, was 1,379.

2. The non-efficiency rate per thousand from 1867 to 1880 was 49 (period of the sale of alcoholics in the posts), while the non-efficiency rate per thousand from 1901 to 1910 was 48 (a period when alcoholics were not sold in the posts). It should be taken into consideration also that the period from 1901 to 1910 was unprecedented in the history of the United States Army, inasmuch as our troops served principally in the tropics under most unfavorable conditions, both as to tropical diseases, effects of temperature and isolation in native pueblos, where the men had no social or moral restraint. The sick rate should have been much greater during this period than from 1867 to 1880, all things being considered.

3. The rate of alcoholism per thousand from 1885 to 1898, when alcoholics were sold in the posts, was 41, while the alcoholic rate from 1901 to 1910, during which period it was prohibited, was 26.

4. The venereal rate from 1885 to 1900 was 85 per thousand (during the sale of alcoholics in the post), while the venereal rate from 1901 to 1910 was 162 per thousand, which would make it appear to the casual observer that the rate during the non-alcoholic period of the canteen was double the rate during the alcoholic period. This rate is not real, and admits of a most satisfactory explanation. From 1885 to 1900 no restraint was imposed on the men concerning venereal diseases in the way of inspections and compulsory treatment—only those cases were carried on the sick report who willingly reported themselves. It must be especially borne in mind that the vast majority of men suffering from venereal diseases conceal such infirmities from their fellow men, and especially soldiers, who feel considerable pride in their positions, and who are aware of the fact that such diseases, if reported officially, become a part of their history in the War Department, whereby a subsequent pension may become affected. I submit this as one of the reasons why less than 33 per cent. of the soldiers in the United States Army suffering from venereal diseases were carried on the sick report during the period from 1885 to 1900, which accounts for the apparent low rate of venereal diseases per thousand during that period. Had the real statistics been reported then, the figures would have been at least 255 per thousand, accepting 85 per thousand as being about one-third (⅓) of the real figures during that period. Ask any of the older medical officers who served at the posts during that period about what percentage of cases appeared at the morning sick call, or for treatment, and invariably you will receive the reply that not more than 25 to 30 per cent. were taken up. Indeed, by reference to the annual reports of the surgeon-general to the Secretary of War during that period, numerous reports have been made by post surgeons that such was the case, and I can mention a dozen or more of the posts during that period, which officially reported from 250 to 400 cases per 1,000 from those diseases, and they did not represent all of the cases then. I again affirm that the 162 cases per thousand from 1901 to 1910, as reported by the surgeon-general of the army, do not represent a more serious condition of venereal diseases than existed during the period from 1885 to 1900. Any one who follows the above explanation will see that the lurid statements concerning the tremendous increase of venereal diseases in the army, as a result of the beerless canteen, are groundless.

I have the greatest respect and admiration for Dr. W. W. Keen of Philadelphia—one of the most charming gentlemen in the country, and one of the greatest surgeons in the world. I take off my hat to the galaxy of brilliant men whose names appear in the petition to the Senate and House of Representatives, all of whom are eminent in their specialties, but know little of the sociologic condition of the soldier and his environment. "Let the shoemaker stick to his last," is an adage well worth observing. While these gentlemen are eminent in their own specialties, I feel that their knowledge of army conditions does not warrant them as witnesses in this important matter. The arguments used in the petition consist of statistics on venereal diseases taken from articles or books on such subjects, and refer exclusively to civil life. I cannot see what bearing they have on the soldiers. These statistics show that venereal diseases are exceedingly wide-spread; in fact, are appalling in civil life, and they do not represent one-half of the terrible story. There are no statistics on venereal diseases from civil life that are trustworthy. Those printed are purely guess-work, and do not represent the actual condition. It would be impossible also to obtain the statistics on alcoholism in civil life, for the reason that the vast majority of men who go on sprees, and even suffer from delirium tremens, are not taken up in the vital statistics of their communities.

The statistics bearing on venereal diseases in foreign armies, which appear in this petition, are practically worthless and do not represent those conditions there. It is a well-known fact that many of the foreign armies do not entertain on the sick report the ordinary cases of gonorrhea, chancroids and non-active stages of syphilis; it is likewise known that in some of the armies, reported in this petition, only the most serious cases of venereal diseases are taken up and made record of. Three-fourths of the men in some of those armies suffering from gonorrhea, chancroids and syphilitic conditions perform duty and are never reported by the surgeon at all. The venereal statistics of our army at present are honest, and show to the world conditions that exist in that regard. Heretofore the statistics on that subject were of little value, as they did not represent the true condition, for the reason that no examinations of the men were made previous to the last ten years, and hence from two-thirds to three-fourths of the diseases were concealed.

Dr. Keen calls attention in his letter to the unfortunate condition of the wives and children of the soldiers who become infected, but does not know that soldiers, as a rule, have no wives and children. With the exception of a few of the high-ranking, non-commissioned officers, soldiers are not permitted to marry and are not supplied with quarters in which to live. The character of the high ranking non-commissioned officer who is allowed to marry is practically as good as that of the commissioned officers, and the best class of civilians. I call attention to this matter to show that few people know anything about army life except those who live "on the reservations," and learn by experience.

The contention that desertions result from absence of beer in the canteen is purely chimerical. I believe it would be a good thing for the United States Government to lose all men who cannot get along without their glass of beer. To show that the absence of beer has nothing whatever to do with the desertions of the men, I desire to call attention to the great number of desertions which occurred during the past summer in Texas. Hundreds of men were sent there as recruits from Chicago to fill up the division on duty there at the time. I myself saw notices of fifty desertions at a time of men who had reached there as recruits, and deserted a few days after reaching Texas. These men belonged to that irresponsible class suffering from "wanderlust," instability of character, and who would never make a success of life, no matter what vocation they followed.

The last contention made by the advocates of restoration of beer, is: that, without its sale in army posts, vile saloons and low brothels spring up in the neighborhood, in which the morals of the men are affected and their health destroyed. Every army officer knows that the sale of beer in a canteen has nothing to do whatever with the establishment of saloons and brothels in the neighborhood of the posts, no more than it has to do with the establishment of such places in cities. I remember well during my service at Sam Houston, Tex. (1893 to 1897), that the entire post was flanked by saloons and brothels, although the beer canteen was in full blast. Within fifty feet of the front gate stood one of the largest of such saloons, and there was not a square around the immediate garrison that did not contain one or more of such places. During my service at Fort Hamilton, New York Harbor (1897 and 1898), at which post the canteen officer was exceedingly active in the sale of beer to the men, giving them credit up to $11 or $12 per month of their pay, the garrison was surrounded by the lowest kind of gin mills and brothels. These establishments have nothing whatever to do with the case in question, and should have no effect in the argument. Recently, at a lecture in the Men's League of Chicago, I was told that there were 150,000 drunkards and 50,000 narcotic addicts in Chicago, where you will find in many places three to four saloons in each square.

In conclusion, I desire to say that I am gratified to learn the personal attitude Dr. Keen takes in regard to the personal use of alcoholics, and only regret that he does not feel the same way toward the young soldier. In discussing this subject with one of the most eminent physicians of Chicago a few days ago, who is in favor of the restoration of beer to the canteen, I was informed by him that he had promised his son, who is now 15 years old, $20,000, the day he reached the age of 25, provided he had never touched alcoholics. I asked him what he thought of the other man's son, for whom he advocated beer. In reply, he could only shrug his shoulders.

The United States Government has imposed on army officers a holy obligation, and the parents of our young soldiers have entrusted us with the care of their sons. Shall we be true to that trust or not? Shall we place temptation before young men who have left their parents' roofs—young men who have never tasted alcoholic drinks in their lives? The answer is too obvious to need reply. The statistics used in this letter are taken from the annual reports of the surgeon-general of the army to the Secretary of War from 1867 to 1910.

L. M. Maus, Colonel, Medical Corps, U. S. A., Chief Surgeon, Central Division.

Medical Men as Illustrators

To the Editor:—I have often noticed, while examining some of my old medical works, that they were illustrated by the authors or by fellow doctors, and out of a list of sixty, I find that some thirty were Americans. Many of the latter are still living, doing splendid illustrative work, while many of the sixty have their drawings buried away in books without even an acknowledgment from the author. The list follows:

Amusco, Jean Valverde de
Allen, Harrison
Anderson, Alex.
Barker, Jeremiah
Barton, B. S.
Barton, Wm. P. C.
Beale, Lionel S.
Bell, Charles
Bell, John
Blackburn, I. W.
Bigelow, Jacob
Camper, Pierre
Cushing, Harvey
Dickinson, Robert L.
Cheselden, Wm.
Cripps, Harrison
Dalton, John Call
Dorsey, John Syng
Flagg, Josiah Foster
Foote, E. M.
Fyfe, Andrew
Gibson, Wm.
Gilpin, John Bernard
Graves, William P.
Goodsir, John
Haden, Seymour
Hayden, F. V.
Heitzmann, Carl
Henle, J.
Hewitt, Wm. Morse
His, Wilhelm H.
Howship, J.
Hodge, Hugh L.
Johnson, Laurence
Judd, Gerrit Parmele
Kane, E. K.
Krassowski, Yakovlevich
Leidy, Joseph
Lizars, William Howe
Moore, James
Morris, Henry, Sir
MacLise, Joseph
Owen, David Dale
Packard, John Hooker
Politzer, Adam P.
Porcher, Francis Peyre
Ramsay, Alex.
Ribemont, Alban
Ruge, Carl
Ruysch, Frederic
Sampson, J. A.
Say, Thomas
Scarpa
Shufeldt, R. W.
Smellie, William
Spigelius
Smith, J. Lawrence
Van der Laaw
Webster, J. Clarence
Wood, John
Woodward, Joseph Janvier
Yale, LeRoy
Young, Daniel S.
Zimmermann, J. C. E.

The progress of my forthcoming work, "Some American Doctors as Botanists", has been so expedited by your kind insertion of my inquiry concerning these that I again ask your help in securing information for my "Medical Men as Illustrators," so as to have full credit given to those of our confrères who have done fine artistic work.

Howard A. Kelly, 1418 Eutaw Place, Baltimore.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

CARBON-DIOXID SNOW

To the Editor:—Please inform us where we may obtain carbon-dioxid snow suitable for removing warts, etc., whether or not we can obtain the sticks, and their approximate cost.

Drs. Telford and Horner, Olney, Ill.

Answer.—Carbon-dioxid snow cannot be obtained in the stick form, but the carbon-dioxid snow, which is carbon-dioxid gas that has been solidified by freezing, may be made from liquid carbon dioxid, which is used in commerce for aerating soda-water. As almost every drug store buys liquid CO_2 in tanks for its soda fountain, it can be obtained through one's druggist. To get the snow it is necessary to have a tank containing a supply of liquid carbonic gas. These tanks are about 6 inches in diameter and 4 feet long with a nozzle at one end, which is the vent for the gas. To collect the snow, such a tank is placed in a position slightly slanting from the horizontal with the nozzle at the lower end, so that the liquid is at the lower end of the tank. A piece of chamois skin should be held over the nozzle so that it makes a loose bag; then when the nozzle is opened by unscrewing the valve, with a small wrench which comes with the tank, the liquid CO_2 is ejected into the chamois bag and collects in the form of snow. When the nozzle is closed and the chamois removed the solidified CO_2 will be found loosely packed on the surface of the chamois skin, appearing like ordinary snow, and it can be molded and packed as one would pack ordinary snow. The simplest way to do this is to take a metal tube, 2 or 3 inches long and ¼ inch in diameter, or of a diameter corresponding to the lesion which it is desired to treat, and pack the snow in this with a rod just as one would pack ordinary snow in such a tube if one wanted to make a stick of that. To make a firm, hard stick of CO_2 the snow should be packed into the tube with a good deal of force. The easiest way to apply this is to pack it down by hammering on the top of the rod. With a little practice masses of snow can be made of any size and any density by this method. Of the special forms of molds the most convenient mold is that suggested by Sutton, which simply consists of metal tubes with a flange of metal at the top that forms a funnel through which it is easy to pack the snow into the tube. With a little care in manipulating the chamois, there is no danger of freezing the operator's hands, but this can be entirely obviated by wearing gloves.

A number of articles on the preparation of the snow have appeared in The Journal and a few of these are listed below:

Tousey, Sinclair: Blotting-Paper Mold for Obtaining Crayons of Carbonic-Acid Ice, The Journal, May 7, 1910, p. 1519.
Stelwagon, Henry W.: A Convenient Source of Carbon-Dioxid Snow, The Journal, Oct. 3, 1909, p. 1205; The Use of Carbon-Dioxid Snow in the Treatment of Nevi and Other Lesions of the Skin, The Journal, Oct. 19, 1907, p. 1354.
Pusey, W. A.: Expensive Molds for Solidified Carbon Dioxid, The Journal, Aug. 7, 1909, p. 459.
Hutchins, M. B.: Mold for Carbon-Dioxid Snow, The Journal, March 6, 1909, p. 786.
Sutton, R. L.: Mold for Carbon-Dioxid Snow, The Journal, Feb. 6, 1909, p. 464.

THE BINET-SIMON TESTS

To the Editor:—Please tell me where I can obtain the full text of the Binet tests discussed in The Journal, December 16, p. 2001, under Current Comment.

Charles W. Allen, Hoboken, Pa.

Answer.—Many requests similar to the above make it evident that the following information will be appreciated: Both the 1905 and 1908 series of the Binet-Simon tests are satisfactorily given in G. M. Whipple's "Manual of Mental and Physical Tests," published by Warwick and York, Baltimore, 1910. One of the best short summaries of the test is given by H. H. Goddard in an article entitled "A Revision of the Binet Scale," published in the *Training School*, Vineland, N. J., June, 1911, which gives an adaptation of the scale for American children. Binet published the last revision of his scale in the *Bulletin de la Société libre pour l'étude psychologique de l'Enfant*, April, 1911. The tests were originally published in the *Année Psychologique*. Several interesting criticisms of the scale are contained in an article by Leonard P. Ayres, entitled "The Binet-Simon Measuring Scale for Intelligence: Some Criticisms and Suggestions," in the *Psychological Clinic*, Nov. 15, 1911. The *Psychological Clinic* for Dec. 15, 1911, is devoted entirely to the Binet-Simon tests. An article by H. H. Goddard, entitled "Two Thousand Children Measured by the Binet Measuring Scale of Intelligence," published in the *Pedagogical Seminary*, June, 1911, p. 232, gives, in addition to comments on the reliability of the scale, some criticisms of Binet's last revision. An article by H. H. Goddard and H. F. Hill, published in the *Training School*, June, 1911, on "Delinquent Girls Tested by the Binet Scale," may also be found of interest. Binet's series of standardizations is similar to those elaborated by Ebbinghaus, Sommer, Fiehen and others, a decade or two ago. On account of their ease of application, the Binet-Simon tests have acquired considerable vogue.

THE CONTAGIOUSNESS OF EPIDEMIC CEREBROSPINAL MENINGITIS

To the Editor:—In looking up the medical authorities I have at my disposal on the subject of epidemic cerebrospinal meningitis, in reference to the contagiousness of the disease, I find conflicting opinions. The State Board of Health of Kansas classes epidemic cerebrospinal meningitis along with small-pox, scarlet fever and other contagious diseases. Holt (1902) says (p. 750) the disease is not contagious. Osler says practically the same thing, but I have not consulted his late edition. Hare (1911) omits any mention as to the contagious elements in the disease. In my personal experience I have seen not to exceed one dozen cases in twenty-five years of practice and have not been able to conclude that one case originated from another. I should like to have the opinion of other medical authorities not at my disposal, whether for or against the contagious theory of the disease.

If we admit the contagious character of epidemic cerebrospinal meningitis, I should be pleased to have precise directions as to just how one can disinfect the carriers of the disease, with suggestions

in the way of precautions for the physician so that he may not become a carrier. The method of disinfecting which we would ordinarily adopt for small-pox will scarcely avail if the *Diplococcus intracellularis* is lodged on the mucous surfaces of the nose and throat.
J. ALLEN PALMER, Erie, Kan.

ANSWER.—Prior to 1905, very few American physicians of the present generation had personal experience with epidemics of cerebrospinal meningitis and the "carriers" had not been discovered. Now it is known that several times as many "carriers" have meningococci in the nasopharynx as there are persons who develop cerebrospinal meningitis. Besides, the nasopharyngeal site of entry of the meningococcus has been more certainly established during the last four or five years. In other words, text-books written prior to 1906-7 have not taken epidemic meningitis very seriously, just as they have not taken epidemic poliomyelitis seriously until recently.

There can hardly be two opinions about the contagiousness of cerebrospinal meningitis, although, of course, the degree is far less than that of measles, diphtheria or scarlet fever; and, indeed, there are very great differences in the degree of contagiousness of these last affections—and yet the contagiousness of the least of them is not denied in relation to that of the worst. The individual experience of any one physician is, of course, a very uncertain basis of decision regarding contagiousness in general. And in cerebrospinal meningitis, as in poliomyelitis, there are surely marked individual differences of susceptibility. But as we possess at present no means of distinguishing the susceptible and the insusceptible the only course left open is to deal with the disease as we do with the common contagious ones.

As to the practical question of method of prevention, the problem is about the same as with diphtheria, only not so serious. The meningococci tend to disappear from the nasopharynx, or to become very few, by the time the disease has run its course and convalescence is established. A few persons, however, are converted into "carriers" and in them it is difficult to suppress the meningococci. The suppression of the meningococci in passive carriers, once they are discovered, is also difficult. The latter source of danger can be averted by taking account of the infectiousness of the nasal and buccal secretions and preventing contamination from spitting, etc., and by caring for hands, clothing, etc. The disinfection of rooms should be by scrubbing and then by the usual gaseous disinfectants, followed by free air and sunlight. Fortunately the meningococcus has no very great power of survival outside the body.

AGGLUTINATION OF BACTERIA BY ACIDS.

To the Editor:—I am much interested in the editorial (THE JOURNAL, Dec. 16, 1911, p. 1998) on agglutination of bacteria by acid concentration of hydrogen ions. Is the article referred to printed in English and if so where can I obtain it? If not, can you give the subject a more extensive review? C. C. M.

ANSWER.—Michaelis' last report is published in the *Folia Serologica*, 1911, vii, 1010. The American agents for this periodical are G. E. Stechert and Co., 151 West Twenty-Fifth Street, New York, and the price of this number is given as $1.05 (4.20 marks). His earlier communication on the subject was published in the *Deutsche medizinische Wochenschrift*, 1911, xxxvii, 969. Michaelis uses for the test the following six solutions:

	Normal Sodium Hydroxid Solution c.c.	Normal Acetic Acid c.c.	Distilled Water c.c.	Hydrogen Ions Concentration (Approximately)
Solution 1..	5	7.5	87.5	1×10^{-5}
" 2..	5	10	85	2×10^{-5}
" 3..	5	15	80	4×10^{-5}
" 4..	5	25	70	8×10^{-5}
" 5..	5	45	50	16×10^{-5}
" 6..	5	85	10	32×10^{-5}

Six test-tubes are prepared by placing in one 1 c.c. of Solution 1, in a second tube 1 c.c. of Solution 2, etc. The fluids are kept on hand in vials with a rubber stopper in which is set the neck of a 1 c.c. pipette. The pipette is filled by pressing on the rubber stopper. The upper end of the pipette is then closed with the finger, and the pipette, still in the rubber stopper, is removed from the vial and its contents are then ready to use. A suspension is made of a twenty-four-hour agar culture of the bacteria in question, after rinsing the culture with a few drops of water to wash away any phosphates, etc., which might disturb the reaction. The suspension is made with 5 c.c. of distilled water and the whole is well shaken and transferred to another glass when it is diluted to 20 c.c. The suspension is then poured into a 20 c.c. burette, with a glass stop-cock, and 3 c.c. of the suspension is placed in each of the already prepared six test-tubes. Incubator temperature hastens the appearance of the reaction, but the test-tubes should be taken out of the incubator after an hour at longest and be observed at room temperature thereafter. According to the agglutinating property of the bacteria, agglutination occurs in fifteen minutes or not until after several hours, and it may be evident only in one or two of the test-tubes. Tests with other substances have constantly confirmed the fact that it is the concentration of hydrogen ions which is the essential factor involved. The optimum hydrogen ion concentration for typhoid bacilli is always in the third or fourth tube while for paratyphoid it is the fifth or sixth. Colon bacilli do not seem to be agglutinated by acids at all.

MOSER'S ANTISCARLATINAL SERUM

To the Editor:—Please state where I may obtain such a serum as was used by Moser in the treatment of scarlet fever. X. Y. Z.

ANSWER.—Moser's antiscarlatinal serum is a European preparation; we find no statement as to where it may be obtained. It is said to be prepared from the serum of horses which have been immunized against cultures of living streptococci obtained from the blood of scarlet fever patients. A serum closely corresponding to this is put on the market by Burroughs, Wellcome and Co., named Antistreptococcus Serum (Scarlatina), but this is said to be obtained from horses injected with killed cultures. See New and Nonofficial Remedies, Ed. 1911, p. 189.

The Public Service

Medical Corps, U. S. Navy

Changes during the week ended Jan. 6, 1912.

Benton, F. L., surgeon, detached from the *Idaho* and ordered to the *Maine*.

Thompson, E., surgeon, detached from the *Maine* and ordered to the naval station, Guantanamo, Cuba.

Hoen, W. S., P. A. surgeon, detached from the naval station, Guantanamo, Cuba, and ordered to the *Idaho*.

Cole, H. W., P. A. surgeon, ordered to the naval recruiting station, Baltimore, January 8.

Dorsey, B. H., P. A. surgeon, ordered to duty at the naval hospital, Boston.

Medical Department, U. S. Army

Changes during the week ended Jan. 6, 1912.

Collins, C. C., major, leave of absence extended one month.

Allen, William H., lieut., granted thirty days' leave of absence.

Ingalls, R. E., dental surgeon, left from temporary duty at Fort William H. Harrison, en route to Fort Missoula, Mont., for temporary duty.

Voorhies, H. G., dental surgeon, reports as on duty at Fort Leavenworth, Kan., since Dec. 21, 1911.

Sherwood, C. E., acting dental surgeon, left Columbus Barracks, Ohio, en route to presidio of Monterey, Cal., for duty.

Ingalls, R. E., dental surgeon, reports for temporary duty at Fort Missoula, Mont.

Morse, Arthur W., major, on arrival at San Francisco on the *Sherman* will accompany Seventh Infantry to Fort Leavenworth, Kan., and then proceed to Fort Morgan, Ala., for duty.

Wilson, James A., lieut., on arrival at San Francisco on the *Sherman* will accompany Seventh Infantry to Fort Leavenworth, Kan., and then proceed to Fort Slocum, N. Y., for duty.

Whitney, Walter, M.R.C., ordered to Fort Morgan, Ala., for temporary duty.

Millikin, John D., contract dental surgeon, leave of absence extended to and including March 4, 1912.

Chappell, Sidney L., M.R.C., ordered to active duty and assigned to station at Fort Totten, N. Y.

Stuckey, Harrison W., M.R.C., ordered to the Philippine Islands for duty on March 5, 1912.

Osborn, Henry C., M.R.C., resignation of commission as first lieutenant accepted.

Brooks, William H., major, ordered to report in person to the president of the army retiring board at San Francisco for examination by the board.

U. S. Public Health and Marine-Hospital Service

Changes for the fourteen days ended Jan. 3, 1912:

Cobb, J. O., surgeon, detailed to represent the service at the annual conferences of the Council on Medical Education and of the Council on Health and Public Instruction of the American Medical Association to be held at Chicago, Feb. 26-27, 1912.

Francis, Edward, P. A. surgeon, directed to proceed to Cleveland, Detroit and Kansas City for the inspection of laboratories under the act of July 1, 1902.

Boards of medical officers were convened for the physical examination of officers of the Revenue-Cutter Service as follows:

Port Townsend, Wash., Dec. 22, 1911, Surgeon P. M. Carrington, chairman; P. A. Surgeon B. H. Earle, recorder.

New London, Conn., Dec. 27, 1911, P. A. Surgeon G. L. Collins, chairman; Acting Assistant Surgeon J. G. Stanton, recorder.

Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

THE OWEN BILL

What It Is and What It Is Not

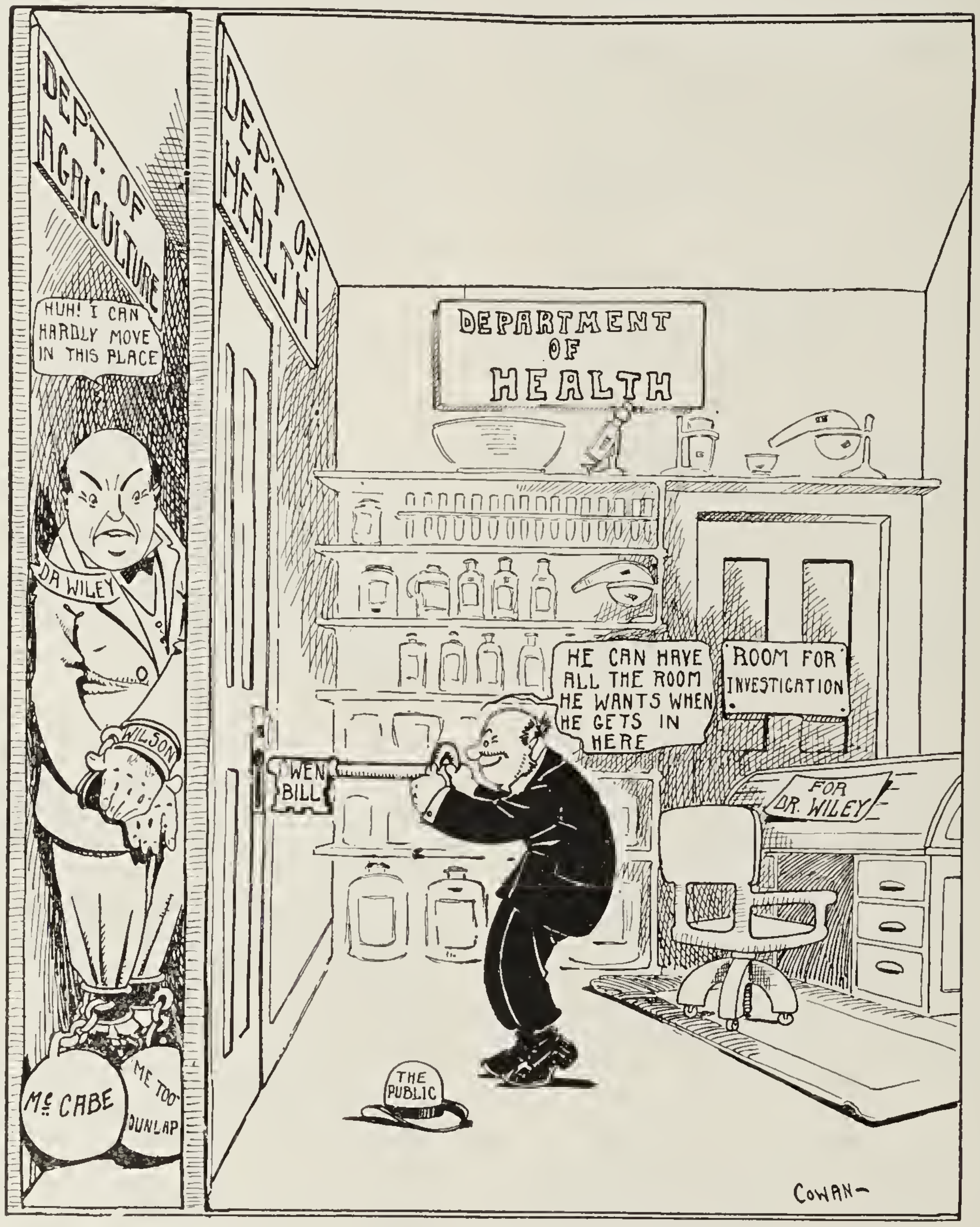
Out of the thousands of newspaper clippings received regarding meetings held by the National League for Medical Freedom, interviews by their leaders and canned editorials denouncing the Owen Bill, not one of these newspaper items quoted from the bill itself, neither does it appear that the bill was read at a single meeting or quoted from verbatim by a single speaker. In fact, it is evident that many of the speakers and writers employed by the League for Medical Freedom have never even read the bill which they denounce.

WHAT THE OWEN BILL IS

Taking up the bill by sections: Section 1 provides for an executive department known as the Department of Health, of which a Director of Health—to be appointed by the President — shall be the head.

Section 2 provides for an assistant, to be known as the Commissioner of Health, and for the usual chief clerk and other department employees and for the auditing of accounts.

Section 3 defines the purpose of the department to be "all matters pertaining to the conservation and improvement of the public health and to collect and disseminate information relating thereto." Provisos carefully safeguard the rights of the states, of private citizens and of all practitioners of healing. This section is the most important part of the bill and should be carefully read.[1]



THE KEY TO THE SITUATION

Section 4 provides for the transfer to the new department of (a) the Public Health and Marine-Hospital Service from the Treasury Department; (b) the Bureau of Chemistry (in part) from the Department of Agriculture; (c) the Division of Vital Statistics, of the Bureau of the Census, from the Department of Commerce and Labor. The President is also authorized to transfer any part of any other department engaged in public health work, except the Medical Department of the Army and the Bureau of Medicine and Surgery of the Navy. All the powers, functions, records and appropriations of any bureau transferred shall be transferred with it.

Section 5 provides for eight bureaus: (a) Sanitary Records, (b) Child Hygiene, (c) Vital Statistics and Publications, (d) Foods and Drugs, (e) Quarantine, (f) Sanitary Engineering, (g) Government Hospitals, (h) Personnel and Accounts.

Section 6 provides for temporary exchange of employees with other departments.

Section 7 provides for an advisory board of seven specialists to advise with the director. This board already exists as the Advisory Board of the Hygienic Laboratory.

Section 8 authorizes the director to call a conference of the health authorities of all the states when deemed advisable. This power is now possessed by the surgeon-general of the Public Health and Marine-Hospital Service.

Section 9 confirms the existing functions of the three bureaus transferred.

Section 10 provides for an annual report to Congress.

Section 11 provides —— dollars to carry out the purposes of the act.

Section 12 is the usual repeal of all conflicting acts.

Section 13 provides that the act shall take effect July 1, 1912.

WHAT THE OWEN BILL IS NOT

1. The bill was not originated by the American Medical Association or by any of its officers or members. Senator Owen's declaration on the floor of the Senate is sufficient proof of this fact. But the American Medical Association has for twenty years urged the passage of such a measure. When Senator Owen introduced his original bill (S. 6049, now S. 1) the Association naturally endorsed it and has continued to do so as it will any measure which is for the public good, but to Senator Owen alone belongs the credit for originating this bill.

2. The passage of this bill will not and cannot create a "medical trust." Every intelligent lawyer knows that the right to regulate the practice of medicine, as well as all other trades and occupations, lies in the state and not in the national government. No law which Congress can pass will or can have any effect on the practice of medicine in the states. (See Freund, Police Power, also Senator Owen's reference to supreme court decisions on this point.)

3. The passage of this bill will not and cannot interfere with the right of any one to select any form of treatment, or any kind of healer or attendant he may desire. This bill has nothing to do with the treatment of individual patients. It provides for the study of diseases in laboratories, by means of chemical, bacteriologic and biologic investigations. It contains no provision whatever for the treatment of any individuals by any one.

4. The passage of this bill will not force any one to submit to any treatment which he does not desire. As stated above and as a reading of the bill will show, this measure has noth-

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[1] Copies of the bill can be obtained through any congressman or our reprint will be sent on receipt of a stamped addressed envelope.

ing to do with the treatment of individual patients. The provisions in Section 3 fully safeguard the rights of every citizen, although this is entirely unnecessary, since Congress has no power to make any one accept any form of treatment for any disease. Congress may make quarantine provisions, detaining persons suffering from certain diseases until they recover, in order to prevent epidemics. The states may make similar provisions. But neither Congress nor the states have any power to compel any person to take any medicine or form of treatment they do not desire.

"BENEFACTORS OF HUMANITY"

The Baltimore *Sun*, under the heading "An Abhorrent Trust," says: "Despite the noble efforts of the League for Medical 'Freedom,' the abhorrent Medical Trust continues to grind the American People beneath its heel. Wooing the ear of Mr. Taft with its artful sophistries, it has lately induced him to issue an executive order requiring all medical practitioners in the Panama Canal Zone to obtain licenses from the local board of health, of which the notorious Gorgas, murderer of mosquitoes, is boss. What will be the effect of this order? Simply that only so-called 'regular' doctors—rascals who have studied four long years in a medical college and really know a staphylococcus from a peritoneum—in brief, members of the trust—will be able to practice. The gifted lady who cures leprosy by reading out of a book; the sturdy bone-setter, horny-handed but with a kind heart; the scorned discoverer of a sure specific for cancer; the Emmanuel Mover with his soothing voice—these great benefactors of humanity will be chased from the zone.

"And not content with such vile consummations, the Medical Trust pursues at home its campaign of inoculation and espionage. When the army was sent to the Mexican border last spring the hideous corpses of typhoid germs were introduced into the veins of 20,000 men. The mental healers of the United States, working voluntarily and at long distance, saved the poor fellows from immediate death. Not one of them, in truth, developed typhoid fever. But soon or late, as everyone knows, they will die of cancer, and if not of cancer, then of delirium tremens, and if not of delirium tremens, then of senile debility—helpless victims of a medical fad, of the sinister Medical Trust.

"Since then thousands of other Americans have been inoculated—the militiamen of Maryland, the paupers in Maryland asylums, multitudes in other states. The militiamen of New York are just now undergoing the torture; orders have been issued that every man in the Army and the Navy shall bare his arm. And meanwhile, the trust emissaries go snooping about the country, interfering with freedom in other ways. Here in Baltimore, for example, they invade the public schools and search for cases of pediculosis—an imaginary malady invented by the trust. And finding it, they proceed against it barbarously.

"It is to stay all such horrors that the League for Medical 'Freedom' was organized. So far as we have seen, the trust prevails over it; but soon or late, if there is any virtue left in the world, it will enjoy its triumph and its glory."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Fifth Month—Third Weekly Meeting

Injuries About the Shoulder-Joint

Discuss diagnosis and treatment of each injury.

I. Fracture of clavicle. II. Dislocations of clavicle; acromial and sternal ends. III. Fractures of scapula. IV. Fractures of upper end of humerus.[1] V. Dislocations of head of humerus. VI. Fracture-dislocation of upper end of humerus.

Injuries About Hip-Joint

Discuss diagnosis and treatment of each injury.

I. Fractures of head and neck of femur.[2] II. Fractures of acetabulum. III. Fractures of greater and lesser trochanter. IV. Dislocations of hip. V. Epiphyseal separation, in children.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Illinois: Coliseum Annex, Chicago, January 17-19. Sec., Dr. James A. Egan, Springfield.

Iowa: Capitol Bldg., Des Moines, February 6-8. Sec., Dr. Guilford H. Sumner, State House.

Kansas: National Hotel, Topeka, February 13. Sec., Dr. H. A. Dykes, Lebanon.

Nebraska: State House, Lincoln, February 14-15. Sec., Dr. E. Arthur Carr, 141 S. 12th Street.

New York: January 30-February 2. Chief of Examinations Division, Mr. Harlan H. Horner, Albany.

Annual Conference on Medical Education, Legislation and Public Health

The annual conference on Medical Education, Medical Legislation and Public Health, under the auspices of the Council on Health and Public Instruction of the American Medical Association, will be held at the Congress Hotel, Chicago, on Monday and Tuesday, February 26 and 27, the session to begin at 10 o'clock Monday morning.

On Monday, February 26, the Council on Medical Education will hold its Eighth Annual Conference. A special address will be given by Mr. Frederic G. Hallett, secretary of the conjoint board of England, on "The Organization and the System of Examinations of the Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England." Other important topics bearing on medical education and licensure will be discussed.

On Tuesday, February 27, there will be conferences on medical legislation and on public health. If necessary the session will be continued on Wednesday.

On Tuesday evening a public meeting will be held at Orchestra Hall at which an address on public health will be delivered by Senator Robert L. Owen, of Oklahoma.

It is reported that the annual meetings of the Association of American Medical Colleges and of the two Confederations of State Licensing Boards are to be held respectively on Wednesday and Thursday following the above conferences. There is promise that this series of conferences will be very interesting and helpful.

The "Chicago Medical University" and the "Crescent Medical University"

A "graduate" of the "Chicago Medical University" recently appeared for examination before the Kansas State Board of Registration but failed to pass. It will be remembered (The Journal, July 9, 1910, p. 134) that this and the "Crescent Medical University" were exposed by the Illinois State Board of Health in 1910, a diploma from each having been purchased at $40 apiece through the assistance of a Georgia physician. Both "universities" were conducted from the same office in Chicago by Dr. Alexander Chittick, Dr. N. O. Bourque and others. Dr. Chittick was convicted and sentenced to sixty days in the county jail for fraudulent use of the mails. His license to practice medicine in Illinois was revoked May 24, 1910.

Miscellany

Value of Experimentation.—The ancients thought as clearly as we do, had greater skill in the arts and in architecture, but they had never learned the use of the great instrument which has given man control over Nature experiment. . . . We did not get very far in our knowledge of the workings of the animal body in health and disease until we began to use experiment. A few of the old Greeks appreciated its value, Galen in particular, but it was not until the Renaissance, until the advent of Galileo and of Sanctorius, that men realized how powerful it might be. Harvey made use of it in a golden discovery, and his monograph, "Exercitatio anatomica de motu cordis," is the first great product of the experimental method applied to medicine. Thousands of men with keen eyes had watched the heart beat, had seen arteries spurt red blood, had seen the black blood flow from the veins, and they had thought and thought of how the heart beat and how the blood flowed, but all in vain until, in a few simple experiments, the problem of its circulation was demonstrated. —Osler in *Glasgow Med. Jour.*

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[1] Progressive Med., December, 1903.

[2] Whitman: Medical Record, March 10, 1904. Senn: The Journal A. M. A., June 10, 1905. Whitman: New York Medical Record, Jan. 2, 1909

Clippings from Lay Exchanges

We often print under this head items of more or less interest, which we have noticed in the newspapers. The following are some collected by "B. L. T." and printed at various times in his column in the Chicago *Tribune:*

LIFE'S LITTLE INDULGENCES

Dr. H. F. O—— of Oconto Falls arrived in the village on Wednesday of last week and has decided to locate here and indulge in the practice of medicine and surgery.—Prairie Farm (Wis.) *Breeze.*

WE CAN SLEEP WITHOUT ASSISTANCE, CAN'T YOU?

Sleeping Partner—Lady or gentleman; lucrative, genuine; £250 to £500; full particulars at interview; good references given and required.—London *Morning Post.*

THE KID SEEMS TO LIKE IT HERE

She had just returned from a case in which she had assisted in ushering a baby into the world for the hundredth time.—*Kendall County Record.*

Society Proceedings

WESTERN SURGICAL ASSOCIATION

Twenty-First Annual Meeting, held at Kansas City, Mo., Dec. 18-19, 1911

(*Concluded from page 58*)

Fibrous Tuberculosis of the Peritoneum Involving Omentum, Intestines and Uterus

Dr. C. Lester Hall, Kansas City, Mo.: The interesting feature in this case was the unusual size of the nodules, varying from that of a mustard seed to a small hazelnut, which were not simply implanted on the tissues, but were buried down in the omentum and mesentery, making it impossible to remove them without tearing into the bowel. Recovery from the operation was uneventful, and to-day, twelve months after the operation, the patient reports herself in fair health and physical condition.

End-Results in Gall-Bladder Surgery

Dr. B. B. Davis, Omaha, Neb.: I have been able to gain a fair knowledge of the postoperative condition of 234 cases for periods ranging from six months to twelve years following operation. Of this number, there are sixty males and 174 females, or, approximately, three females to one male. Of the 234 gall-bladders, 150 contained stones, and eighty-four were cases of cholecystitis, acute or chronic, without stones. At the primary operation 176 were drained and fifty-eight were subjected to cholecystectomy. Only one of the fifty-eight patients on whom cholecystectomy was done primarily has had enough postoperative trouble to require relief by secondary operation, and that was done to break up adhesions that were interfering with the emptying of the stomach. Relief was complete eighteen months after the operation. Of the 176 cases of primary drainage, eleven patients have been such sufferers as to be willing to have another operation performed. The second operation in ten of these cases was cholecystectomy, with relief finally in all of them, but at least two of these continued to have considerable pain for several months. One of the cases operated a second time did not seem to show sufficient cause for cholecystectomy, and a drainage operation was done. The relief was only partial.

Aside from the eleven patients operated on secondarily for unrelieved or recurrent symptoms, five have been readmitted to the hospital for medical and massage treatment without operation. Two of these patients were relieved, and two received no benefit and are still suffering. The fifth patient has been back twice and each time rest, hot packs, Carlsbad salts, careful diet and light massage have given relief. His last stay in the hospital was only three months ago and it was agreed that if the symptoms returned he would come back for a cholecystectomy. Twelve other patients complained greatly for a time, but as far as it has been possible to ascertain, most of them are better, and at least seven are completely relieved. My records in regard to persistent fistulas are incomplete, but several have not closed for from three to six months after operation. One of these was still discharging almost a year after discharge from the hospital, but as there was no pain and the general health of the patient was excellent, the woman would not consent to another operation.

Tubal Sterilization

Dr. Lawrence W. Littig, Davenport, Ia.: Animal experiments, the ligation or excision of pathologic tubes, and the results of like operations on normal tubes prove conclusively that tubal ligation, with or without excision, is not an efficient measure to prevent conception. The only operation which gives a promise of success is excision of all or a part of the tube, with a deep wedge-shaped excision of the uterine cornu, including the *pars uterina* of the tube, the uterine defect to be closed with a musculomuscular, and a seroserous row of sutures. Granting that the state has the right to sterilize its mental and moral delinquents, tubal ligation, as legalized in Iowa, considering its remote possibility of success, and its ever-present, although vanishing danger, is an unjustifiable operation, entirely without promise as a means to lessen the procreation of the unbalanced.

Chronic Brain Abscess of Traumatic Origin

Dr. William Jepson, Sioux City, Ia.: Among six cases of chronic brain abscess of traumatic origin submitted to operation, there was one recovery among three cases due to gunshot wounds, and two recoveries among the other three cases of fractures produced by means other than missiles. In all cranial fractures assuming the type of puncture wounds, there exists a great tendency to the production of a chronic abscess. This is an encapsulated infection, and as long as it remains so there are no symptoms. When the capsule gives way, however, converting a latent into a potential infection, symptoms indicative of acute inflammation follow. The danger of infecting the arachnoid space should be guarded against by a not too rapid escape of the pus.

The Choice of Technic in Enterostomy Incident to Operations for Intestinal Obstruction

Dr. John P. Lord, Omaha: The drainage of the bowel in chronic as well as in acute obstruction makes for safer surgery. Venting by an enterostomy tube in uncertain or insecure sutures, especially in complicated cases in resections of the large intestine, removes the element of gas distention and allows rest to the bowel, a necessary condition to insure primary union. The technic which I favor is practically identical with an E. J. Senn gastrostomy. Leakage has never been troublesome, and in the case of all patients who survived, closure was complete in a short time. The simplicity and safety of the method favored makes the indications for enterostomy more frequent, and if it were more often used, and if it had a more general early application it would make for safer and more satisfactory intestinal surgery incident to operations for obstructions.

Infection of the Retroperitoneal Lymphatics

Dr. James E. Moore, Minneapolis: Owing to the inaccessibility of these parts, infections and even abscesses often occur here that are not recognized. When there is an infection here, the intestines usually become distended, which adds to the natural difficulties of examination; when chills, fever and sweating are present, the cause of which is not found in any of the usual locations, or when the symptoms continue after thorough drainage of pelvic or abdominal abscesses, the retroperitoneal space should be suspected. It is quite possible that in many instances where patients have died from sepsis without the abscess having been discovered, it was located in this region: The presence of tubercular abscesses in this location has been very frequently recognized. The reported causes of nontubercular abscesses in the retroperitoneal space are typhoid, appendicitis, salpingitis, infection following abortion and parturition, and suppuration of the inguineal lymph-nodes. In some cases following parturition infection has manifested itself as late as three months after labor. A few cases have been reported without apparent cause. My experience is limited to four cases, the first two occurring years ago before laboratory facilities were at hand.

Failure of the Colon to Rotate

Dr. Charles H. Mayo, Rochester, Minn.: The relative rarity of these obscure intra-abdominal abnormalities, and the fact that they so infrequently give rise to definite symptoms, explains, in part, why a diagnosis is so seldom made. Within the abdomen congenital deformities are so efficiently concealed that only a small percentage of them are found until adult life is reached, and then only at operation or necropsy. Because of congenital or acquired openings in the diaphragm, much of the colon with other abdominal viscera may be located in the pleural cavity. A partial rotation may leave the cecum at any point between the normal and the right under-liver position, or the left umbilical or left pelvic position. In the event of such abnormality, there may be failure to find the appendix at operation, and the congenital position should be considered probable when no colon is found on the right side, and positive if the duodenum is found uncovered by colon and with a mesentery. Failure of the colon to rotate should be considered as a possible cause in cases of obscure inflammatory conditions in the left or middle pelvis, or in the left iliac fossa. Approximately three hundred cases of complete transposition of the abdominal viscera have been reported in the literature. In six cases observed at St. Mary's Hospital we operated three times for left-sided appendicitis, twice in acute abscess. Very little is found in the literature as regards failure of the colon to rotate, although it is undoubtedly a condition which should be considered as more frequent than complete transposition. The condition may be found described under various anomalies of the duodenum as well as of the colon. We have observed five of these cases during the past two years in operating on the abdomen, and in only one of the cases was the abnormality diagnosed before operation.

Tuberculosis, Solitary and Apparently Primary, of the Fallopian Tubes

Dr. Albert J. Burge, Iowa City, Ia.: I have seen two cases of tuberculosis of the Fallopian tubes. The sections in each case showed well-marked tuberculosis in the partially destroyed or degenerated mucous and muscular walls, with distinct giant cell formation. The future will recognize distinctly the tendency of the female adnexa to develop primary tuberculosis as does the epididymis of the male. If so, what shall be the treatment? Will it be the same vigorous, radical and summary course which the analogous disease in the male merits and now receives? In view of the added dangers of an intraperitoneal location in the female, I venture to say that it will, saving the ovaries when free and safe, but in nowise temporizing with the tuberculous tubes.

DISCUSSION

Dr. John B. Murphy, Chicago: Dr. Burge's paper has interested me from several standpoints. First, from the pathologic findings; second, from the clinical history; third, from the association of this lesion with hemorrhages from the uterus, and, fourth, from the surgical treatment. The reason for the deposit of tubercle bacilli in a tube is not definitely settled. Whether it is of hematogenous origin in the tube, or of hematogenous origin in the vas deferens, the epididymis, is a question. It is my belief that infection in a tube occurs more commonly through the peritoneum or through the uterus, and that tuberculosis of the uterus is a more frequent lesion than is generally believed. Both of Dr. Burge's cases show evidence of mixed infection, and not a pure infection. When there is a pure infection of the tube, the fimbriated end is open. It is the only type of infection of the tube that retains the patency of the tube during the inflammatory process. In the other types of infection of the tube the tendency is at once to closure of the tube by agglutination to the neighboring structures. Where a tube remains open, the clinical course is almost identical with that of recurrent appendicitis. A patient will have a period of relief, in fact, of good health, followed by a sudden attack of pain, nausea and vomiting, local sensitiveness, elevation of temperature, and often a discernible effusion into the peritoneal cavity. Examination through the vagina or through the rectum usually shows a thickening of Douglas' pouch in the class of cases of the type I have mentioned. In the type of case the doctor has reported here, once the tube becomes closed, it does not give the recurrent appendicitis syndrome of symptoms as does the open fimbriated end. Perforation of the tube on the side of tuberculosis, as mentioned in the doctor's paper, is not uncommon. When it does occur, it causes a limited peritonitis which usually rapidly circumscribes itself and undergoes repair. The peritoneum has such greater resistance against tuberculosis than any other tissue in the body that it rapidly heals up. In the treatment of these cases, removal of the tube with the encapsulation of the end suffices for the cure of the local conditions, and not only that, the extensive peritonitis that may have resulted from repeated attacks of leakage from the end of the tube entirely repairs.

The Present Status of Surgery for Cancer of the Breast

Dr. E. S. Judd, Rochester, Minn.: Tumors of the breast may be divided into two groups, benign and malignant. So far as we know at the present time, a differentiation other than microscopic cannot be made between a benign tumor and a very early malignant one. They should all come under the same line of treatment, namely, radical excision of the malignant tumors, and removal of the tumor followed by radical excision if the growth proves malignant in the supposedly benign type. Age is no longer considered an important factor in determining malignancy. While it is true that the muscles are seldom involved as compared to the fascia; at the same time, we have recently observed several cases in which the lymphatics penetrating deep into the muscle were extensively involved. The frequency with which mammary carcinoma produces metastases in the bones is well known. The sternum and ribs are the most frequently involved, and this occurs by direct extension. The femur, bones of the spine and humerus come next in the order of frequency. It is often advisable in cases of cancer of the breast to have roentgenograms made of the bones most frequently invaded, since it is obviously useless to remove the breast should one of these bones be involved.

Two hundred and sixty-four cases of carcinoma of the breast have been observed in the clinics at St. Mary's Hospital within the past two years. Of this number, two hundred were considered operable and sixty-four inoperable. In order to make an early positive diagnosis, it is necessary to remove for macroscopic and microscopic examination all supposedly benign and doubtful neoplasms. The technic of radical amputation of the breast has changed but little in the past few years. A large amount of skin, equidistant in all directions, should be removed. The most important part of the technic is the removal of a very extensive part of the superficial and deep fascia. This dissection must begin above the axillary structures, include the pectoral muscles and fascia of the axilla, and extend down over the rectus muscle, taking in a part of its fascia. In removing the pectoralis major the fascial excision is carried to the sternum and from there outward to the large muscles of the back. If there are many skin nodules, or if the integument is brawny and edematous, although the local lesion can be entirely removed, in all probability there are internal metastases or bone lesions and the condition is hopeless.

The prognosis as to the probability of a cure in a case of carcinoma of the breast will depend (1) on the length of time the neoplasm has been developing; (2) on the degree of outlying involvement; (3) the activity of the gland which will be determined by the age of the patient and the relation to a period of lactation, and (4) the thoroughness of the removal of the gland-bearing fascia.

SOUTHERN SURGICAL AND GYNECOLOGICAL SOCIETY

Twenty-Fourth Annual Meeting, held in Washington, Dec. 12-14, 1911

(Continued from page 59)

Benign Tumors of the Stomach

Dr. Edward A. Balloch, Washington, D. C.: My patient was a woman, 56 years of age. There was a history of a severe fall twenty years before, when the left side was severely injured; vague dyspeptic symptoms for several years, principally pain and nausea. The pain was worse after the menstrual periods. Enlargement of the abdomen was first noticed December, 1910. This had increased steadily, and, at the same time, the pain and nausea had grown worse. Examination showed a mass in the lower left quadrant, having the general size and shape of a kidney. It could be pushed into the left kidney region without difficulty, but resumed its original position when pressure was removed. A diagnosis of wandering kidney was made and the patient sent to the hospital for operation. After she was anesthetized a further examination was made, when it was found that the mass could be pushed all over the abdomen. The diagnosis was then made of omental cyst or a pelvic tumor with a long pedicle. After opening the abdomen the growth was found to spring from the greater curvature of the stomach. It was removed without difficulty and the patient made a rapid recovery. Pathologic examination showed the growth to be a soft fibroma.

Pyloric Stenosis Due to Overgrowth of Scar Tissue

Dr. W. M. Jordan, Birmingham, Ala.: Non-malignant new growths in the pyloric end of the stomach are much more common in the negro race than in whites. I have not observed a single case of this character in a white person, but have met with five cases in negroes. There were two men and three women, whose ages were respectively, 28, 29, 38, 45 and 55. All gave stomach histories more or less suggestive of ulcer preceding the onset of obstruction. The smallest growth, the one which was resected, was about one inch in diameter, while the largest was as broad as the hand. In every case the tumor was situated on the stomach side of the pylorus. In all but one the growth merged with the pyloric ring at one end and presented a sharply defined border at the other. The peritoneum overlying the growths was apparently normal. When the stomach was put on the stretch, as in lifting it out of the incision, the gastric wall overlying the tumor assumed a whitish, bloodless appearance, which made it easy to demonstrate the outline of the growth. In one case the operation was a partial gastrectomy, while a posterior gastrojejunostomy was done in the other four. Complete relief was noted in every case.

DISCUSSION

Dr. James E. Thompson, Galveston, Tex.: It has occurred to me that we might classify these cases more correctly as cases of myoma. Three years ago I read a paper on myoma of the stomach and collected a number of such cases. I found at that time that myosarcomata were moderately common. They are extremely common in horses.

Dr. James E. Moore, Minneapolis: In speaking of tumors of the stomach, or tumors of the character under consideration occurring in unusual places in the abdomen, it is well to bear in mind the possibility of their being parasitic growths, that is, having been original growths from the uterus, they have become attached to the other viscera, and later Nature makes a separation. Many such cases are on record.

Dr. E. A. Balloch, Washington: At first, I was very much of Dr. Thompson's opinion that this tumor looked very much like a sarcoma. But it was pronounced by the pathologist as a fibroma, as there were no muscular elements in it. I had difficulty in conceiving how a soft fibroma could occur in that locality.

Postoperative Gastric Dilatation

Dr. T. C. Witherspoon, Butte, Mont. In three of my cases a marked dilatation of the stomach existed without obstruction. No portion of the intestinal tract was similarly dilated. There was no infection of the surgical field, and visceral union was perfect. Unlike the case recorded in my former paper, there was good union in the parietal wounds of the last two. Neither of these patients suffered pain about the epigastrium as did the first patient. I am impressed with the idea that in the former the segmental trophic disturbance manifested itself in both visceral and somatic nerves, while in the latter case in the visceral nerve distribution alone. In all three cases the paralysis of the stomach, the freedom from mechanical interference with movements of and emptying of the organ, the purely local nature of the dilatation, the lack of any demonstrated wound infection, and the distinct segmental character of the trophic disturbance seen in the first patient seemed to point distinctly to a central paralysis.

Twice in the last two years I have had an opportunity to demonstrate the distinctly protective value of colon bacilli vaccination before operating. The two patients had had abdominal operations before, and each suffered seriously from vomiting and gastric dilatation, which necessitated lavage and they both suffered likewise from urine shut off for twenty-four or forty-eight hours. Both feared a second operation, especially as the nature of the procedure was to be more serious. I thought it wise to at least immunize against the common source of bowel intoxication and therefore vaccinated against the colon bacillus until two hundred million caused no reaction. The result was a recovery after operation, without nausea of meteorism in any part of the intestinal tract. While the two instances demonstrate nothing of scientific value, they nevertheless point a way and open a field for inquiry.

Lymphatic Edema and Elephantiasis

Dr. Albert Vander Veer, Albany: I saw a case of lymphatic edema, possibly congenital, in a woman, 40 years of age. Careful attention was given to her general health, as much rest as possible advised, and pressure, by means of bandages, was applied from the toes up to the groin. This afforded relief, but when removed the general edema would return. Operative intervention was not attempted at any time. The second case was of elephantiasis in a woman, 72 years of age. Case 3 was one of marked lymphatic edema of the left arm extending from the finger tips to the shoulder following an operation for the removal of the left breast. Case 4 was one of lymphatic edema of the right leg. Ligation of the femoral artery in Scarpa's space was performed. The patient did well, but there was not much diminution in the size of the leg or permanent improvement. A year later ulcers appeared and amputation was done through the middle third of the thigh. Patient convalesced nicely and was much more comfortable afterward, but ligation of the artery did not bring the desired relief.

Indications for Abdominal Cesarean Section in Eclampsia

Dr. John F. Moran, Washington, D. C.: I have collected fifty-three cases, including four of my own, operated on from 1901 up to the present time. Seventeen mothers died, a mortality of 32.32 per cent. Forty-five infants were born alive, seven were stillborn and four are not mentioned. Altogether 116 cases have been reported with a maternal mortality of 49 per cent. While the statistics of the last decade show a marked improvement over the previous one, the mortality still is far above the general death-rate of eclampsia. A careful analysis of the cases, however, shows that many of the patients had been subjected to other methods of treatment and were moribund at the time of operation. Abdominal and vaginal Cesarean section are not proposed as substitutes for the other methods of intervention in eclampsia, but the claim is made that they have a well-defined field of application in certain cases of eclampsia. If they are to have an established place in the treatment of this complication, the indications for which they are urged must be met by prompt elective action, for to delay until the patient is *in extremis* and all other treatment has failed, is to invite disaster.

The Lane Operation

Dr. John Young Brown, St. Louis, Mo.: During the last three years I have operated in sixteen carefully selected cases of this type. In all of these cases a diagnosis has been arrived at by a process of exclusion, and in each intestinal stasis has been demonstrated by means of the bismuth meal prior to operation. Fourteen patients presented well-defined pericolic membranes and in all there was present kinking of the ileum. In two of the cases the condition found at operation was undoubtedly due to primary involvement of the appendix. In nine of these cases the constipation and the symptoms of intestinal toxemia have been entirely relieved, the patients gaining in weight and showing marked general improvement. In five of the fourteen cases, while the improvement has been satisfactory, much annoyance has resulted from gaseous distention and pain in the excluded cecum and colon. It cannot be too strongly emphasized that neither the Lane operation nor any of the suspension operations should be undertaken unless there are well-defined demonstrable pathologic lesions justifying their performance. All so-called atonic and neurasthenic types of enteroptosis will yield far better results if given proper rest, hygienic and dietetic treatment.

The End-Results of Operations in Exophthalmic Goiter

Dr. George W. Crile, Cleveland: In studying the end-results of my patients, I have made several generalizations. No patient died of the disease after leaving the hospital; no patient was made worse by the operation; every patient was either benefited or cured. Among the factors that influenced the end-results were the environment of the patient, the freedom from nervous shocks, the means at hand for diversion as well as the avoidance of strain. The elimination of all nervous shock at the time of operation has proved a good clinical asset. The improvement began usually the next day after the operation and continued for from six months to two years. I regard patients as cured when they are able to withstand nervous shocks such as fright, disappointment, worry, etc., in a normal manner. I have found that the time required for a complete cure is dependent on the environment of the patient.

Omentopexy in Cirrhosis of the Liver

Dr. H. H. Grant, Louisville Ky.: I have collected 144 cases from the literature, of which seventeen patients or about 11 per cent. died following the operation. Seventeen or 11 per cent. are reported as cured; sixty-four or about 44 per cent. improved, and thirty-two or 22 per cent. are unimproved.

Primary Sarcoma of the Gall-Bladder

Dr. R. S. Cathcart, Charleston, S. C.: My patient, a man, was 45 years of age, fairly developed, but had a slight cachectic or septic look. Operation revealed the case to be one of primary sarcoma of the gall-bladder. Its surgical interest is only that the patient is alive and in good health, doubtless due to operation at an early stage.

Amputation for Congenital Gangrene

Dr. Randolph Winslow, Baltimore, Md.: I wish to report a case of congenital gangrene of the right forearm, with successful amputation, in an infant five days old. The ability of a frail child of that age to undergo such a mutilating operation, without an anesthetic, is also noteworthy. It is possible that an anesthetic might have been well borne, but I feared to attempt it. The attending physician stated that no pressure by the cord or bands was present. The gangrene was not of the dry or anemic type, but was more of the obstructive type. The forearm and hand were swollen, discolored and offensive.

The Matas Operation in the Treatment of Traumatic Aneurysm

Dr. Walter C. G. Kirchner, St. Louis, Mo.: I have had four cases of aneurysm of traumatic origin. In the first case the aneurysm resulted from a gunshot wound of the brachial artery, and was of the fusiform type. Instead of employing obliterative endo-aneurysmorrhaphy, after extirpation of the sac, a biterminal vein transplantation was performed with a satisfactory result. In the second and third cases, large sacciform aneurysms resulted from stab injuries of the brachial artery. The cases were well adapted to the Matas operation, and in each instance good functional use of the extremity was obtained. The fourth case, a sacciform aneurysm of the femoral artery, was interesting on account of the location of the aneurysm below Poupart's ligament, its great size, and the fact that the sac contained a broken knife-blade 2 inches long. A restorative operation was performed, after preliminary retroperitoneal clamping of the external iliac arteries. The patient made a good recovery and was able to attend to his usual occupation.

What Can Surgery Do for Gastro-Enteroptosis?

Dr. Joseph Ransohoff, Cincinnati: Every case of gastro-enteroptosis should be studied individually and should not be treated in a routine way, whether by medicine or operation. In many seemingly hopeless cases of gastro-enteroptosis with marked neurasthenic symptoms, operation promises relief. If this is the result of suggestion, it is none the less valuable if the relief is permanent. Whereas, of course, internal treatment, abdominal supports and postural treatment should be tried, operative interference should not be delayed unnecessarily lest the habitus nervosus becomes too deeply rooted to be eradicated. No gastroptotic patient should be operated on unless some actual functional disturbance can be demonstrated. To relieve this must be the aim of the operation. Given a gastroptosis in which we can demonstrate distinct functional incompetence or deviations, the existence of nervous phenomena does not militate against operation, but may be the chief reason for performing it.

Interstitial Ectopic Pregnancy

Dr. Charles R. Robins, Richmond, Va.: In 1,324 cases of ectopic pregnancy collected from literature by Rosenthal, there were less than 3 per cent. of the interstitial variety. My patient is 27 years of age, colored, tripara; one miscarriage. Her last menstruation occurred in June, since which time there has been no bloody discharge. In the early part of July she was taken with sharp pains in the lower abdomen, worse in the right iliac region. After this, for a while, she would have a severe attack of abdominal pain at night, felt on both sides and radiating to the shoulder on the right side. She later would have recurring attacks and a few days after an attack could feel a mass in the right side. She was confined to bed for five weeks and then got up for four or five days, when she had another severe attack and was forced to return to bed. Her pains were severe all over the body; she had a cold sweat and a chill. At this time the pain settled in her right side and has remained there constantly ever since. She has suffered from marked constipation for four months. Urination is frequent and burning. At the time of the examination she had a temperature of 101 F. The patient was quite fat, but a tumor could be made out in the lower abdomen half way up to the umbilicus. The recti muscles were somewhat rigid, and there was marked tenderness over the right iliac area. On bimanual examination the uterus was made out, although not sharply defined, the enlargement being greater on the right side. The size of the uterus corresponded to about a three-months' pregnancy. There was no bloody discharge and the patient said that she had had none since June. A diagnosis of ectopic pregnancy had been made but the possibility of an appendicitis complicating pregnancy was considered. There was a leukocytosis of 17,000, but no differential count was made. On September 7 an exploratory McBurney incision was made and the abdomen found full of fluid blood. A median incision was then made, the clots cleaned out of the pelvis and the uterus delivered. The right side was found enlarged with several points of rupture, and with the membranes showing through. The uterus was removed by a supravaginal hysterectomy.

Section of the specimen shows an unruptured sac with hemorrhages between the membranes and the walls of the gestation cavity, the chorionic villi well developed, and a perfectly formed embryo. The tube on the right side and the cavity of the uterus are both intact, the latter containing a well developed decidua. The case is unusual in not having had uterine bleeding at any time.

Book Notices

The Mechanism of Life. By Dr. Stéphane Leduc, Professor à l'Ecole de Médecine de Nantes. Translated by W. Deane Butcher, Formerly President of the Röntgen Society, and of the Electro-Therapeutical Section of the Royal Society of Medicine. Cloth. Price, $2. Pp. 172, with 64 illustrations. New York: Rebman Company, 1911.

The views of the author have been much discussed in France and for the most part adversely. He turns to England, hoping that English-speaking men with more liberal minds will give life to his ideas as they did to those of his countryman Lamarck. The author attempts to present the phenomena of osmotic growths of chemical substances in analogy of form and phenomena to living things, so that they will convince one that in osmotic growths we have the origin of life. The book is well worth reading, but one cannot help feeling that the argument from analogy is forced.

The chapter on artificial cell production by implanting in a solution of certain salts another of different density or concentration is interesting, but more instructive is the chapter on karyokinesis. All of the phenomena of karyokinesis the author reproduces artificially by placing in salt water a drop of the same solution pigmented with India ink and by placing on either side of the latter a hypertonic drop of salt solution more lightly stained. The process of diffusion leads the central drop in succession to produce all the karyokinetic figures. The physical explanation which the author makes of karyokinesis in cells seems probable; that is that it is due to osmotic pressure, exerted by the drops of different density as they gradually diffuse in the surrounding liquid.

The analogy between the shape of osmotic growths of chemicals and plants, shells, corals and various other living things is curious but not convincing of a relationship between them. But the fact that these growths are often built up of artificial cells or what looks like them; that the growths absorb material from the medium in which they are to produce their growth; that the increase in weight manifold at the expense of the medium in which they grow; that a circulation of fluid takes place in these growths; that the chemical substances taken into them are often changed in their composition in order to contribute to the growth and another substance is thrown back into the surrounding medium; that these growths change shape and position because of external stimuli—all these are phenomena strangely like those of life—like the phenomena of nutrition, of assimilation, of sensibility and of growth.

The author tells exactly how his experiments are performed and the results are depicted in numerous illustrations.

Die perorale Intubation. Ein Leitfaden zur Erlernung und Ausführung der Methode mit reicher Kasuistik. Von Dr. Franz Kuhn, Elisabeth-Krankenhaus in Kassel. Mit einem Vorwort von Dr. O. Hildebrand, Direktor der chirurg. Klinik in der Kgl. Charité in Berlin. Paper. Price, 5 marks. Pp. 162, with 22 illustrations. Berlin: S. Karger, 1911.

This book not only describes the instruments and method of peroral intubation, but it also considers the indications and anatomic features of the procedure.

Peroral intubation represents an important surgical advance, for it makes it possible to perform extensive and bloody operations on the throat and jaws without danger of blood entering the upper air-passages, larynx, trachea or lungs. Heretofore this danger could be eliminated only by tracheotomy or by placing the patient in Roser's position of the hanging head, which seriously increased the bleeding. Another advantage of peroral intubation is the possibility of tucking the tongue out of the way into the laryngopharynx, where it becomes a tampon against blood entering the air-passages, for with the peroral tube in the larynx, the tongue can no longer obstruct respiration.

Kuhn enters fully into a description of the major operations on the jaws and pharynx in which peroral intubation is used and in addition shows a new route to the sphenoid body obtained by the means of a transverse incision at the junction of the soft palate with the hard palate, which gives a more ready access to the body of the sphenoid bone than can be obtained by the nasal route, which includes the formidable mutilation of cutting away most of the nasal septum.

The chief objection to peroral intubation is the possibility of the tube's slipping out of the larynx during motions of the patient. It must, therefore, be well fastened at his mouth by the rubber tubes mentioned.

With peroral intubation it is possible to do major jaw and pharyngeal operations with the patient sitting upright on the operating-table, a position that minimizes the bleeding and so makes the technic more exact. Where an anesthetic is given through the peroral tube the amount required is far less than when the anesthetic is inhaled in the usual way, and the anesthetizer must consider this, for minimal doses of chloroform or ether are rapidly effective when introduced directly into the bronchial passages.

Without doubt peroral anesthesia will in time be generally adopted as an indispensable procedure, since it makes difficult and bloody operations on the pharynx and jaws far easier and more exact than they are now. Kuhn is to be commended for the clear and convincing way in which he presents his subject.

Auto-Inoculation in Pulmonary Tuberculosis. By Marcus Paterson, M.B., B.S., M.R.C.S., Medical Superintendent at Brompton Hospital Sanatorium, Frimley. Cloth. Price, 21 shillings. Pp. 236. London: James Nisbet & Co., 1911.

This book should prove of interest to all physicians who are concerned with the practical treatment of pulmonary tuberculosis. As indicated by the title, it deals primarily with the application in practice of the hypothesis that tuberculosis may be favorably influenced by proper stimulation of the function of specific antibody formation through auto-inoculation, that is, the absorption of antigenic substances from the tuberculous foci in the lungs. The inducement of adequate auto-inoculation is brought about by means of graduated labor, regulated with scrupulous care and attention to amount and other details. The practical elaboration of this plan, which seems to rest on sound principles, is the author's contribution to the therapy of tuberculosis. The guides to the control of the treatment are the temperature, the appetite, the sputum and the general condition of the patient. In order to reduce excessive auto-inoculation, complete immobilization may have to be enforced. There are also chapters on diet, complications, diagnosis and other phases of tuberculosis and its treatment, including sanatorium administration. The book is a valuable contribution to the treatment of tuberculosis and is cordially recommended. The results obtained by the methods described are encouraging, and the moral value of graduated labor in overcoming the disastrous effects on mental and physical vigor by a sanatorium life merits special emphasis. The volume of 236 pages is printed on thick paper in unusually large type. It is folio post-quarto in size (8½ by 11 inches), but there are twenty-four lines only to the page and the margins are very wide. Why this peculiar form is used is not at all clear. It surely is not the most economical form for a book of this character.

Carbonic-Acid Snow as a Therapeutic Agent in the Treatment of Diseases of the Skin. By R. Cranston Low, M.B., F.R.C.P., Assistant Physician to the Skin Department, Royal Infirmary, Edinburgh. Cloth. Price, $1.50 net. Pp. 117, with illustrations. New York: William Wood & Co., 1911.

This book is an evidence of the rapidity with which the method of treatment with solid carbon dioxid, introduced by Pusey in 1907, has become established and of the importance which it has assumed in dermatologic practice. Low in this work summarizes the whole subject and furnishes a valuable fund of information on its technic and its practical applications. His experience, based on its use at the Royal Infirmary, Edinburgh, agrees with that of dermatologists generally and covers the class of lesions in which the method has been found useful. He has done a distinct service in bringing all of the experience together in form where it is readily available. The work is practical; its aim is to furnish a working knowledge of the method, and it is a valuable book to any one who wishes to familiarize himself with the application of this simple and convenient means for treating many of the defects of the skin.

Medicolegal

Religious "Healer" an Unlawful Practitioner of Medicine—Requirements of Colorado Statute Explained—State Can Control Practice

(Smith vs. People (Colo.), 117 Pac. R. 612)

The Supreme Court of Colorado affirms a judgment of conviction of a "healer" of practicing medicine without a license. It says that the people's evidence showed that the defendant kept a place of business for healing the sick; that there were signs in the windows reading: "Professor Smith, Healer." "Office hours 9 to 12, 2 to 6"; also a sign on the door: "Professor Smith, Healer." "Walk in." He claimed that his treatment was a natural one—a gift from the Almighty; claimed to restore people to health; said he could cure any disease a medical man could, and many they could not; could cure diarrhea, and stomach, spinal, nervous and throat troubles and pneumonia; mentioned several cases of pneumonia he had recently cured that the physicians had given up; said he diagnosed and treated them without medicine. The defendant testified that he belonged to the church of "The Divine Scientific Healing Mission," a corporation; that he was a preacher of the gospel and a healer of the sick; held services Sunday afternoons at a hall, where he preached and cured the sick; said his church had branches everywhere; he occupied a couple of living rooms, not an office, where he lived and treated the sick and afflicted without the use of drugs or a knife; some he charged, some he did not; never turned any one away; the signs had been there for over two years; did not practice medicine or diagnose diseases; people came to his rooms, told him what was the matter with them, and he treated them; could not tell whether patients had gout, small-pox or rheumatism, but could and did treat and cure them. "Healer" means curing the sick. The certificate of incorporation of "The Divine Scientific Healing Mission"—showing its objects to be "preaching, teaching and practicing the gift of healing, guided and directed by divine power, by laying on of hands, regardless of faith, creed, sect or race, to promote peace on earth, good will to men," also containing the tenets of "The Divine Scientific Healing Missions," as follows: "We believe in healing the suffering humanity by laying on of hands to be the gift of the divine spirit and by sound reason we can comprehend its virtue"—was offered in evidence and excluded by the trial court.

It was the nature of the defendant's business, not the objects of the corporation or the tenets of his church, that was in controversy. The evidence showed that he was practicing medicine within the definition of the statute, and was using the title "healer" to his name to indicate that he was engaged in the business of healing the sick. He treated in his office or place of business, for hire, persons suffering from disease, for the purpose of curing them. He held himself out to the public as a professional healer of diseases, and a practitioner of the healing art. The statute lays hands on commercial healing as a money-making occupation, business or profession, regardless of the method of treatment or curative agency employed. It concerns the public health, and should be liberally construed to accomplish the object of its enactment. It does not belong to that class of penal statutes construed most strongly against the people.

As a protection to the public health, the statute requires those engaged in the business of curing the sick to possess certain qualifications. It is not concerned with the school, sect or system of healing, or the method of treatment. One form of examination is required of all sorts of healers. All applicants must be examined in anatomy, physiology, chemistry, symptomology, toxicology, pathology, surgery, obstetrics. All schools teach these branches, and use the same text-books. They are the fundamentals in which all applicants must be grounded before they can be licensed to follow the business of curing the sick. There can be no difference of opinion among intelligent men on the subjects above enumerated; but there is great difference in regard to treatment. Hence the statute expressly prohibits any examination in materia medica or therapeutics. In the eye of the statute methods of treatment meet on a level as curative agencies in healing human ills. There is no discrimination, partiality or monopoly. It requires, however, that the healer shall possess a reasonable amount of learning before he enters on the business of curing the sick. The discrimination goes to the degree of learning, and not to the school, sect, system or creed. As a protection to the public health, the state fixes the standard of competency, and makes the right to engage in the business dependent on the possession of certain knowledge.

The defendant claimed that he came within the exemption which says: "Nothing in this act shall be construed to prohibit . . . the practice of the religious tenets or general beliefs of any church whatsoever, not prescribing or administering drugs." The constitution provides that there shall be no interference with the "free exercise and enjoyment of religious profession and worship." The statute does not interfere with the free exercise of religion or worship. Any persons, individually or collectively, any minister, or any church congregation may resort to prayer whenever they wish for the healing of the sick. No attempt is made to interfere with religion or religious devotions. This does not, however, authorize one under the cover of religion or a religious exercise to go into healing commercially for hire, using prayer as the curative agency or treatment. Religion cannot be use as a shield to cover a business undertaking. The defendant was engaged in a business venture, not a religious exercise. The practice of medicine, defined by the Colorado statute, means the practice of the healing art commercially, regardless of the curative agency employed. The commercial practice of healing by prayer, followed as a money-making venture or occupation, is the practice of medicine within the plain meaning of the statute. Furthermore, the exemption mentioned in the statute is not descriptive of the offense, and it was not necessary for the people to negative the exemption in the information.

The legislature under the police power of the state could create the state board of medical examiners and fix its powers and duties. The police power of the state relates to the preservation and promotion of the health, safety and morals of the people. The law is settled that the legislature may control the practice of medicine. Such enactments emanate from that branch of the police power of the state having to do with the protection of the public health. The state has the right to determine and define what constitutes the practice of medicine.

Practice of Medicine After Revocation of Certificate—Validity and Construction of Statutes as to Authorizing State Board to Revoke Certificates for Advertising Under False Names and Unprofessional Conduct

(People vs. Apfelbaum (Ill.), 95 N. E. R. 995)

The Supreme Court of Illinois affirms a judgment for $100 rendered against the defendant by the municipal court of Chicago as a penalty for practicing medicine without a license. He had been licensed by the State Board of Health to practice medicine, and his certificate or license had been revoked by virtue of Section 6 of the Illinois medical practice act, for advertising under a name other than his own, and other unprofessional and dishonorable conduct. He attacked the validity of said section on several grounds.

Section 6, the court holds, is not void for uncertainty. It authorizes the refusal of the license for certain specific reasons, and also generally for unprofessional and dishonorable conduct, and provides that the license may be revoked for the same reasons. The reasons particularly named are certain enough, but it would scarcely be possible for the statute to catalogue specifically every act of unprofessional or dishonorable conduct which would justify the refusal or revocation of a license. In any event, the defendant was found guilty of the specific offense of advertising under another name than his own, and as to that charge the statute is not uncertain.

The medical practice act, containing Section 6 above mentioned, was passed in 1899. On May 11, 1901, an act of two sections was passed, providing that it should be unlawful for any physician to practice medicine in another physician's name, or to hold himself out as another physician by advertisement, for the purpose of imposing on or defrauding any other person, under penalty of fine and imprisonment. It was insisted that this act modifies, and by implication repeals, that part of Section 6 of the medical practice act which prohibits advertising by a physician under a name other than his own. A later act will not be held to repeal a prior statute, unless the two cannot be reconciled. There is no such inconsistency between these two acts that both cannot stand. The one deals with the case of a physician who practices under a false name, whether that of another physician or not, and without regard to his motive, the penalty for which is the refusal or revocation of his license. The other deals with the physician who for fraudulent purposes practices under the name of another physician, or holds himself out as another physician; the penalty being fine and imprisonment. The one act deals with the licensing of physicians to practice, and does not create or define any criminal act; the other deals with the practice of physicians, and declares that certain acts shall constitute criminal offenses.

Neither the granting nor the revocation of a license to practice medicine is the exercise of "judicial power," as that term is understood in reference to the distribution of the powers of government. It was not contended that the state has not the power to prescribe the qualifications of physicians practicing medicine and to punish unqualified persons engaging in such practice, and the existence of such power is not debatable. The possession of the required qualifications must be ascertained by some authority, and the legislature has imposed this duty on the State Board of Health. In the administration of the law the State Board of Health necessarily exercises discretion and judgment in determining whether or not an applicant possesses the required qualifications, and to that extent its action is judicial in character, but it is not the action of a court or action appropriate for a court. It is similar in its nature to the acts of assessors in valuing property for taxation; of boards of review in reviewing such valuations; of clerks of courts and of sheriffs in approving bonds taken by them; of commissioners of highways in laying out and opening roads; of city councils in granting or revoking licenses to keep dramshops, or of superintendents of schools in granting or revoking teachers' certificates. In none of these cases does the tribunal engaged in the execution of the law exercise judicial power within the meaning of the constitution.

This court has never passed on the power of the State Board of Health to revoke its certificates, though the existence of such power was plainly intimated in People vs. McCoy, 125 Ill. 289, and State Board of Health vs. Ross, 191 Ill. 87. The revocation of the license is not intended as a punishment for any offense committed, but for the protection of the public by the police power of the state. The statute has declared certain acts to constitute a disqualification for the practice of medicine, and, when one has been ascertained to have done those acts, the body which is charged with the ascertainment and determination of the qualifications to practice medicine may deprive him of his license, either by refusing it or revoking it, as the circumstances may require.

The part of Section 6 which makes advertising under a false name a reason for refusing or revoking a certificate does not violate Sections 1, 2 or 4 of Article 2 or Section 22 of Article 4 of the state constitution or the fourteenth amendment of the federal constitution. A citizen may advertise his business in any legitimate manner, but it is a legitimate exercise of the police power in protecting the public against the deception and fraud practiced by irresponsible and quack doctors to require every physician to have the license of the State Board of Health granted in his own name, and to practice or advertise under no other.

Due process of law does not necessarily imply judicial proceedings. Orderly proceedings according to established rules which do not violate fundamental right must be observed, but there is no vested right in any particular remedy or form of proceeding. A general law, administered in its regular course according to the form of procedure suitable and proper to the nature of the case, conformable to the fundamental rules of right and affecting all persons alike, is due process of law.

The power of revocation given to the State Board of Health is not arbitrary or beyond the investigation of the courts. The board cannot, from mere caprice or without cause, revoke a certificate fairly issued on sufficient evidence of the applicant's qualifications. The statute itself requires notice and a hearing before any certificate can be refused or revoked.

The record of the State Board of Health showed that the defendant, on notice given him, appeared before the board and a hearing was had on charges of advertising under another name than his own, and of using the United States mail for fraudulent purposes. The notice was given by the State Board of Health, and required the defendant to show cause why the certificate issued to him by the board and authorizing him to practice medicine should not be revoked for the unprofessional conduct particularized in these charges. It sufficiently appeared from this notice that the charges were made against him in his profession as a physician. He did not ask for a more specific charge, but admitted that he had advertised under the name of Dr. Hoffman. The board found him guilty under both charges, and revoked his certificate for unprofessional and dishonorable conduct. This record showed a specific charge, notice, hearing and the determination of the board thereon, and was sufficient to sustain the action taken.

In regard to the objection that Section 9, which makes it penal to practice medicine "without a certificate issued by" the State Board of Health, does not apply to the case of one who has had a certificate issued to him, it seems sufficient to say that one whose certificate has been revoked is without a certificate as much as one to whom no certificate was ever issued.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

December, VIII, No. 6, pp. 717-880

1 Experimental Study of Pain Sense in Pleural Membranes. J. A. Capps, Chicago.

2 *Relation of Papillary Muscles to Mitral Regurgitant Murmurs. W. T. De Sautelle and E. G. Grey, Baltimore.

3 *Tetanus. E. W. Hill, Colon, C. Z.

4 *Comparative Investigation of Effects and Toxicity of Sodium Salicylates of Natural and Synthetic Origin. J. A. Waddell, Charlottesville, Va.

5 *Leukocytic Enzymes in Leukemia in Neutral Media. R. S. Morris, St. Louis, and T. R. Boggs, Baltimore.

6 Coagulation-Time of Blood as Affected by Various Conditions. M. Solis-Cohen, Philadelphia.

7 *Tumors of Pineal Body. P. Bailey and S. E. Jelliffe, New York.

2. **Papillary Muscles and Mitral Regurgitant Murmurs.**—As a result of their study the authors arrive at the conclusion that the two papillary muscles play the most important rôle in the transmission of the insufficiency murmur from the mitral valve to the apex. The transmission of the murmur toward the apex apparently depends only in small part on the thickness of the ventricular wall. The papillary muscles must be intact to conduct the murmur. The papillary muscles conduct regurgitant murmurs to whatever portions of the heart they may be attached. The vertical direction of the fibers of the papillary muscles accounts in great part for the conduction of the murmur by these structures. The chordæ tendinæ transmit the murmur from the mitral segments to those portions of the heart into which they may be inserted. If the tissues intervening between the heart and the chest-wall play any part in conducting a murmur from the auriculoventricular junction to the mitral area, it is so slight as to be negligible. The murmur heard in the left axilla in mitral regurgitation is evidently due to the proximity of the anterior papillary muscle to that region.

3. **Tetanus.**—In considering the subject of tetanus, Hill says, we are struck by the fact that it is a disease that has been recognized for centuries, widely diffused throughout the world, found during all periods of life save the first five years, except-

ing the primary mouth: varying in mortality, age incidence, occurrence during the season of the year, and susceptibility of the sexes; a disease having an extensive literature, the data of which as to frequency, mortality and prognosis are singularly indefinite and unsatisfactory, giving rise to conclusions and statistics both unreliable and confusing. The error, according to Hill, is due in large part to the persistent disregard of certain clinical characteristics and natural tendencies of the disease as exhibited in incubation, progress and duration, unmodified by any treatment whatsoever. Recovery from tetanus once developed is to-day, as in the past, due more to the character of the attack than to the remedies employed. Consecutive data of actual mortality, covering a long period of years, and a large number of cases confined to the same geographical area, should present information as to frequency, age, sex, season of the year and modification by climate, if any. Tetanus is a comparatively rare disease, due probably to peculiar biologic and chemical properties of its bacillus. In the two great classes into which tetanus can be divided, tetanus of the tropics and tetanus of the temperate zones, all the clinical forms of the disease appear, but with marked differences, which will be noted in their proper places. The original article should be consulted for details of Hill's studies.

4. **Sodium Salicylates.**—No differences were detected by Waddell between the brands of natural and synthetic salicylate examined, although the synthetic samples were the cheapest obtainable on the market. The method employed by Waddell in this comparison of the natural and synthetic salicylates consisted in administering the drugs to animals in definite dosage per kilogram and observing the symptoms produced by the smallest effective, lethal and intermediate doses of the one as compared with those of the other. In all cases the drug was administered hypodermically, 0.9 per cent. saline being the solvent employed. For cats, a 10 per cent. solution was used; for rats, a 20 per cent.; and for rabbits, a 35 per cent. Both fractional and single dosage were tried. Every precaution was used to secure exactness of dosage. All the cats used were in good physical condition; they were kept during the course of the experiments in wire cages. Seventeen animals were experimented on, divided into five groups of different dosage, some of each receiving the synthetic and others the natural. The most characteristic symptoms noticed were vomiting, increase of reflexes, extreme weakness, convulsions and death. Vomiting, occurring in the case of every cat except one, was a very early symptom and was produced in from twenty minutes to one and one-half hours in 90 per cent. of the animals. Whether early or late bore no relation to the kind of salicylate or the dose given. Repeated examination failed to reveal the presence of salicylates in the vomitus. Salicylates may, therefore, produce emesis by a central action.

These five series of experiments show that the synthetic and the natural salicylates affect cats essentially alike. The rats used in these experiments were common, wild rats. Thirty-six of these animals were used, being divided into seven groups receiving different dosage, some the synthetic, others the natural. The most striking symptoms noticed were increase of reflexes, stupor, salivation, convulsions and death. However, only the last two were what may be called characteristic; the others being of variable occurrence. The phenomena of death were the same as in the cat. The sphincters were usually relaxed; the lips were blue and covered with froth. The rabbits used were tame ones. Twenty-seven experiments were performed on these animals, divided into six groups receiving different dosage, some the natural, others the synthetic. The most striking symptoms were extreme weakness, convulsions and death. As a rule the animal showed few symptoms. The earliest effect was a loss of appetite; and if profoundly affected, the animal ceased to be playful or to take notice, having a tendency to stay by itself. In only a few cases was there an evident increase in reflexes as evinced by tremor and sensitiveness to sound.

Except loss of appetite and salivation, which were present in all the animals experimented on, early symptoms were constantly present and unmistakable only in the case of the cats. Anorexia was present in all cats, almost from the moment of injection, no matter how small the dose. Emesis occurred in 94 per cent. of all cats. Increased reflexes were present in 94 per cent. Convulsions occurred in 76.5 per cent. Convulsions occurred in 43 per cent. of all rats receiving doses of 0.5 gm. per kg. and higher; and never with 0.35 gm. per kg. In the rabbits convulsions occurred in 37 per cent. with a dosage between 2.93 gm. per kg. and 1.0 gm. per kg.; 15 per cent. within the same range of dosage died without convulsions. Cats proved to be very susceptible to the salicylates; the mortality was 100 per cent. with a dosage of 1.4 to 0.8 gm. per kg. Rats proved to be very suitable animals, giving uniform results. Rabbits gave the most inconstant results obtained from any of the animals.

5. **Leukocytic Enzymes in Leukemia in Neutral Media.**—In six cases the leukocytes were tested by Morris and Boggs for the presence of the following types of endo-enzyme: protease, lipase, amylase, maltase, invertase, lactase, a glycolytic enzyme and oxidase. Since the number of ferments tested for was comparatively large and the quantity of leukocytic suspension at their disposal relatively small, it was impossible to study the effects in more than one reaction. It was, therefore, decided to limit the observations for the present study to possible action in neutral mediums. They found that a protease is present in the lymphocytes of chronic lymphoid leukemia and in the leukocytes of acute and chronic myeloid leukemia and of pus. Lipase occurs in the white cells in the same conditions. It is shown that amylase is contained in the granular leukocytes of pus and of myeloid leukemia, acute and chronic, and in the lymphocytes of chronic lymphoid leukemia. Maltase is likewise a product or constituent of these cells. Digestion of saccharose, lactose and glucose by myeloid or lymphoid cells has not been observed in neutral mediums. Oxidase is demonstrable in the leukocytes in conditions in which the granular cells of the marrow are present in large numbers. Biologic differences between myeloid cells and the lymphocytes of chronic lymphoid leukemia have not been demonstrated in neutral mediums. The authors believe that it is a legitimate inference that in part, at least, the enzymes of the plasma may be derived from the leukocytes.

7. **Tumors of Pineal Body.**—The authors give an account of the pineal syndrome, report a case of teratoma of the pineal gland and give abstracts of all previously recorded cases of pineal tumors.

Kentucky Medical Journal, Bowling Green

November 15, IX, No. 22, pp. 859-890

8 Value of Routine Estimations of Blood-Pressure. E. F. Horine, Louisville.
9 Variation from Common Type of Scarlet Fever; Report of Cases. E. F. Katzmann, Louisville.
10 Ossification of Capsule of Tonsil in Adult. W. C. White, Louisville.
11 Large Umbilical Hernia, Containing Omentum, Intestine and Liver, in Child 7 Months Old; Operation, Recovery. E. S. Allen, Louisville.
12 Total Obstruction of Intestine Due to Cancer of Sigmoid and Constricting Band. B. Asman, Louisville.
13 Cancer of Mesentery. G. A. Hendon, Louisville.
14 Appendicitis Associated with Pregnancy. J. R. Wathen, Louisville.
15 Hernia of Parotid Gland Following Trauma. J. R. Wathen, Louisville.
16 Malarial Hemoglobinuria. F. C. Askenstedt, Louisville.
17 Stiff and Painful Shoulder, Including "Baseball" or "Glass" Arm. J. J. Moren, Louisville.
18 Hydrophobia. O. E. Bloch, Louisville.
19 Tuberculosis. S. E. Hampton, Melton.
20 Diagnosis and Treatment of Gastric Ulcer. C. V. Hiestand, Merrimac.

December 1, IX, No. 23, pp. 891-946

21 Version. E. Speidel, Louisville.
22 *Indications for and Application of Axis-Traction Forceps. D. Caldwell, Paducah.
23 *What Physician Can Do for Diseases of Women in His Office and at the Bedside. G. J. Herman, Newport.
24 *Indications for Prostatectomy. F. Boyd, Paducah.
25 *State Institutions and a Plea for More Perfect Equipment. H. P. Sights, Hopkinsville.
26 *Expert Testimony in Courts of Law. D. S. Reynolds, Louisville.
27 *Surgical Treatment of Goiter. J. R. Wathen, Louisville.
28 Diagnosis and Treatment of Acute Mastoiditis. D. M. Griffith, Owensboro.
29 Radical Mastoid Operation; Its Indications and Results. A. O. Pfingst, Louisville.
30 *Care of Insane Criminal. M. Board, Louisville.

22, 23 and 24. Abstracted in The Journal, Nov. 11, 1911, p. 1634.

25, 26, 27 and 30.—Abstracted in The Journal, Nov. 18, 1911, pp. 1719 and 1720.

Pennsylvania Medical Journal, Athens

December, XV, No. 3, pp. 169-254

31 Histopathology of Preparalytic Stage of Acute Anterior Poliomyelitis. A. R. Allen, Philadelphia.
32 Recent Studies in Experimental Pathology of Acute Anterior Poliomyelitis. P. A. Lewis, Philadelphia.
33 Surgical Treatment of Poliomyelitis. G. G. Davis, Philadelphia.
34 *Sanitary Control of New York's Milk-Supply. E. J. Lederle, New York.
35 *Milk and Its Relation to Public Health. P. J. Eaton, Pittsburgh.
36 Clean Milk from Producer's Standpoint. H. E. Van Norman.
37 *Year's Work of Commission on End-Results of Fractures of Shaft of Femur. W. L. Estes, Easton.
38 *Lodge Practice. H. M. Alleman, Hanover.
39 Diagnosis and Medical Treatment of Poliomyelitis. W. G. Spiller, Philadeplhia.
40 Pennsylvania's Work on Poliomyelitis. S. G. Dixon, Harrisburg.

34, 35 and 38.—Abstracted in The Journal, Oct. 28, 1911, pp. 1479 and 1480.

37. **Fractures of Femur Shaft.**—The commission recommends that teachers of surgery in medical schools should give far more attention than they have done in the last decade or more to their own investigation of fractures and to the teaching of this most important branch of surgery to the students who belong to their classes. While recognizing the fact that *x*-ray photographs may be most misleading, the commission believes, nevertheless, that when taken by competent anatomists, who understand the importance of proper relative position of tube and limb and the importance of taking more than one view of the fracture, these radiograms will furnish an indication for the proper reduction and the mechanical appliances for the preservation of proper apposition and that they will serve as a graphic record of the fracture itself. These radiographs to be most valuable should be taken before reduction of the fracture, when it has been reduced and has a fixed dressing and finally after union has taken place and the patient is able to be up and about. In regard to the method of treatment the commission from the study of the cases finds that some form of traction is the method most commonly employed and that the result after such treatment, in most cases, enables the patient to resume his occupation and function without serious detriment. Properly taken *x*-ray pictures, however, show that absolute apposition and restoration of proper axis of the bone is very seldom accomplished. Deaths from simple fractures of the femur occur in 8.6 per cent. of the cases. The reports show they occur almost wholly in old age; from shock and exhaustion or from pneumonia; in drinkers from delirium tremens; or from some operative interference. It is evident that the open method itself introduces into the treatment of these cases such a very marked element of danger that the commission cannot recommend the method for general use or recognize it as a routine practice. In selected cases in which it is impracticable to restore the fragments to their proper position and where mechanical means have failed within a reasonable time to produce proper restitution of the fragments, the open method may be employed, but then only by an experienced surgeon, one who habitually employs most thorough aseptic methods. The commission does not recommend any one method of mechanical treatment. As in everything else, the method must be adapted to the case itself and not the case to the method. Some form of traction, such as Buck's extension, seems to be the preferable method of treatment. Plaster of Paris is also a valuable means of treating these fractures, but it should be applied under anesthesia. Complete relaxation, unconsciousness of pain and laxity of muscle are necessary in applying the plaster dressing properly to these cases. The ordinarily employed method of measuring from the anterior superior spine of the ilium to the tip of the internal malleolus should be checked, as a rule, by some other measurement, as for instance measuring from the tip of the ensiform cartilage to the internal malleolus or patella, or from the middle of the umbilicus to the internal malleolus. In making all measurements it is important to ascertain and assure, if possible, that the pelvis is not tilted and that the anterior spines are in the same horizontal plane.

Journal of Missouri State Medical Association, St. Louis

December, VIII, No. 6, pp. 225-266

41 Crisis in Medical Profession. S. P. Child, Kansas City.
42 Use of Diets Rich in Carbohydrates in Treatment of Diabetes Mellitus. W. P. Elmer, St. Louis.
43 Etiology of Retrodisplacement of Uterus. O. Hofmann, Kansas City.
44 Diagnosis of Retrodisplacement of Uterus. G. Gellhorn, St. Louis.
45 Treatment of Retrodisplacement of Uterus. O. B. Campbell, St. Joseph.
46 Diagnosis of Chronic Pancreatitis. C. C. Conover, Kansas City.
47 General Principles of Operative Treatment of Carcinoma. A. E. Hertzler, Kansas City.
48 Non-Surgical Treatment of Cancer. J. Grindon, St. Louis.
49 Differential Study of Multiple Benign Cystic Epithelioma and Adenoma Sebaceum in Negro. R. L. Sutton, Kansas City.

Journal of Tennessee State Medical Association, Nashville

December, IV, No. 8, pp. 299-342

50 *Spina Bifida. B. B. Cates, Knoxville.
51 Tuberculosis of the Spine. A. G. Nichol, Nashville.
52 How to Succeed in the Practice of Medicine. T. M. Roberts, Sweetwater.
53 Care of Children's Teeth. J. L. Austin, Chattanooga.
54 Diagnosis of Tumors of Bones. R. J. McFall, Cumberland City.
55 Diagnosis of Duodenal Ulcer. J. F. Gallagher, Nashville.
56 Pellagra. P. H. Acuff, Washburn.

50. **Spina Bifida.**—Cates has operated on seven patients with two deaths, a mortality of 26.7. There were five males and two females. The ages varied at the time of operation from twenty-eight days to twenty-six years. The situation of the tumor was midsacral, lumbosacral, lumbar and upper sacral in one case each and cervical in three cases. All the tumors were meningoceles, except one, a meningomyelocele. Two mothers bore three spina bifida children with the tumors in the cervical region. Both mothers had pellagrous symptoms. One, the mother of the child with meningomyelocele, afterward died of pellagra. One mother with pellagrous symptoms gave birth to two children with tumors in the cervical region. One lived three months and died of bronchopneumonia, not, however, before developing hydrocephalus. Two years later this woman bore a male child with a tumor in the cervical region. This child is living and thriving, twenty months after operation, though it shows a slight strabismus. Another mother, who bore a boy with tumor in the lumbar region, had Graves' disease.

Northwest Medicine, Seattle, Wash.

December, III, No. 12, pp. 335-366

57 Surgical Treatment of Exophthalmic Goiter. M. B. Tinker, Ithaca, N. Y.
58 Goiter. E. F. Root, Salt Lake City, Utah.
59 Present Status of Salvarsan in Vienna Clinics. R. C. Matson, Portland, Ore.
60 *Medical Inspection of Schools. G. E. Hyde, Rexburg, Ida.
61 Hemorrhagic Menopause Uterus. T. C. Witherspoon, Butte, Mont.
62 Sarcoma With Special Reference to Its Treatment by Mixed Toxins. C. J. Smith, Pendleton, Ore.
63 Nitrous Oxid Oxygen Anesthesia. S. W. Schaffer, Portland, Ore.
64 Phase of Tonsil Question. R. W. Perry, Seattle, Wash.
65 Diabetes Mellitus in Childhood. W. Gellhorn, Seattle, Wash.

60. Abstracted in The Journal, Dec. 9, 1911, p. 1943.

Journal of Nervous and Mental Disease, Lancaster, Pa.

December, XXXVIII, No. 12, pp. 705-781

66 Chronic Hypertrophic Spinal Pachymeningitis. C. K. Mills and E. M. Williams, Philadelphia.
67 *Multiple Ependymomata of Brain and Spinal Cord, With Tabetic Symptoms. H. C. Gordinier and H. P. Sawyer, Troy, N. Y.
68 Case of Pseudo- or Diffuse Sclerosis. T. Diller and G. J. Wright, Pittsburgh.

67. **Ependymomata of Brain and Spinal Cord.**—The authors direct attention to a diffuse tumor formation whose anatomic location was such as to excite gradual compression and destruction of the posterior nerve roots, resulting in a symptom complex closely simulating tabes dorsalis. From a pathologic standpoint the case seems to stand alone, as they could find no record in the literature of a precisely similar case. The pathologic findings may be summarized as follows: A diffuse new growth derived from and having its primary location in the ependymal lining of the ventricular spaces of the brain. A wide-spread involvement of the frontal lobes, with marked necrosis of the growth proper and the surrounding brain tissue. Multiple nodules of the crura and pons, impli-

cating the sixth nerve roots of the left side especially. Implication of the posterior nerve roots and dorsal aspect of the spinal cord throughout its whole length. The location of the pathologic changes found in this case explains well the symptoms from which the patient suffered during the last two years of her life. The sudden attacks of recurring pains, the incoordination and ataxia, the Rombergism, the loss of the patella and tendo Achilles jerks, the characteristic gait, loss of muscle sense, the retardation of the conduction of pain sense and the anesthetic areas, were doubtless due to the anatomic limitation of the diffuse ependymal growth to the dorsal aspect of the whole length of the spinal cord, implicating especially the dorsal spinal nerve roots which are absolutely encircled as if en cuirass by the cellular proliferation, causing compression and atrophy of them, together with secondary ascending degeneration of the dorsal columns. Paralysis of the left external rectus muscle was occasioned by degeneration of the left sixth nerve. The mental symptoms, consisting of progressive loss of memory, slow cerebration and general mental enfeeblement (frontal lobe symptoms), were due to the wide-spread areas of necrosis resulting from the ependymal growths which involved the frontal lobes.

Journal of Michigan State Medical Society, Battle Creek

December, X, No. 12, pp. 583-665

69 Intestinal Tuberculosis. S. G. Gant, New York.
70 *Diagnosis of Heart Disease. G. W. McGaskey, Ft. Wayne, Ind.
71 *Heart in Acute Infections. C. G. Jennings, Detroit.
72 Management of Heart Cases in General Practice. J. B. Whinery and T. D. Gordon, Grand Rapids.
73 *Acute Anterior Poliomyelitis B. F. Green, Hillsdale.
74 Poliomyelitis. T. M. Koon, Grand Rapids.
75 *External Pelvimetry With Special Reference to Method of Measuring Outlet. H. H. Cummings, Ann Arbor.

70, 71, 73 and 75. Abstracted in The Journal, Oct. 28, 1911, p. 1483.

Journal of Indiana State Medical Association, Fort Wayne

December, IV, No. 12, pp. 505-548

76 Fibromyoma of Uterus. S. J. Young, Valparaiso.
77 *Injuries in and About Ankle. E. H. Griswold, Peru.
78 Why Re-operate in Adenoids? G. W. Spohn, Elkhart.
79 Diagnosis and Treatment of Empyema. H. Elliott, Brazil.
80 *Improved Method of Treating Fractures of Humerus. H. R. Allen, Indianapolis.

77. **Ankle Injuries.**—Griswold emphasizes the great importance of an exact knowledge of the manner of infliction of injury as a means to correct diagnosis and application of proper treatment. Without this knowledge severe injuries which are apparently minor are treated improperly and a favorable prognosis given with later disappointing results, as a permanent lameness from an unrecognized Pott's fracture, or an amputated foot that might have been saved. Therefore, Griswold denominates history of the accident as a symptom of injury and the first and most important symptom in differentiating injury from disease as well as aiding in a correct diagnosis of the character and extent of injury and the adoption of proper surgical procedures.

80. **Treatment of Fractures of Humerus.**—On the basis that in fractures of the humerus the object is to secure a constant distance between broken bone fragments, or a constant length of arm by employing a constant force to one end and a fixed force to the opposite end, Allen has constructed a padded metallic brace, with straps at the wrist and mid-arm, axillary pads, v-shaped, bearing against the antero-posterior muscle boundaries of the axillary space. The prolongation of the crutch arms terminates in round metallic pads, one of which rests over the pectoral muscles and the other over the scapula. On these pads are metallic cleats for the attachment of adhesive plaster. When the forearm is flexed on the arm more acute than a right angle, it forms a re-entrant angle into which is placed the downward traction metallic pad. This pad is the counterpart of the upward axillary traction pad. By tightening the adjustment screw or by lowering the re-entrant angular pad the fragments of broken humerus are pulled to their proper level or even below their proper level. The hand is at all times free to act.

New Mexico Medical Journal, Las Cruces

November, VII, No. 2, pp. 35-66

81 Salient Epidemiologic Features of Pellagra. C. H. Lavinder, U. S. P. H. & M.-H. S
82 Surgery of Stomach. C. B. Lyman, Denver.
83 Feeding in Typhoid. J. A. Rolls, Santa Fe.
84 Fest's Operation for Cure of Enuresis in Female, With Report of Case. E. B. Shaw, Las Vegas.

Yale Medical Journal, New Haven, Conn.

November, XVIII, No. 3, pp. 99-234

85 *Serums and Vaccines, Prophylactic and Curative. J. H. Egbert and O. O'Neill, Willimantic, Conn.
86 Anaphylaxis and Its Application to Legal Medicine. A. J. Wolff, Hartford, Conn.
87 Salvarsan in Treatment of Syphilis. J. C. Rowley, Hartford, Conn.
88 Value of Repeated Examinations of Urine in Diagnosis of Pyelitis. H. M. Steele, New Haven, Conn.
89 Some Aspects of the Early Months of Pregnancy. J. B. McCook, Hartford, Conn.
90 Bronzed Diabetes (Hemochromatosis). G. Blumer, New Haven, Conn.
91 Some Problems Connected With Medical Inspection in Schools. E. W. Goodenough, Waterbury, Conn.
92 Secondary Parotitis. F. C. Hyde, Greenwich, Conn.

85. **Serums and Vaccines.**—While no very large proportion of cures in cases of developed tetanus through the administration of tetanus antitoxin have been recorded, the authors hold that it should, nevertheless, be employed in all cases, since, by neutralizing the poison circulating in the blood, it may turn the tide in the patient's favor, even though it does not repair the damage already occasioned to the nervous system. Antistreptococcic serum in the hands of the authors has proven especially useful in cases of acute and spreading infection with marked toxemia. Their experience with both streptococcic and staphylococcic vaccines (bacterins) is that stock vaccines of these varieties are very uncertain but that autogenous vaccines are highly efficacious. They report five cases of gonococcic infection treated with gonococcic vaccine; three presented arthritis; one (a case of multiple infection), arthritis and iritis and one iritis. From 5,000,000 to 50,000,000 killed cocci were injected *pro re nata*. Results were good, both as regards the arthritis and the iritis. The benefit to the urethral condition was negligible. Stock vaccines were employed. Six cases of lobar pneumonia were treated by inoculation, with one death. Four received autogenous vaccines. Of the sixteen cases, eight were single pneumonias and one among the doubles. One patient receiving the treatment was pregnant at the time, giving birth to a normal child at term the day crisis occurred. One of the single pneumonias had a preexisting pulmonary tuberculosis. The one fatal case in the series was a double pneumonia that came under treatment on the fifth day of the disease, death occurring from toxemia. The general condition improved and the temperature dropped after the injection of the vaccine in all these cases but two, the fatal case and a boy of 9 years who reacted badly to the vaccine, every injection being followed by rise of temperature, diminished expectoration, lessened diaphoresis and even delirium. In this latter case the inoculations were discontinued and the patient pulled through on stimulants and expectorants. In none of these cases did crises occur before the usual time and in five there was no marked crisis, convalescence following lysis. Delayed resolution was the rule. The inoculations usually lessened expectoration, but in all, except the case just noted, diaphoresis was augmented. The average dose administered was ten minims, equal to about 35,000,000 bacteria, every twelve hours. Average number of injections, ten. The authors believe that the value of the vaccine treatment of pneumonia seems to be well established. Early diagnosis and prompt resort to the vaccine treatment are important. Stock vaccines are promptly obtained and should be employed during the preparation of autogenous products.

Journal of Kansas Medical Society, Kansas City

November, XI, No. 11, pp. 451-490

93 Postoperative Tonsillar Hemorrhage. J. E. Sawtell, Kansas City.
94 Trifacial Reflexes With Special Reference to Diseases of Eye, Ear, Nose and Throat. A. H. Andrews, Chicago.
95 *Management of Nervous Child. M. L. Perry, Parsons.

December, XI, No. 12, pp. 491-534

96 Personal Rights vs. Tuberculosis. S. J. Crumbine, Topeka.
97 Case of Desmoid of Stomach Wall. G. M. Gray and C. C. Nesselrode, Kansas City.
98 Tincture of Iodin as Antiseptic. N. C. Speer, Osawatomie.
99 Necessity for Early Recognition of Gall-Bladder Disease and Its Surgical Treatment. H. L. Snyder, Winfield.
100 Colpectomy. L. F. Barney, Kansas City.

95. Abstracted in The Journal, Oct. 28, 1911, p. 1481.

Northwestern University Bulletin, Chicago

December, XIII, No. 2, pp. 45-88

101 Postoperative Ileus, Immediate and Remote. F. A. Besley, Chicago.
102 Recent Currents in Psychotherapy. J. Grinker, Chicago.
103 *Mitral Stenosis of High Grade. C. A. Elliott, Chicago.
104 Differentiating Urethral Shreds in Anterior and Posterior Urethritis. M. Wolff, Chicago.
105 Significance of Wassermann Reaction in Various Stages of Syphilis. N. D. Curry and M. Wolff, Chicago.
106 Treatment of Diabetes Mellitus. C. E. Johnson, Chicago.
107 Relation of Glycosuria to Pancreas. H. McGuigan and C. L. von Hess, Chicago.

103. **Mitral Stenosis of High Grade.**—Mitral stenosis of high grade is believed by Elliott to be much more frequent than is generally supposed. It is frequently associated with hemorrhage ("phthisic type," "uterine type"). Repeated attacks of mitral disease are almost certain to bring on stricture at the valve. It is as true that mitral regurgitation is always accompanied by more or less stenosis, as is the old saying that mitral stenosis is always accompanied by regurgitation. Many cases are entirely latent and insidious in their course, the compensation being so gradually and completely developed that the patients are entirely unaware of the existence of a valvular lesion until on sudden exertion (i. e., childbirth, running up stairs, a sharp pneumonia) compensation suddenly fails, the immensely hypertrophied right heart will not give, and the patient suffers a sharp, possibly fatal, attack of pulmonary edema. There is frequent association of embolism with mitral stenosis. The emboli for the most part are passively formed in the slowed-down venous streams of the lesser circulation. Mitral stenosis is the most frequent chronic valve lesion associated with embolism. The physical findings during periods of broken compensation are apt to simulate those of myocarditis, notably the extreme dilatation and weak, irregular pulse, thus explaining the frequency with which mitral stenosis goes to autopsy under the mistaken diagnosis of myocarditis. The degree of compensation attained in some cases seems incredible in the face of such extreme stenosis. Three groups seem fairly well differentiated: 1. Lesion latent; compensation apparently perfect; lesion manifest only on physical examination. 2. Lesion stationary; compensation for light work established; periodical compensation at times of increased demands for heart work; periodical fluctuation in the physical findings. 3. Lesion progressive; ultimate complete broken compensation, extreme dilatation and arhythmia.

Journal of Medical Society of New Jersey, Orange

December, VIII, No. 7, pp. 337-390

108 *Foreign Bodies in Eye. W. B. Johnson, Paterson.
109 Mosquito as Sanitary and Engineering Problem. E. A. Ayers, Branchville.
110 Significance of Pain in Diagnosis of Disease of Lower Abdomen. T. B. Lee, Camden.
111 Bacterial Vaccines; Theory and Principle of Their Therapeutic Application. C. Z. Garside, New York.
112 Feeding of Children. D. E. English, Summit.
113 Strictures of Male Uretha and Their Complications. W. Neer, Paterson.
114 Improved Medical Inspection of Public Schools and Its Results. G. J. Holmes, Newark.
115 Secretary's Relationship to Non-Attending Member and to Non-Member. D. Strock, Camden.

108. Abstracted in The Journal July 12, 1911, p. 317.

Long Island Medical Journal, Brooklyn

November, V, No. 11, pp. 431-472

116 Scientific Spirit Versus Commercialism in Medicine. W. L. Conklin, New York.
117 *Some Considerations Concerning Epilepsy. J. F. Munson, New York.
118 Diagnosis and Treatment of Cholecystitis. H. L. Prince, Ithaca, N. Y.
119 Diseases of Bone and Their Clinical Importance. C. F. Painter, Boston.
120 Cesspool for Dwellings Without Sewer Privileges. A. A. Young, Newark, N. Y.
121 Experiences With Noguchi Test. C. O. Boswell, Rochester, N. Y.
122 Simple Apparatus for Giving Salvarsan. J. Roby, Rochester, N. Y.

117. **Epilepsy.**—Speaking on the subject of what the family physician can do to prevent epilepsy Munson says that the discipline and supervision which he can institute at home will benefit both the patient and the family. Sedative medication can be balanced with the seizures at a happy medium. He can encourage the patient to work. He can assist in the eugenics movement by creating in his community a sentiment in favor of restricting marriage on the grounds of mental and physical fitness and by collecting data. By assisting in the limiting of the spread of infectious diseases and especially of the venereal diseases (and alcohol) through education or otherwise, he can assist in limiting the amount of degeneracy. From the material at hand, he can furnish valuable data and statistics on the position of certain etiologic factors in epilepsy.

Illinois Medical Journal, Springfield

December, XX, No. 6, pp. 607-744

123 *Abuse of Local Treatment in Gynecology. H. T. Byford, Chicago.
124 Puerperium Considered as Period of Prophylaxis Against Subsequent Abdomino-Pelvic Diseases. C. Culbertson, Chicago.
125 Vesicovaginal Fistula: Report of Five Cases. A. Conklin, Chicago.
126 Technic for Supravaginal Hysterectomy. C. U. Collins, Peoria, Ill.
127 Female Perineum. H. L. Green, Quincy, Ill.
128 When Is a Case of Tuberculosis Curable? Time Required for Cure and Subsequent Precautions to be Observed. T. B. Sachs, Chicago.
129 Present Status of Our Knowledge of Infectiousness of Milk Containing Tubercle Bacilli. P. G. Heinemann, Chicago.
130 Tuberculosis Dispensary and Home Treatment. H. R. M. Landis, Philadelphia.
131 Value of Tuberculin in Diagnosis and Treatment of Pulmonary Tuberculosis. J. Ritter, Chicago.
132 Legal Aspect of Medicine. A. L. Mann, Elgin, Ill.
133 Physician as Witness. C. F. Irwin, Elgin.
134 *Tonsil Instruments. R. J. Tivnen, Chicago.

123. Abstracted in The Journal June 7, 1911, p. 1842.

134. Abstracted in The Journal August 26, 1911, p. 722.

Medical Record, New York

December 30, LXXX, No. 27, pp. 1309-1368

135 Quantitative Analysis of Human and of Cows' Milk. A. V. Meigs and H. L. Marsh, Philadelphia.
136 Trunk Anesthesia. B. Holmes, Chicago.
137 Chronic Invalidism Due to Pathologic Conditions of Colon and Appendix. J. T. Pilcher, Brooklyn.
138 *Transplantation of Cord in Operations for Hernia. A. V. Moschcowitz, New York.
139 Scrubbing Ulcers. E. C. Beck, New York.
140 *Automatic Device for Reading Systolic and Diastolic Blood-Pressures. B. R. Hoobler, New York.
141 Confirmation Studies of Weinstein's Test for Cancer of Stomach. L. K. Hirshberg, Baltimore.
142 *New Typhoid Test. F. A. Prendergast, Brooklyn.

138. **Transplantation of Cord.**—Moschcowitz claims that oblique inguinal hernias are to be operated on without transplantation of the cord, whereas direct inguinal hernias are to be operated on with transplantation of the cord.

140. **Automatic Device for Reading Systolic and Diastolic Blood-Pressure.**—The principle on which Hoobler's apparatus operates is the use of the "double cuff" arrangement in connection with the Fedde pith-ball device. A cuff, such as is ordinarily used on any blood-pressure instrument, is placed about the upper arm of the patient. This cuff is connected with a much smaller one about the lower arm by means of a rubber tube in which is inserted a cut-off valve. Also, from the lower cuff a rubber tube connection leads into another air-tight chamber which consists, for example, of a small rubber bag. Into this rubber tube connecting the lower arm-cuff with this rubber bag is inserted a small glass tube open at either end into whose bore is introduced a small pith ball after the manner devised by Fedde. In order to operate, the cut-off between the upper and lower arm-cuff is opened and air is pumped in as in filling the ordinary upper arm-cuff of any instrument. Instead, however, of filling the upper arm-cuff only, the air is passed into the lower arm-cuff as well as into the extra bag leading from it. The air is passed in continuously until the pressure in all the bags is about 100 mm. mercury, as shown by the blood-pressure instrument. At this point the cut-off between the upper arm-cuff and the lower arm-cuff is closed, making now two distinct air-tight chambers, the one in the upper cuff and the other made up of the rubber bag in the lower arm-cuff and the bag connected with it. The two last mentioned bags are connected by the pith-ball tube.

As pulsations pass into the forearm there is at each pulsation slight enlargement of the volume of the forearm. Each enlargement will cause the air to pass from the bag in the cuff about the lower arm, through the tube containing the pith ball, into the rubber bag connected with it. This will force the pith ball to move in the direction of the air current, hence with each arterial pulsation air will rush from the lower arm-bag, causing the pith ball to jump. On the other hand, after each pulsation the arm will return to its smaller size, thus in obedience to the law of equalization of pressure, the air is made to flow back into the lower arm-bag, thus drawing the pith ball back toward the arm. Hence there are oscillations of the pith ball as long as there are arterial pulsations in the forearm. Now, if additional air is pumped into the upper arm-cuff, which is shut off from the lower arm-bag, by the cut-off valve, to the point of obliterating the forearm pulsations, there will likewise be a cessation of the oscillations of the pith ball. At this point the height of the mercury column is read for the systolic pressure. Or, the air may be pumped into the upper cuff far above the true blood-pressure and allowed to escape through a needle valve. By this method, as soon as the pulsations appear in the forearm, they are recorded by the instant oscillations of the pith ball, this being the systolic reading. These results are identical whether taken at the cessation of the pith-ball oscillations or at the first appearance of such oscillations.

If the operator opens the shut-off between the upper and lower arm-bags and watches the oscillations of the pith ball as the air is permitted to escape through a needle valve, the point at which the oscillations are greatest is the place at which the diastolic pressure is read.

142. **New Typhoid Test.**—Prendergast's test consists in injecting with a fine hypodermic needle a few drops of a suspension of dead typhoid bacilli of the strength of less than 5,000,000 per c.c. After the solution has been injected intradermally (care always being taken to raise as superficial a bleb as possible and with a well-mixed solution) in twenty-four hours the non-typhoid patient shows a well-marked area of redness around the point of injection. The typhoid patient shows absolutely no reaction. The reaction (as a rule) begins to appear in twelve hours, reaches its maximum in twenty-four hours, and has disappeared in 48 hours. Any redness after forty-eight hours is considered an infection and is not taken as a reaction. This test gives no constitutional reaction (rise of temperature, malaise, chill, etc.), and has no elements of danger. In the negative cases (controls) a few patients have complained of slight soreness and itching at point of injection twelve to twenty-four hours after the injection was given. This quickly subsided without treatment and gave no after-trouble.

Ohio State Medical Journal, Columbus

December, VII, No. 12, pp. 561-620

143 Surgical Aspect of Urogenital Infections With Special Reference to Kidney Tuberculosis. C. E. Barnett, Ft. Wayne, Ind.
144 Relation of Pyogenic Microorganisms to Etiology and Treatment of Skin Diseases. H. R. Varney, Detroit.
145 Ten Months' Experience with Wassermann Reaction as Clinical Sign of Syphilis. C. L. Cummer and R. Dexter, Cleveland.
146 Shall We Remove Tonsils for Relief or Cure of Rheumatism? C. S. Means, Columbus.

Journal of Ophthalmology and Oto-Laryngology, Chicago

December, V, No. 12, pp. 375-404

147 Tuberculosis of Uveal Tract, With Presentation of Case. E. W. Alexander, San Francisco.
148 Indications for Mastoid Operation. F. E. Franchere, Sioux City, Ia.

New York Medical Journal

December 30, XCIV, No. 27, pp. 1313-1352

149 *Localized Outbreak of Typhoid Traced to Milk Infected by a Bacillus Carrier; Also Case of Laboratory Typhoid Contracted from Cultures. C. F. Boldnan and W. C. Noble, New York.
150 Venereal Diseases and Their Relation to Infant Mortality and Race Deterioration. P. A. Morrow, New York.
151 Sterility in Women. E. McDonald, New York.
152 Diffuse Suppurative Labyrinthitis; Its Diagnosis and Relation to Endocranial Complications. J. Auerbach, New York.
153 Talk About Climates of South-West. E. E. Elliott, Chicago.
154 Indications for Radical Operation in Frontal Sinusitis. S. McCullagh, New York.
155 Social and Moral Considerations Related to Medical and Surgical Care of Crippled Children. D. C. McMurtrie, New York.
156 *The "Drop-Stroke" Method of Percussion. O. Lerch, New Orleans.

149. **Localized Typhoid.**—A dairy farmer gave a history of six cases of typhoid on his farm in 1904, one in 1907 and one case in 1908. The dairyman represented the last of the six cases in 1904, and was now the only person on the farm who had had the disease. Specimens of his stools were collected and examined for typhoid bacilli. The examinations disclosed the presence of enormous numbers of living typhoid bacilli. The bacilli were tested with typhoid agglutinating serum and also as to their cultural characteristics. They proved to be typical. As a confirmation of the laboratory findings in this case, it is of interest to note that one of the laboratory assistants, while pipetting a broth fishing from one of these specimens, accidentally drew some into her mouth. Two weeks later she developed typhoid, which ran a typical course ending in recovery. A blood-culture taken during the course of the disease yielded typical typhoid bacilli.

156. **Drop-Stroke Method of Percussion.**—The characteristic feature of Lerch's new method of percussion is the drop. As soon as the dropping hammer touches the pleximeter, vibrations are felt in the palm of the hand and the finger tips, changing in character with the slightest change in the area percussed. A 1-inch drop or a drop of several inches is the same in everybody's hands, and it does not matter whether the lean man or the fat man, the nervous or the calm practices it, he will not differ in results as long as he allows the hammer to drop on the pleximeter. As soon as the border of a solid organ is reached, the hammer feels heavy when the organ is located near the surface, light when the organ is deeply located and air intervenes between it and the body surface. This sensation varies according to the amount of air beneath. At the same time, the rebound of the hammer varies proportionately in height and frequency; there is practically no rebound when a solid organ is in contact with the surface. Finally, perceptibly later, the changing note is heard, a dull thud, directly over the solid organ. These three criteria: the vibrations felt, the rebound of the hammer seen, and the note heard, Lerch says, allow even those who do not possess an acute sense of hearing, to obtain the same results as those who have; as the eye and sense of touch, active all at the same time, make up for any deficiency of hearing.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

December, XIII, No. 6, pp. 327-392

157 Tumor of Ponto-Cerebellar Angle with Bilateral Loss of Smell and Disturbance of Tastee. B. R. Tucker, Richmond.
158 Case of Raynaud's Disease. J. E. Stokes, Salisbury, N. C.
159 Seven Hundred Cases of Nitrous Oxid-Oxygen Anesthesia. S. Leigh and J. H. Culpepper, Norfolk, Va.
160 Early Diagnosis of Tuberculosis. J. J. Loyd, Catawba, Va.

Bulletin of Medical and Chirurgical Faculty of Maryland, Baltimore

December, IV, No. 6, pp. 87-103

161 Disposal of Sewage in Small Towns and Country Dwellings. W. R. Stokes, Baltimore.
162 Good to Be Derived From Our Sanitary Sewerage System. C. H. Jones, Baltimore.
163 Baltimore Sewerage System. C. W. Hendrick, Baltimore.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

December 16, No. 2659, pp. 1577-1636

1 Bier's Hyperemic Treatment. H. F. Waterhouse.
2 Leprosy. T. S. B. Williams.
3 *Remarkable Daily Variation in Leukocytes in Several Diseases. D. Thomson.
4 *Dangers of Saline Injections. E. C. Hort and W. J. Penfold.
5 Six Cases of Arsenic Poisoning Caused by Fumes from Coke Stove. J. G. Taylor and K. V. Trubshaw.
6 *Paroxysmal Attacks of Dyspnea, Occurring at Night, in Heart Disease H. Barber.

3. **Daily Variations in Leukocytes in Diseases.**—The main point emphasized by Thomson is that leukocyte counts should always be made every four to eight hours because of the extreme variability of forms and numbers in all diseases. He also suggests a protozoon origin of Hodgkin's disease, the suggestion being based on the similarity of the leukocyte picture to that seen in malaria.

4. **Dangers of Saline Injections.**—The authors believe that saline injections as at present administered are by no means free from risk, especially when they are large. Neither centrifuging, filtration through cotton-wool or bacterial filters, nor boiling, is sufficient to prevent the fever that follows saline injections. It is claimed that distillation in a sterile Jena retort of all water used in the preparation of saline solutions, followed by immediate injection, is at present the only reliable method of insuring that no fever follows the injections.

6. **Paroxysmal Attacks of Dyspnea in Heart Disease.**—The features, common to all Barrer's patients, are that they occurred in elderly men in whom the heart was enlarged. In no case was there valvular disease which appeared to be primary, nor signs of an aneurysm. In two the high blood-pressure suggested chronic interstitial nephritis as a primary disposing cause to the heart trouble, but in the absence of albuminuria or other signs of kidney disease the attacks would not appear to be uremic. Barrer is inclined to believe that the morbid anatomy of the condition in all has been degeneration of the heart muscle.

Lancet, London

December 16, CLXXXI, No. 4607, pp. 1677-1754

7 *Intra-Abdominal-Pelvic Pressure in Man. R. H. Paramore.
8 Abdominal and Pelvic Surgery. R. Morison.
9 Venereal Disease: Its Present and Future. D. White and C. H. Melville.
10 *Case of Rapid Involution of Uterine Fibromyoma After Parturition. R. L. E. Downer.
11 *Calcium Salts as Prophylactic Against Serum Rashes. M. A Cassidy.
12 *Diplococcus from Urino-Genital Tract. L. S. Dudgeon and P. N. Panton.
13 Splenomegalic Polycythemia with Cyanosis. E. Clark-Jones.
14 Ovarian Cystoma of Unusual Size Complicated with Ventral Hernia and Ascites. H. Macnaughton-Jones.

7. **Intra-Abdomino-Pelvic Pressure.**—The intra-abdomino-pelvic pressure, even that maintained during posture and rest, Paramore says subserves most important circulatory functions. It not only quickens the whole circulation, but renders the blood richer and purer in a shorter time; and this is the reason of its far-reaching effects on general metabolism. By maintaining a high aortic pressure it lays the foundation for an efficient cerebral circulation so important to man; it is, indeed, by its means that man has been able to evolve and is able to maintain a vigorous and strenuous life, both physical and mental, in spite of his erect carriage and the elevated position of his brain.

10. **Involution of Uterine Fibromyoma.**—Downer concludes in his case that a fibroid of the size of a cricket ball entirely disappeared in the course of two months during the process of involution. A year later the patient again became pregnant and at the present time, gestation having proceeded for five months, there is no sign of any reappearance of the tumor.

11. **Calcium Salts for Serum Rashes.**—In the diphtheria ward at St. Thomas' Hospital it has been the custom during the last few years to administer calcium salts with the object of influencing the severity of antitoxin rashes. In order to ascertain the effect, if any, of this treatment, Cassidy took sixty-two consecutive cases and administered calcium to alternate patients, irrespective of the extent of membrane or dose of serum. The chlorid was the salt used in most cases, but the lactate was given occasionally; the average dose was 5 gr. (maximum, 10 gr., minimum, 3 gr.), given three times a day, omitting every third day. In each case rashes were carefully looked for, and, when present, noted as being "faint," "moderate," or "severe." Of these sixty-two patients, twelve died in less than twelve days after admission and are therefore excluded. In twenty-three patients treated with calcium there was no rash in four, faint rash in six, moderate rash in five, severe rash in eight. Average duration of rash when present, 8.4 days. In twenty-seven patients treated without calcium there was no rash in sixteen, faint rash in seven, moderate rash in one, severe rash in three. Average duration of rash when present, three days.

12. **Diplococcus from Urino-Genital Tract.**—The organism described by Dudgeon and Panton is one which is not infrequently met with in the urino-genital tract, yet appears to have escaped notice in the standard works on bacteriology. It is a diplococcus in no way allied to the pneumococcus, yet the two organisms may be, and have been, confused. The authors isolated the organism from the urine of women, children, and much less commonly male adults, as well as from the vagina, and have obtained pure cultures of it from pus from the interior of the uterus. It appears to be particularly common in the urine of small children; in an examination of carefully taken catheter specimens from eleven children with epidemic diarrhea they met with it in eight cases. In its staining properties, its morphologic appearances, and in the nature of its colonies on agar this organism closely resembles the pneumococcus, yet in every other respect the two bacteria are widely different. It should hardly be necessary to insist that the diagnosis of a pneumococcal infection can only be made after full cultural and other investigations, yet the authors venture to think that the frequency with which the pneumococcus has been reported from the urine and from vaginal discharges depends on the mistaken identity of that organism with the one described: in fact, they have evidence that this mistake does occur. The organism is one not infrequently met with, and may be unaccompanied by any evidence of disease. In a certain proportion of cases, however, it is associated with the ordinary phenomena of inflammation and may be the sole organism detected. The coccus appears to have little or no pathogenic action on mice or rabbits.

Journal of Tropical Medicine and Hygiene, London

December 1, XIV, No. 23, pp. 350-364

15 Etiology of Beriberi. H. Fraser and A. T. Stanton.

Practitioner, London

December, LXXXVII, No. 6, pp. 741-886

16 General Practitioner and Medical Society. J. M. Bruce.
17 *Nature and Treatment of Certain Forms of Indigestion. F. J. Wethered.
18 Pulmonary Tuberculosis. M. Paterson.
19 Fatalities of Appendicitis and Their Prevention. W. S. Handley.
20 Recurrent Jaundice, Pyrexia, Splenomegaly, Anemia and Pigmentation of Skin in Girl Aged 11 Years. L. Guthrie.
21 Skin-Grafting. W. Evans.
22 Treatment of Venereal Diseases as We See Them To-Day. J. E. R. McDonagh.
23 Anaphylaxis in Relation to Certain Clinical Manifestations. H. B. Shaw.
24 Practical Points on Blood-Pressure for Practitioner. J. C. McClure.
25 Dr. John Fothergill. R. H. Fox.
26 Case of Traumatic Myositis Ossificans with Involvement of Musculo-Spiral Nerve. E. C. Bevers.
27 Permeating Mastoid Meningitis. J. Burgess.
28 Special Applications of Spa Treatment to Female Pelvic Disorders. M. B. Ray.
29 Medicinal Use of Omnopon. J. Rae.

17. **Indigestion.**—In Wethered's opinion the pain and discomfort experienced in dyspepsia are due to three causes: (1) the distention of the stomach brought about by the accumulation of gases evolved by faulty digestive processes (if the distention is only slight a sense of fulness and discomfort is felt; if the distention is greater there is actual pain); (2) the existence of free hydrochloric acid, which causes an increase of peristaltic action of the stomach (the acid may also produce a spasm of the pylorus, which causes the pyloric orifice to be closed and so by preventing the exit of gases intensifies the symptoms); and (3) the presence of alcohols evolved in the stomach. The time-honored plan of giving alkalies in certain cases affords relief by neutralizing the acid and so lessening the increased peristaltic action. It is obvious, however, that a more effective plan to relieve the symptoms would be to empty the stomach of the contained gases and the retained more or less altered food matters. This is best done, Wethered says, by emptying the stomach into the duodenum by Mitchell's method. When the surface of the skin immediately beneath the left costal arch is gently stimulated with the fingers contraction of the stomach occurs. The stimulation must be brought about by stroking the skin very lightly; if too much pressure is used a spasm of the pylorus seems to be produced, and gas and fluid are then unable to pass through the pyloric opening. When contraction of the stomach occurs, as evidenced by the sounds heard by the phonendoscope, the stroking must at once be stopped until the bubbling or gurgling sounds have also ceased, otherwise the

nervous impulse seems to become too strong and the contraction ceases. When the sounds have stopped the stimulation is again resorted to and so on until the stomach has been emptied, as shown by the results of auscultatory percussion. The procedure is best carried out four hours after a meal. In most cases, once a day for about a week or ten days is required and the interval may be lengthened, every two days, every third day, and so on, until all symptoms have disappeared. At the same time the diet must be carefully regulated. The most important point is suitable spacing of the meals. Three meals a day must be prescribed; breakfast at about 8:30 to 9 a. m.; lunch from 1 to 1:30 p. m.; and dinner at 7 to 8 p. m., nothing whatsoever being taken in the intervals. In this way the stomach has complete rest between the meals and thus has a proper chance of emptying itself, being assisted once a day by the method described.

Glasgow Medical Journal

December, LXXVI, No. 6, pp. 401-475

30 Proptosis. A. M. Ramsay.
31 Development of Acidity in Cows' Milk and Its Relation to Time and Temperature. R. Vincent.
32 *Unusual Distribution of Secondary Growths in Case of Cancer of Female Mamma. G. T. Beatson.

32. **Cancer of Female Mamma.**—In Beatson's case secondary deposits appeared at (1) umbilicus, (2) vulva, (3) anus, (4) Scarpa's triangle, (5) lower jaw and (6) scalp. The case was inoperable. Not only were nodules present on the right side of the chest anteriorly, on both sides of the neck, on the right lower jaw, on the scalp, and, posteriorly, on the back in the scapular, lumbar and gluteal regions, but they were very numerous on the front wall of the abdomen and had reached to the apex of Scarpa's triangle on the right side, to the mons veneris and to the perineum, a very large one being situated close to the anus. The nodules varied in size from a small bean to a 5-shilling piece, the largest being at the (1) umbilicus, (2) the mons veneris, (3) the left side of the anus and (4) Scarpa's triangle. Of these, three had ulcerated, but not the one near the apex of Scarpa's triangle. Beatson reviews the anatomy of the lymph supply of these regions to show how metastasis could occur.

Annales de l'Institut Pasteur, Paris

November, XXV, No. 11, pp. 785-864

33 *Tuberculosis in the Astrakhan Country. (Recherches sur l'épidémiologie de la tuberculose dans les steppes des Kalmouks.) E. Metchnikoff, E. Burnet and L. Tarassevitch.
34 *Experimental Research on Acute Poliomyelitis. II. (Maladie de Heine-Medin.) K. Landsteiner, C. Levaditi and M. Pastia.
35 Protozoan Infections and Lesions of the Adrenals. (Maladies à protozoaires et lésions des capsules surrénales.) M. Elmassian.
36 *Extensive Epizootic of Rabies. (Sur une grande épizootie de rage.) A. Carini.
37 Mechanism of Alcoholic Fermentation. A. Lebedeff.
38 Distribution of the Proteus Bacillus in Nature. C. Cantu.

33. **Comparative Freedom of the Calmucks from Tuberculosis.**—The skin test with tuberculin (Pirquet) was extensively applied last summer to the inhabitants of the vast plains in the Astrakhan district along the northwest border of the Caspian Sea. Near the borders 89.5 per cent. of the male adults reacted positively while in the interior the proportion was only 64 per cent. and the difference was greater among the women and still more so among the children. When the older children are sent to a town school they almost invariably contract tuberculosis, so that the authorities are now planning a school for them in the interior. The conditions among the Calmucks offer an exceptionally favorable field for study of the contracting of tuberculosis unusually late in life.

34. **Experimental Research on Acute Poliomyelitis.**—Among the special points studied was the resistance of the virus; it was learned that the virus kept in glycerin in the refrigerator for 202 days was still capable of infecting monkeys. Even when the virus had been thoroughly desiccated, it proved virulent after twenty-four days, and kept in water or milk at room temperature and exposed to the light it was still virulent after thirty days. Monkeys were inoculated with scraps from the tonsils and pharynx of a child who had succumbed to acute poliomyelitis and the animals promptly contracted the disease while inoculation of scraps of gland tissue from the neck, spleen and mesentery proved harmless. This child had been brought to the hospital, April 7, for tuberculous pleurisy and developed the poliomyelitis May 7, dying May 10. There had been no case of poliomyelitis before in the hospital for fourteen months. But another child who had been in the same ward as the above from April 11 to April 30 developed poliomyelitis four months later.

36. **Epizootic of Rabies.**—Carini writes from Sao Paulo in Brazil to report an epizootic of rabies in cattle and horses causing the death of about 4,000 cattle and 1,000 horses. There was no unusual prevalence of rabies in dogs at the time, but it was noticed that bats in broad daylight attacked and bit the cattle, and Carini suggests that bats may have been the source of the extensive epizootic. It has been prevailing for several years but exclusively in a narrow strip of the country. As its true nature was not discovered until recently, prophylaxis has not been on the correct basis. The animals affected all die after a few days, and the meat and hides have been utilized but no mishaps have been known to follow.

Archives des Maladies de l'App. Digestif, Paris

November, V, No. 11, pp. 589-648

39 Experimental Variation of Intestinal Putrefaction by Changes of Diet. (Régime et putréfaction intestinale.) A. Bickel.
40 Roentgenoscopy in Locating the Position of the Stomach. (Etudes roentgenographiques sur la situation de l'estomac.) S. Talma.
41 *Influence of Sodium Salts on Elimination of Sodium Chlorid in the Urine and on Abnormal Gastric Secretion. (Influence de l'ingestion du bicarbonate et du citrate de soude sur l'élimination du chlorure de sodium par l'urine et sur la sécrétion chlorhydrique au cours des gastropathies.) A. Mathieu.
42 *Symptoms on Part of Esophagus with Gastric Cancer. (Les symptomes oesophagiens et pseudo-oesophagiens dans le cancer de l'estomac à forme linitique.) A. Cade.

41. **Influence of Sodium Salts on Bladder and Stomach Secretion.**—Mathieu reports extensive research on the variations in the output of sodium chlorid in the urine and in the secretion in the stomach under the influence of ingestion of sodium bicarbonate or citrate. He tabulates the details in three typical cases of hyperchlorhydria in which the symptoms compelled relief by administration of an alkali. The bicarbonate and citrate displayed a similar action; with both the proportion of sodium chlorid in the urine rapidly dropped when the dose surpassed 20 gm. of the sodium salt and it increased on doses of 10 gm. In some other cases even 6 or 10 gm. of the bicarbonate induced retention. When this reduction in the elimination of sodium chlorid was going on, the gastric secretion seemed to be checked also. Mathieu thinks that this complex mechanism set in play by ingestion of an alkali might be instructively studied with graduated doses to learn the exact moment when saturation of the acid is followed by inhibition of gastric secretion. There was no tendency to edema in his cases, notwithstanding the retention of the chlorid. It may have been eliminated by the bowels.

42. **Esophagus Symptoms with Gastric Cancer.**—Cade discusses the history and clinical aspect of the symptoms suggesting mischief in the esophagus which accompany diffuse cancer of the stomach. The retraction and loss of elasticity in the walls and the gaping cardia induce early and incessant vomiting and pain in swallowing while the esophagus retains its permeability more or less. In seven cases reported in detail these symptoms apparently located the malignant disease in the esophagus. When the esophagus is also involved, the pain in swallowing is more intense. Insufflation of the stomach, showing the retraction of the walls, is an important aid in differentiation, as also a history of preceding gastric dyspepsia or signs of stenosis of the pylorus. Roentgenoscopy generally clears up the diagnosis at once and should never be omitted.

Bulletin de l'Académie de Médecine, Paris

December 5, LXXV, No. 40, pp. 261-284

43 *Vaccination Against Typhoid in the French Colonies. (Résultats de la vaccination antityphoidique au Maroc par le vaccin de Wright et les vaccins polyvalents.) H. Vincent.
44 Appendicitis Plus Salpingitis. (Note sur un cas d'appendiculo-salpingite.) P. Segond.

43. **Vaccination of Troops Against Typhoid.**—Vincent reports the results of vaccination of 283 soldiers against typhoid which was prevailing at the time in the garrisons where they were stationed, along the border between Algeria and Morocco. These figures do not include any men who had previously had typhoid or any febrile stomach trouble. Among the 2,632 not vaccinated there were 171 cases of typhoid and 134 cases of febrile stomach trouble, with a typhoid mortality of 0.835 per cent. Among the 129 soldiers vaccinated with Wright-Leishman vaccine one contracted typhoid but had it very lightly, while none of the 154 vaccinated with polyvalent vaccine showed at any time symptoms of typhoid or of a suspicious febrile gastric trouble. The men lived under similar conditions in every respect otherwise than the vaccination.

Lyon Médical, Lyons

November 19, CXVII, No. 47, pp. 1069-1132

45 The Butter in Human Milk. (Etude du beurre dans le lait de femme par la centrifugation.) E. Plauchu and R. Rendu.

November 26, No. 48, pp. 1133-1196

46 Pathologic Anatomy of the Nervous System. (L'anatomie pathologique du système nerveux; son rôle et ses limites dans l'étude des maladies nerveuses.) L. Bériel. Continued.

December 3, No. 49, pp. 1197-1268

47 Lactic Acid Possibly Responsible for White Bile with Certain Cancers. (Réaction de la teinture d'iode avec la gaze blanche, l'alcool et l'eau. Application à la bile blanche dans certains des voies biliaires.) M. Jaboulay.

48 Tuberculin Treatment in Tuberculosis of the Eyes. (Tuberculinothérapie de la tuberculose oculaire.) L. Dor.

Presse Médicale, Paris

December 2, XIX, No. 96, pp. 989-1004

49 *Treatment of Leprosy. (Les nouvelles médications antilépreuses.) M. Jeanselme.

50 Superheated Air Douche in Therapeutics. (La douche d'air chaud en thérapeutique; instrumentation; indications; technique.) M. Vignat.

December 6, No. 97, pp. 1005-1012

51 Sodium Silicate Seems to Ward Off Experimental Epinephrin Vascular Lesions. (Athérome expérimental et silicate de soude.) A. Gouget.

52 *Autoserotherapy in Infectious Diseases. P. Modinos.

49. **Treatment of Leprosy.**—Jeanselme reviews the various drugs and physical methods of treatment that have been advocated of late for treatment of leprosy, remarking that he has been much pleased with the benefit derived and the lack of by-effects when chaulmoogra oil was injected mixed with equal parts of a compound oil made by mixing 0.5 gm. of guaiacol with 0.25 gm. of camphor and 5 gm. each of vaselin and oil of vaselin. An injection of 6 c.c. is equivalent to 140 drops of the chaulmoogra oil, and this injection can be repeated three times a week. External cauterizations and other physical measures may heal superficial lesions but they are liable to mobilize the germs and thus do harm. Radium proved efficient in arresting the pain in two cases, and it also induced in a week the retrogression of leprous nodules on the face and ears, the infiltrations subsiding without leaving a trace (De Beurmann and Degrais). The Roentgen rays sometimes have a curative action on recent leprous infiltrations, and Jeanselme cites reports of various writers on this method of treatment, adding that he found it successful in two cases but without any effect in another. The Roentgen rays have an inconstant action on the disturbances of sensation in leprosy, sometiems modifying and sometimes without effect on them. The rays should be applied along the route of the nerve, especially at the points where the nerve seems thickened and knobby. High frequency currents may likewise have a sedative action on incipient nervous disturbances and often prove useful in combating progressive atrophy of muscles, if care is taken not to fatigue the muscle. He adds that the high frequency spark seemed to be instrumental in the cure of a leprous perforating lesion in the foot; a three-minute sitting was given once a week for six weeks with a spark 4 or 5 cm. long. A similar lesion on the other foot of the same patient did not benefit so much, and it recurred. From the multiplicity of methods of treatment it is easy to deduce that none is satisfactory, although almost any one may aid in isolated cases.

52. **Autoserotherapy.**—Modinos applies a blister and injects serum from the blister into the subcutaneous cellular tissue. He draws up into the syringe from 8 to 10 c.c. of the blister fluid and injects it subcutaneously at some other point, and has applied this method of autoserotherapy in sixteen cases including four of influenza, four of typhoid and eight of Malta fever. He is confident that the course of the typhoid in two of the patients was materially attenuated by the procedure and in six of the eight cases of Malta fever. The injection may have to be repeated once or twice after intervals of five days, but when done early it seems to abort the disease. The cooperation of the organism before it has become exhausted by the struggle against the disease is an important factor in the cure. The course of the infection was usually much shortened even when typhoid was complicated with Malta fever.

Revue de Chirurgie, Paris

December, XXXI, No. 12, pp. 839-1070

53 *Echinococcus Disease of the Pleura. (De la pachy-pleurite échinococcique et du traitement des kystes hydatiques de la plèvre.) E. and M. Vincent.

54 *Fifty-Three Cases of Injury of Lungs from Without. (Sur le traitement des plaies du poumon. Etude statistique.) L. Clément.

55 *Injury of Adrenals from Momburg Belt Constriction. (Le procédé d'hémostase de Momburg et les capsules surrénales.) C. Canestro.

56 *Injury of Vessels in Axilla Complicating Trauma of the Shoulder. (Des lésions des vaisseaux de l'aisselle qui compliquent les luxations de l'épaule.) M. Guibé. Commenced in No. 10.

57 *Treatment of Aneurysms and Hematomas. (Le traitement conservateur des anévrismes et des hématomes.) C. Monod and J. Vanverts. Commenced in No. 11.

53. **Echinococcus Disease of the Pleura.**—Vincent reviews the various forms that may be assumed by this affection, comparing eight cases from the literature with two from his own practice and emphasizing anew that treatment must be exclusively surgical. It should aim to remove all traces of the parasites from the pleura and to release the lung when it is bound down by rigid thickening of the pleura. For the first it is enough to resect the ribs to permit ample access for the pneumotomy. The second indication is met at a second sitting with a flap incision to permit decortication of the lung. His patients were cured by treatment on these principles. In one case the first symptom had been recurring cough for more than three years with fetid sputum during the last six months; then the patient one day coughed up a scrap of membrane-like tissue and fever set in with pain in the right shoulder. Sudden suffocation and intense pain brought him to the hospital where relief was obtained by puncturing the pleura. Hemoptysis a few months later led to the diagnosis of a hydatid cyst in the lung or pleura. Pain in the right side of the chest and general debility were the main symptoms in the second case, with slight fever at times. After five or six months there followed dyspnea on exertion and a single hemoptysis; pleurisy was assumed at first but puncture revealed the echinococcus in the pleural effusion. In another case the only symptom for months was the gradual enlargement of the abdomen, and a laparotomy finally revealed a bile-tinted effusion almost filling the peritoneum and finally traced to a ruptured echinococcus cyst in the liver. The peritoneum does not become inflamed under the influence of such an effusion, even mixed with bile, while the pleura usually develops a pachypleuritis.

54. **Wounds of the Lung.**—Clément comments on the comparative harmlessness of firearm or stab wounds of the lung or injury from fracture of the ribs or crushing accidents. Only when the vessels are involved in the injury is the outlook unfavorable. He tabulates the details of his fifty-three cases.

55. **Momburg Belt Constriction and the Adrenals.**—Canestro concludes from his experimental research that the Momburg belt method of hemostasis is liable to induce modifications in the structure and functioning of the adrenals. At the same time these are never sufficiently serious to explain alone the instances of immediate sudden death. In a few rare cases, however, if the adrenals were not entirely sound beforehand, it is possible that the procedure might have induced a sudden arrest of adrenal functioning which proved rapidly fatal. Although this injury of the adrenals is not enough to cause death, as a rule, yet it may cooperate in the clinical syndrome and throw light on certain puzzling symp-

toms. The sympathetic nervous system may feel the lack of adrenal functioning, and thus may result an instability and irregular action of the cardiovascular system; this may irreparably injure an already weakened heart.

56. **Lesions in the Vessels in the Axilla with Dislocation of the Shoulder.**—Guibé summarizes seventy-eight cases and discusses treatment. Ligation of the subclavian artery is apparently the preferable technic as it is much simpler than incision of the hematoma, he says; the mortality in the cases on record was only 20 per cent. with ligation while it was 31 per cent. with incision, and gangrene followed in only 20 per cent. of the ligation cases while it occurred in 44 per cent. of the incision cases. The functional outcome with the ligature was excellent results in 25 per cent.; mediocre results in 50 per cent., and the outcome unknown in all the other cases, while with incision excellent results were obtained only in 9 per cent.; mediocre in 36.4 per cent.; outcome unknown in 18.2 per cent., and in 36.4 per cent. the arm had to be finally removed.

57. **Treatment of Aneurysms and Hematomas.**—Monod and Vanverts base their monograph on 107 cases of aneurysm, classifying them according to the artery involved. The list includes a large number from American literature. They report that conservative measures proved successful in 82.5 per cent. of the cases in which they were applied while gangrene followed in only 1 per cent. There was recurrence or postoperative hemorrhage in 11 per cent., generally ascribable to defective technic in suturing the vessel. Traumatic lesions of arteries naturally offer better chances for conservative treatment than lesions of pathologic origin.

Semaine Médicale, Paris

December 13, XXXI, No. 50, pp. 589-600

58 *Primary Tuberculous Tumors and Cold Abscess in the Abdominal Wall. (Tuberculomes et abcès froids primitifs de la parol abdominale.) M. Savariaud.
59 Cholera at the International Sanitary Conference. (Rapport de la sous-commission du choléra.) Van Ermengem.

58. **Primary Cold Abscess in Abdominal Wall.**—Savariaud remarks that the first step in diagnosis is to know of the existence of the affection in question; none of the text-books, however, mentions the possibility of a primary localization of tuberculosis in the abdominal wall. He has encountered six cases of the kind in the last two years, three in children. In one case the tumefaction in the gall-bladder region had been ascribed to a hydrocholecystitis while an attack of pain in the same region six months before had been assumed to be due to appendicitis. No one doubted that the present attack was one of inflammation in the gall-bladder although recognizing the fact that cholecystitis is extremely rare in children. Not knowing that a primary tuberculous cold abscess could develop in the abdominal muscles, simulating a deep lesion, he made no attempt to examine the abdominal wall for such a tumefaction, but prepared to operate at once on the gall-bladder. Fortunately, he did not make a large incision but struck at once the pus pocket at the back of the aponeurosis of the rectus. He thought at first it was a diverticulum from the gall-bladder but the fungous tissue suggested a tuberculous abscess in the sheath of the rectus which had been partially destroyed at this point. The pocket was cauterized with zinc chlorid, loose scraps excised, and the cure was soon complete and permanent, the little girl having shown no other trace of tuberculosis since. Archambault and Hiller have called attention to these primary tuberculous lesions in the abdominal wall. A cold abscess may develop likewise secondary to invasion of the iliac lymph-nodes. The first symptom is pain, but this ceases after the tumor has attained a certain size; it is not movable in the wall. In one of Melchior's cases there was a coincident gall-bladder affection. In Hiller's case there had been pain in the gall-bladder region for over three years, preventing the patient's lying on that side, and the course of the case suggested coincident tuberculous peritonitis. Puncture, aspiration of the contents of the cold abscess and injection of a modifying fluid have given good results in some cases, but the accessibility and perfect results to date of radical surgical treatment render this preferable as a rule.

Berliner klinische Wochenschrift

December 11, XLVII, No. 50, pp. 2237-2284

60 Postoperative Hernia into Abdominal Wall. (Hernia properitonealis abdominalis in alter Bauchnarbe. Brucheinklemmung, Darmgangrän und -resektion.) C. Pochhammer.
61 Torn-Off Upper Eyelid Successfully Replaced. (Operative Heilung eines abgerissenen Augenlides.) C. Hamburger.
62 Advantages of the Alexander-Adams Operation. (Ist heutzutage die Alexander-Adams'sche Operation noch berechtigt?) G. Schickele.
63 *Action of Iodin. (Wirkungen des Jods auf den menschlichen und tierischen Organismus.) Strubell.
64 Case of Recovery from Hodgkin's Disease. (Geheilte Splenomegalie.) M. Mosse.
65 Isolated Tuberculous Process in the Wall of the Intestine as Manifestation of Experimental Tuberculosis. (Solitäre Darmwandtuberkulose als besondere Form der experimentellen Meerschweinchentuberkulose.) G. Kiralyfi.
66 *Blood Picture with Latent Intestinal Tuberculosis. (Latente Tuberkulose des Darms und der mesenterialen Lymphdrüsen als Ursache eigenartiger hämatologischer Syndrome.) A. Bretschneider.
67 Sports and Gymnastics. (Deutsches Turnen und gymnastische Systeme.) R. du Bois-Reymond.

63. **Action of Iodin on the Human and Animal Organism.**—Strubell reports research showing the changes in the opsonic immunity under administration of iodin salts, especially the reduction of the resistance to staphylococci. He thinks that this throws light on the acne which is liable to develop when iodin is being taken; the skin loses its resisting power and casual staphylococci set up their lesions. His work confirms further the change in the viscosity of the blood under iodin, and it suggests that internal organs are likewise rendered more susceptible, particularly to toxins generated by staphylococci. A number of isolated facts learned by his research fit into the results of the research of others, the various cog-wheels, he says, forming a solid whole of great promise.

66. **Latent Intestinal Tuberculosis.**—Bretschneider refers in particular to hemolytic jaundice and pernicious anemia, reporting a case of each in which the blood picture was the main or only symptom of latent tuberculous processes in the intestine and mesenteric lymph-nodes.

Correspondenz-Blatt für Schweizer Aerzte, Basel

December 1, XLI, No. 34, pp. 1185-1216

68 Determination of Physical and Psychic Symptoms in the Subconsciousness. (Die Determination physischer und psychischer Symptome im Unterbewusstsein.) L. Frank.
69 Detachment of the Retina as Industrial Accident. (Gilt eine latente, durch Ueberanstrengung plötzlich manifest gewordene Netzhautablösung als Unfallfolge?) A. Dutoit.

Deutsche medizinische Wochenschrift, Berlin

December 7, XXXVII, No. 49, pp. 2265-2312

70 *Transplantation of Living Tissues. E. Enderlen.
71 *Toxicology of Tobacco. (Die Toxikologie des Tabakrauches und des Nikotins.) A. Fröhlich.
72 *Diagnosis of Gastric Cancer. (Ueber Frühdiagnose und Spätdiagnose des Magenkarzinoms.) I. Boas.
73 *Surgery of the Pancreas. (Zur Chirurgie der Pankreaserkrankungen.) E. G. Lick.
74 Epinephrin and Sugar in the Blood During Pregnancy. (Zur Frage der Adrenalinämie und des Blutzuckers in der Schwangerschaft.) E. Neubauer and J. Novak.
75 Serotherapy in Treatment of Pneumococcus Ulcer of the Cornea. (Behandlung der Pneumokokkeninfektion der Hornhaut — Ulcus serpens — mittels grosser Serummengen.) H. Gebb.
76 Technic for Intravenous Injection of Salvarsan. (Intravenöse Salvarsaninjektionen ohne Kochsalzzusatz.) M. Brann.
77 General Principles for Surgery of Peripheral Nerves. (Die Chirurgie der peripherischen Nerven.) Berger.
78 Inheritance of Acquired Properties. (Vererbung erworbener Eigenschaften.) H. Ribbert.
79 Advertising of New Drugs. (Unzuträgliche Reklame für neue Heilmittel.) L. Henius.

70. A recent summary of this subject was reviewed in THE JOURNAL, Dec. 23, 1911, p. 2113.

71. **Toxicology of Tobacco.**—Fröhlich discusses this subject from the standpoint of the pharmacologist and experimental analysis.

72. **Diagnosis of Gastric Cancer.**—Boas emphasizes that the early diagnosis of cancer means the detection of the first anatomic changes, and he thinks that when there are already clinical manifestations this stage is long past. The main point is to determine whether a cancer causing clinical manifestations has passed the stage of a local circumscribed process, that is, has become inoperable. There are several

points which throw light on this question; chief among them is the discovery of metastasis in the rectum or ovary. Boas reported long ago metastasis in the rectum in eight cases of gastric cancer and two of cancer in the liver, and has since observed several more cases of the kind. Before this, he found the metastasis in the rectum in a number of cases, including one of cancer of the cecum, although at the time he did not appreciate the secondary character of the growth. With Strauss, Kelling, Schnitzler, Bensaude and others he calls attention to the importance of metastasis in the rectum as an important sign that the primary cancer is already inoperable. He estimates the frequency of this sign at 20 or 30 per cent.; the metastasis is generally in the anterior wall of the rectum, from 2 to 4 cm. above the prostate, and feels hard and knobby, generally "like a seal ring," but occasionally a diffuse soft infiltration or tumor as large as a pigeon's egg, but always free from ulceration and not growing into the mucosa, and thus without the usual funnel shape of rectal cancer. In his cases the metastasis in the rectum never caused any symptoms. Only a few women patients were in this group with rectal metastasis. In one case recently of cancer of the pylorus he warned against attempting an operation, solely on account of the discovery of metastasis in the rectum, and the growth proved altogether inoperable. Another important point is that surgeons must refrain from operating on these rectal metastases on the assumption of a primary growth. Great attention should also be paid to metastasis in the ovaries, especially as the secondary growth generally overshadows the primary; it proclaims that the primary tumor is inoperable even when other conditions seem to favor its radical removal. Boas further emphasizes the importance of dulness in the semilunar space, the "rib phenomenon." He has always found this dulness when a cancer of the fundus of the stomach had involved large extents of the organ and thus offered great technical difficulties to its removal, but this sign requires further study to determine its connection with inoperability. Another important sign of inoperable extension of the cancer in stomach or intestine, is venous thrombosis in the leg, showing the passage of cancer cells into the blood. Possibly the cachexia reaction may prove useful to determine the operability of cancers, as well as other serologic and biologic tests. The practical importance of this "late diagnosis" is that surgeons will not be called on to operate in the absolutely hopeless cases, which will render the surgical statistics much more favorable, sifting out the cases doomed to failure and reducing the number of the unsatisfactory exploratory laparotomies.

73. **Surgery of the Pancreas.**—Liek reports two cases of acute hemorrhagic pancreatitis; in the first the anemia, ileus and abnormally slow pulse should have suggested the trouble, but several operations were necessary before the actual condition was recognized. The slow pulse was probably the result of irritation of the vagus. In the second case a cyst developed after acute pancreatitis, its location suggesting hydrops of the gall-bladder. The patient died nearly three years later of diabetes and pulmonary tuberculosis, and necropsy revealed fibrous degeneration of the head of the pancreas, all that remained of the organ. The pancreatitis had not been recognized at the time, but the cyst had evidently developed on the basis of a circumscribed necrosis.

Medizinische Klinik, Berlin

December 10, VII, No. 50, pp. 1921-1962

80 Inflammation. (Ueber die Entzündung.) F. Marchand.
81 The Tonsils in Pathology. (Die Tonsillen als Eintrittspforte der Infektionskrankheiten.) G. Finder.
82 Gastric Symptoms with and as Equivalent for Migraine. (Magensymptome und Magenäquivalente bei Migräne.) A. Schmidt.
83 Dyspnea from Distention of the Stomach with Air or Gases. (Ueber Magenspannung—Pneumatose—und Dyspnoe.) J. Pal.
84 *Early Diagnosis of Tuberculosis of the Kidney. (Zur Frühdiagnose der Nierentuberkulose.) C. Hirsch.
85 Treatment of Warts. (Warzenbehandlung.) E. Saalfeld.
86 Mountain Sunlight. (Das Licht im Gebirge.) A. Gockel.

84. **Early Diagnosis of Tuberculosis of the Kidney.**—Hirsch says that the urine may be little if any modified even with an established tuberculous process in the kidney, but that albuminuria of dubious origin should always compel examination of the urine for tubercle bacilli. This may reveal a tuberculous process in its incipiency, even when the albuminuria seems to be merely of the orthostatic, cyclic or lordotic type.

Monatsschrift für Kinderheilkunde, Leipsic

X, No. 8, pp. 391-438

87 *Physiology of Lactation. (Bedarf es des physiologischen Reizes zur Anregung und Erhaltung der Laktation?) H. Helbich.
88 Biologic Differentiation of Proteins in Milk. (Die biologische Differenzierung der Milcheiweisskörper.) H. Kleinschmidt.
87 Participation of Urogenital Mucosa in Exudative Diathesis. (Beteiligung der Schleimhaut des Urogenital- Apparates am Symptomenkomplex der exsudativen Diathese.) F. Leist.
90 Research on the Stomach in Tetany in Children. (Magenuntersuchungen bei kindlicher Tetanie.) O. Thorspecken.
91 The Ash Content of the Muscles with Rachitis. (Ueber den Aschgehalt der Muskulatur bei Rachitischen.) E. Aschenheim and L. Kaumheimer.

87. **Physiology of Lactation.**—Helbich states that he has been able to keep the breasts secreting normally when the infants were not nursing. By regularly drawing the milk with a breast pump, lactation proceeded as under normal conditions. He gives the curves in eight of the ten cases reported, all confirming the efficacy of this artificial drawing of the milk in keeping the breasts secreting normally for weeks and months. No untoward by-effects were observed in any instance. The amount of milk increased from 800 to 1.350 gm. between the first and eleventh months in one typical case after the death of the child in the second month.

Münchener medizinische Wochenschrift

December 5, LVIII, No. 49, pp. 2593-2648

92 Physiologic Differences Between the Cortex and the Medulla of the Thymus. (Bedeutung der eosinophil-gekörnten Blutzellen im menschlichen Thymus.) H. Schridde.
93 Degeneracy of Germ Cells Under Influence of Alcohol. (Alkohol und Keimzellen—Blastophthorische Entartung.) A. Forel.
94 Dead Bacteria in Water in Salvarsan Solution Enhances Toxicity. (Der Einfluss von Mikroben auf die Wirkung des Salvarsan.) W. L. and N. K. Yakimoff.
95 *Thrombosis of Mesenteric Vessels. (Ueber Verschluss der Mesenterialarterien und dessen Folgen.) H. Merkel.
96 Pneumonia Due to the Diplococcus. (Ein klinischer und experimenteller Beitrag zur Kenntnis der durch den Friedländerschen Bazillus verursachten Pneumonie.) E. Toenniessen.
97 Cocain Mydriasis. (Zur Kokainmydriasis.) W. Lindemann.
98 Electric Method of Determining Mineral Content of Water. (Eine einfache Bestimmung des Mineralstoffgehalts und der Härte von Trink- und Nutzwässern.) K. Wunder.
99 Test for Left-Handedness. (Einfaches Verfahren zur Ermittlung von Linkshändern.) A. Brüning.
100 Operative Treatment of Astigmatism. (Beitrag zu operativen Behandlungen des regelmässigen Astigmatismus.) G. Levinsohn.
101 Improved Technic for Intravenous Infusion. W. Rübsamen.
102 *Recurrence After Gall-Stone Operations. (Wie können wir Rezidive nach Gallensteinoperationen vermeiden und einschranken?) H. Kehr.
103 Plan for International Union for Advancement of Science. (Die Internationale Union zur Förderung der Wissenschaft.) K. Pollack.

95. **Mesenteric Thrombosis.**—Merkel tabulates the details of six cases from the literature of isolated occlusion of the inferior mesenteric artery with more or less serious anatomic changes in the region of the large intestine involved. He then reports a case of thrombosis of both mesenteric arteries, with necropsy. There was complete paralysis of the segment of the bowel involved, which was distended with a bloody mucous fluid. Death occurred from absorption of toxic substances at this point before the intestinal walls yielded. Sclerosis in the mesenteric vessels had evidently been the cause of the abdominal pains and constipation of which the patient had complained for a few months. Merkel can find only three cases on record similar to this. The trouble has been defined by Schnitzler as angiosclerotic dysperistalsis. Merkel remarks that there are over 150 cases on record of thrombosis of the superior mesenteric artery, fatal in nearly every instance. The anastomoses of the inferior mesenteric artery prevent serious damage from its obstruction as a rule, but when the artery is already affected with sclerosis and the heart is already more or less insufficient, the outcome is invariably fatal.

102. **Recurrences After Gall-Stone Operations.**—Kehr reports an additional instructive case of supposed recurrence of gall-stones after an operation, supplementary to his article sum-

marized in The Journal, Jan. 6, p. 70. He removed a stone from the common bile duct of a man of 60, whose liver showed signs of cirrhosis. His health persisted good for more than three years when he lost appetite and jaundice developed so intense that operative treatment was required. There were no pains. The liver again showed cirrhosis; the bile duct was moderately enlarged, containing purulent bile and an impacted stone, the size of a hazelnut. Kehr naturally assumed either a recurrence or imperfect clearing out of the concrements at the previous operation, but the microscope revealed a suture thread in the center of the stone which had evidently developed in the common bile duct, its structure differing entirely from that of gall-bladder stones. The case teaches the necessity for microscopic examination before asserting that there is recurrence of gall-stones.

Wiener klinische Wochenschrift, Vienna

December 7, XXIV, No. 49, pp. 1691-1726

104 Some Problems in Heredity. (Nachruf auf Ludwig Kerschner. —Einige Betrachtungen über das Vererbungsproblem.) H. Rabl.
105 Sunlight as a Therapeutic Factor. (Zu Sonnenkuren.) W. Winternitz.
106 Reaction in Urine Under Atophan. (Ueber einige im Atophanharne auftretende charakteristische Reaktionen.) W. Skorezewski and I. Sohn.
107 Formation of Vagina Out of Small Intestine. (Ueber die Herstellung einer künstlichen Vagina aus dem Dünndarm.) J. Halban.
108 Insurance of Wage-Earners in Hungary. (Die ungarische Arbeiterversicherung im Jahre 1910.) H. Pach.

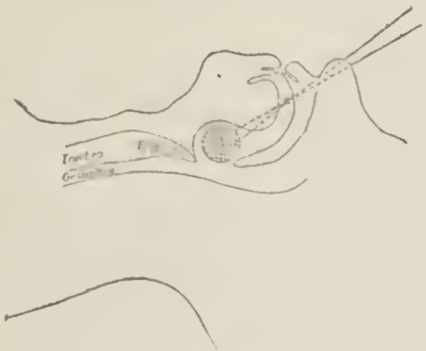
Zentralblatt für Chirurgie, Leipsic

December 16, XXXVIII, No. 50, pp. 1625-1656

109 *Treatment of Perforated Duodenal Ulcer. (Zur Behandlung des perforierten Duodenalgeschwürs.) A. Hofmann.
110 *Management of the Tongue During General Anesthesia. (Ein neuer Handgriff zur Narkose.) Gontermann.

109. **Treatment of Perforated Duodenal Ulcer.**—The tissues were so friable in the case reported by Hofmann that he found it impossible to suture the perforation. The duodenal ulcer had caused no symptoms until the perforation occurred in the night, and the operation followed twelve hours later. Bile and pancreatic juice had poured through the opening and there were already traces of fat necrosis. After the retrocolic posterior gastro-enterostomy had been made and the peritoneum cleaned out, the opening was plugged with a tampon and the liver pressed down on the ulcer and held in place by tampons introduced between the surface of the liver and the costal arch. The tampons were gradually removed later without any further trouble.

110. **Management of the Tongue in General Anesthesia.**—Gontermann avoids the disagreeable drawing out of the tongue and pulling the jaw forward, by a method of pushing the tongue out of the way with a round roller tampon, 3 or 4 cm. thick, introduced as the mouth is held open with a gag. The tampon is rolled along the surface of the tongue to its root, in front of the epiglottis. Applying pressure with the tampon on the tongue at its base and pressing toward the chin, the tongue is lifted forward and, as the epiglottis follows this movement of the tongue, the entrance to the larynx is left open. Greater force can be applied by leverage against the upper teeth. The gag is not required further when this tampon roll is once in place, and the fact that the tampon can be changed for a clean one at any time is a further advantage of the method. He has found it particularly useful and reliable during operations over an hour long, or when the head is held low.



Zentralblatt für Gynäkologie, Leipsic

December 16, XXXV, No. 50, pp. 1681-1704

111 *Sepsis from Bednar's Apthæ in New-Born Infants. (Sepsis bei Neugeborenen ausgehend von der Bednar'schen Aphthen.) G. Linzenmeier.
112 *Ligation of Uterine Cervix to Arrest Hemorrhage. (Ueber eine der Methoden zur Stillung von Gebärmutterblutungen.) S. S. Cholmogoroff.

111. **Sepsis from Aphthæ.**—Linzenmeier reports three cases in which fatal sepsis developed from Bednar's aphthæ, an affection of infants only a week old, consisting in the mild forms of two yellow, flattened, slightly elevated patches, one on either side of the median raphe of the palate, possibly ulcerating and suggesting diphtheria and accompanied by profuse seropurulent nasal secretions. In his cases the phlegmonous affection spread downward into the intestinal tract and the infants soon died. In the first child the process ran a more gradual course, the esophagus and entire stomach becoming coated with the false membrane, but in the others the course was more like that of acute erysipelas. In each case hemolytic streptococci were cultivated from the tissues or secretions and diphtheria was bacteriologically excluded. The palate lesions were the first signs of trouble and he is inclined to ascribe them to mechanical injury from the wiping out of the mouth of the new-born infant, the injury affecting especially predisposed points in the palate. As the mothers all harbored hemolytic streptococci, infection of the lesions from them set up a serious syndrome; if the germs in the mouth had been only the ordinary flora, the affection would probably have run a mild course under the typical clinical picture of Bednar's aphthæ. The cases teach the importance of refraining from touching the interior of the new-born child's mouth. Linzenmeier clears out the infant's mouth by bending the body forward on its abdomen, holding the infant by the back of its neck and its feet. Aspirated mucus is thus forced out of the infant's mouth and nose, and it is wiped off at once by the child's knee. He calls this the "handkerchief maneuver" and states that its repetition for two or three times generally clears out effectually the mouth and nose. The nostrils are cleared with the tracheal catheter and any mucus left can usually be easily aspirated through the nostrils, as infants breathe only through the nose as a rule and the mucus lodges in the throat or nose. It is only exceptionally necessary to introduce the catheter into the trachea for the purpose.

112. **Ligation of Cervix to Arrest Uterine Hemorrhage.**—After curetting out the last traces of an abortion there was profuse arterial hemorrhage rebellious to the usual measures. There seemed no other recourse but to remove the uterus or to clamp the uterine arteries according to Henkel. As the latter procedure is not always effectual, and as the patient was too young to lose the uterus, Cholmogoroff decided to close the external os with a row of ligatures, hoping thus to dam the stream of blood as the uterus early in a pregnancy is hard and does not distend easily. The hemorrhage ceased after he had thrown seven ligatures around the cervix, passing the sutures through it. The uterus did not increase in size afterward and the ligatures were removed the ninth day.

Gazzetta degli Ospedali e delle Cliniche, Milan

December 3, XXXII, No. 145, pp. 1531-1546

113 *Dangers and Inefficacy of Snake Venom in Treatment of Leprosy. (I veleni ofidici nella cura della lebbra.) E. Bertarelli.
114 Apparatus to Aid in Percussion of the Chest. (Nuovo apparecchio per lo studio della transmissione dei suoni attraverso il torace.) C. Molon.
115 *Direct Medication of Lungs and Pleura. (La terapia diretta nelle affezioni dell'apparato respiratorio.) V. d'Amico.

113. **Dangers of Snake Venom in Treatment of Leprosy.**—Bertarelli comments on the remarkable extent of the belief that the bite of a snake has a curative action in leprosy. It has been found for ages in the Orient, in South America, wherever leprosy is prevalent, but it has no scientific basis to date. He cites an experience reported by V. Brazil which occurred at Rio de Janeiro a few years ago. A certain man (named Machado) despairing of recovery from his leprosy and disregarding his physician's warning, deliberately exposed his hand to the bite of a rattlesnake. The toxic action of the venom induced intense congestion in the leprosy lesions, but otherwise the symptoms were those of ordinary rattlesnake bite, the man dying twenty-four hours afterward.

115. **Direct Medication of the Lungs.**—D'Amico reports twenty-two cases of pleurisy, pneumonia and pulmonary

tuberculosis or abscess in the lung, in which he injected a non-toxic disinfectant into or near the focus, testing the patient's tolerance by graduated doses. The principle followed was the same as in treatment for surgical tuberculosis elsewhere, and he says that the outcome was equally favorable. The disinfectant used was generally a mixture of 1 gm. iodoform; 2 gm. camphor; 5 gm. guaiacol; 30 drops of peppermint essence and 20 gm. olive oil. He injected 1 c.c. directly into the cavity, five times at three-day intervals, following with two injections into the apex in a case of tuberculous cavity and infiltration of the apex. By the end of two months the lesion had healed and after two more months the clinical cure was complete. In cases in which the aim was to transform a sluggish process to start a tendency to heal, he found Durante's iodo-iodid mixture preferable (1 part metallic iodin to 9 parts potassium iodid), but this proved too stimulating for pleurisy with effusion, aggravating the secretion. The injections never induced hemoptysis; he was careful to use a very narrow needle and have the patient rest at the time and afterward. The treatment was promptly successful in two cases of septic pneumonia, practically a phlegmon in the lung. He urges the adoption of direct medication as a routine measure.

Policlinico, Rome

December 3, XVIII, No. 49, pp. 1545-1576

116 Salvarsan in Syphilis of the Nervous System. (La cura del Salvarsan nella sifilide nervosa, e la reazione del Wassermann.) G. Mingazzini.

Riforma Medica, Naples

November 27, XXVII, No. 48, pp. 1317-1344

117 Arteriosclerosis in Relation to Syphilis. (L'arteriosclerosi nei suoi rapporti colla sifilide.) R. Campana.

118 Cancer of the Nipple. (Caso di emoangiosarcoma.) C. Licini.

119 Aleukemic Neoplastic Myelosarcomatosis. (Emosarcomatosi mielogena a tipo mieloblastico.) C. D. Martelli. Commenced in No. 47.

December 4, No. 49, pp. 1345-1372

120 *The Blood-Pressure in the Artery of the Retina. (La pressione del sangue nell'arteria retinica e suoi rapporti con la pressione nel circolo del Willis.) C. Rubino.

120. **Determination of Blood-Pressure by Measuring it in the Artery of the Retina.**—Rubino and Bajardi have each devised a simple means of determining the blood-pressure by the force necessary to arrest the circulation in the retina. The patient recognizes the ischemia at once by the inability to see with the eye in question. Rubino describes considerable experimental research on the anatomic conditions and the modifications of the blood-pressure when any of the arteries in the circle of Willis are compressed. The results all confirm the instructive findings when the sphygmometer is applied to the eye-ball with force sufficient to arrest the circulation in the retina; in 100 healthy adults the range was from 80 to 112 mm. mercury. He discusses in particular the relations between the blood-pressure in the artery of the retina and in the other arteries of the circle of Willis.

Hygiea, Stockholm

November, LXXIII, No. 11, pp. 1201-1307

121 *Disappearance of Malaria from Sweden. (Studier öfver frossan och de sannolikaste orsakerna till dess successiva aftagande och så godt som fullständiga upphörande i Sverige under sistförflutna halfsekel.) C. Flensburg.

122 *A Normal Following an Extra-Uterine Pregnancy. (Om hafvandeskap efter föregående extrauterin graviditet.) E. Essen-Möller.

123 *Operative Cases of Extra-Uterine Pregnancy. (Summarisk redogörelse för operativt behandlade fall af extrauterin-graviditet.) L. Lindquist.

124 Cyst in Third Ventricle. (Ett fall af ependymcysta i tredje hjärnventrikeln förorsakande hastig död.) H. Hanson-Breide.

121. **Malaria in Sweden.**—Flensburg relates that there are records showing 1,709 cases of chills and fever in Stockholm in 1827 and 2,582 cases in 1829, while when the figures for all of Sweden were recorded in 1871, there were 11,074 cases. Since that date the records show a constant drop; in 1890 there were only 1,288 cases throughout Sweden; in 1900, 289 and 45 in 1909. According to the months, the proportion of cases throughout Sweden, 1875 to 1908, with a total of 60,449 cases showed from 4 to 6 per cent. between August and February inclusive, the maximum being 13, 17 and 12 per cent. in April, May and June. He ascribes the practical disappearance of malaria from Sweden to general hygiene and drainage and cultivation of the soil, with possibly as an additional factor the cooler summers in the last century and a half. The weather bureau records show that the mean summer temperature is decidedly lower than it was fifty years ago.

122. **A Normal Following an Extra-Uterine Pregnancy.**—Essen-Möller reviews the experiences at Lund with fifty-six cases of extra-uterine pregnancy. Operative treatment was applied in all but one case and 46 per cent. of the thirty-nine patients traced to date have passed through another pregnancy since, five twice and two three times. Seventeen of these eighteen women bore normal children at term, which emphasizes the importance of leaving the adnexa on the other side intact. The best ultimate results were obtained when there had been no attempt to drain. He reviews further the experiences of others with conservative treatment, the testimony all being in favor of operative measures as leaving better conditions so that there is less danger of complications. In Brentano's compilation of ninety-one cases of non-operated extra-uterine pregnancy, there was spontaneous abortion later in twenty-two cases, proving fatal in eight. In the thirty-six following pregnancies in Essen-Möller's experience only two of the patients aborted.

123. **Operative Treatment of Extra-Uterine Pregnancy.**—Lindquist reports a following pregnancy in eleven of the forty cases of extra-uterine pregnancy at Göteborg since 1895. In two of these cases the following pregnancy was also tubal; in the others the pregnancy was quite normal. One patient succumbed to the hemorrhage from an unrecognized tubal abortion. She had not menstruated for two months and had complained of recurring pains in the left side but the temperature persisted normal. A resistance developed in this side, gradually spreading, and after two weeks a similar resistance developed in the right side. The anemia was so extreme that the patient succumbed five days after the operation.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

NEPHRITIS: AN EXPERIMENTAL AND CRITICAL STUDY OF ITS NATURE, CAUSE AND THE PRINCIPLES OF ITS RELIEF. By Martin H. Fischer. The 1911 Cartwright Prize Essay of the Association of the Alumni of the College of Physicians and Surgeons, Medical Department of Columbia University, New York. First Edition. Cloth. Price, $2.50. Pp. 201. New York: John Wiley & Sons, 1912.

FOURTH SCIENTIFIC REPORT ON THE INVESTIGATIONS OF THE IMPERIAL CANCER RESEARCH FUND. Under the direction of the Royal College of Physicians of London and the Royal College of Surgeons of England. By E. F. Bashford, General Superintendent of Research and Director of the Laboratory. Paper. Pp. 233. London: Taylor and Francis, Red Lion Court, Fleet Street, E. C., 1911.

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THE TECHNIC AND RESULTS OF DEEP INJECTIONS OF ALCOHOL FOR TRIFACIAL NEURALGIA

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CHICAGO

TECHNIC

The technic of deep injections of the fifth nerve is simplicity itself. A straight needle is introduced at the lower border of the zygoma and pushed in until the point penetrates the sheath of the branch involved; then alcohol is injected through the needle into the nerve. Sometimes the procedure itself is as easy as this sounds. But often there are difficulties, occasionally disappointments; hence the numerous details and hints which follow, based on the treatment of 150 patients between Aug. 1, 1906, and Sept. 1, 1911.[1]

The ophthalmic division may be disposed of in a few words. I do not approve of deep injections of this branch. The optic and the third, fourth and sixth nerves as well as large vascular channels are too near for perfect safety, and in my experience superficial injections of the supra-orbital have been uniformly successful. The patient being recumbent, with an ordinary (long) hypodermic needle the nerve is injected at the supra-orbital notch which, as a rule, is easily palpable. When the notch is not to be felt, the pain caused by firm pressure on the nerve may locate it. Occasionally both fail and then the operator must rely on topographic anatomy. Ordinarily, when the needle point strikes the nerve the patient feels a shoot of pain in the forehead, sometimes as high as the vertex. But this, too, may fail and then the only thing to do is to inject where the nerve is thought to be and examine for analgesia in its distribution. Nearly always the patient knows when the alcohol goes into the nerve by the sharp pain running upward, but the only reliable criterion of a successful injection is analgesia in the supra-orbital area. This appears at once, and until it does appear the nerve has not been injected. As a matter of practice, the nerve is very easily found and rarely should be missed.[2]

When possible the needle is made to follow backward along the nerve so that an appreciable extent of it may be injected. Naturally such an injection reaches fibers given off in the orbital roof and is more effective than one made at a single point. Ten to twenty minims are sufficient. Immediately on withdrawal of the needle, pressure is made over the *locus* of injection. This exsanguinates the tissues allowing the maximum effect of the alcohol and, what is not a matter of indifference to the patient, it controls oozing and thus prevents a black eye. What it does not prevent is swelling. This is always more or less marked. Sometimes it closes the eye for a couple of days and is always greater and lasts longer in cases previously treated by a cutting operation. The deeper the injection is made along the roof of the orbit, the greater the swelling. Aside from the tumefaction and occasional discoloration, which need no treatment, I have encountered no unpleasant effects from this injection except pruritus, of which two or three patients have complained. In only one case was it really troublesome, and in all it gradually subsided. One patient developed a triangular patch of alopecia at the hair margin, base forward. This also was only temporary. The solution used is that given in the deep injections.

The supratrochlear branch of the frontal nerve may have to be separately injected, as will be explained later. It may be reached at a point about midway between the inner canthus of the eye and the eyebrow on a line running upward and inward at an angle of about 45 degrees. This sounds indefinite, but I have never failed to get it.

For the superior and inferior maxillary divisions (hereinafter called middle and inferior), I use the practically unmodified method of Lévy and Baudouin.[3] To avoid repetition it seems best first to deal with the method as a whole and then give the technic pertaining to each branch.

The straight needle is 12 cm. long, 1.75 mm. thick, not acutely sharp, with a stylet the somewhat rounded end of which is flush with the needle-point when the stylet is pushed home. It is graduated in centimeters from the point up to five (six would be better), so that the operator at all times may know just how deep he has penetrated. The proximal end is fitted to receive the threadless nozzle of a syringe, preferably of glass and holding 2 c.c. or more (Fig. 1). In operation the stylet is slightly withdrawn until the needle has penetrated the skin and subcutaneous tissue, when it is pushed home thus providing a blunt point for the deeper course; this to avoid injury of vessels. The nerve having been reached, the stylet is removed, the filled syringe fitted to the needle and the solution injected. Some operators have discarded the stylet and use a sharper needle of smaller caliber. I have tried both and decidedly prefer the older instrument except in a very occasional case in which the tissues are so tough that penetration with the blunt instrument is difficult. I think there is no doubt that the sharper needle causes about as much pain and more oozing. I believe, too, that it is more apt to puncture a vessel of size. The middle meningeal artery, in passing through the foramen spinosum, is not far from the inferior maxillary where it is injected. A sharp slender needle might cut this artery. Being slender and flexible, it is not nearly so easy to manipulate; it is not easy to change its direction while *in situ*. The point, too, is appreciably beyond the opening and being acuminate is less apt to announce its impingement on the nerve. Even the heavier needle has been known to snap off at one of the centimeter marks. The solution I use is as follows:

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[1] This number includes a half dozen patients treated during my absence by my assistants, Drs. Peter Bassoe and Ralph C. Hamill, but does not include old cases reinjected after recurrence.

[2] Here as elsewhere I have come across the most astonishing bungling; even cutting operations on this branch, in which the nerve had been cleanly missed though presumably excised.

[3] Presse méd., April 17, 1906; and also Lévy: Essai sur les Nevralgies Faciales, Paris, 1906.

	Gm. or c.c.		
Cocain Muriat..................	|1		gr. ii
Alcohol	13|5	or	ʒ iiiss
Aq. Dest. q. s. ad..............	15|5		℥ ss

I have tried leaving out the cocain, but think the injections rather less painful with it in. I do not use pure alcohol because this is strong enough to stop the pain, and the stronger solution hardens the tissues more, making reinjections more difficult and painful. Generally about 2 c.c. are used. If the operator feels satisfied that the needle is in the nerve (he never *knows* it), less is enough. If I am injecting about at several points (that is, searching for the nerve) I sometimes use 3 c.c., rarely more.

I very much prefer not to use an anesthetic (and have done so in only four cases) because the conscious patient is of great assistance. Impingement of the needle on the nerve generally is announced by a sharp, rarely severe, pain somewhere in the area of its distribution. (Sometimes it is only a "pins and needles" feeling.) When the operator thinks he has gone deep enough and must be near the nerve, but has not caused this eccentric sensation, by pressing the point of the needle upward or downward, backward or forward, he may start such a pain or paresthesia, thus indicating the location of the nerve. The needle is then withdrawn a little, the direction slightly changed toward the indicated point and another trial made to put the needle into the nerve-sheath. Furthermore, examination for analgesia before termination of the operation, as indicated below, cannot be carried out if the patient be anesthetized. Right here I may as well emphasize, what will appear later, that no attempt should be made to reach the nerve by one vigorous shove. The procedure is rather that of feeling one's way, on the lookout for bony points and eccentric pain, i. e., pain in the peripheral distribution of the nerve.

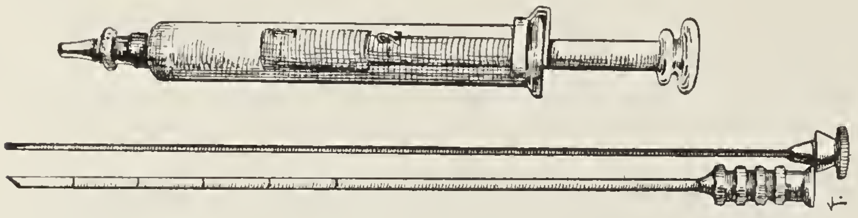
Fig. 1.—Syringe, stylet and needle used for alcohol injections in neuralgia.

If the needle has attained the proper depth in what seems to be the proper direction and still no eccentric pain has been produced, the stylet may be withdrawn and a little alcohol injected. It should be sent in with a little force or spurt. Odd as it may seem, the needle itself sometimes does not cause pain when it strikes the nerve, but this spurt of alcohol nearly always does. Or it will cause a tingling sensation in the area of distribution. In either case the injection is in or near the nerve. Supposing that thus far all results are negative, the syringe is detached, the stylet replaced and the needle pushed still further in or it is partly withdrawn and a slightly different direction tried. When the needle is thus partly withdrawn to change its direction or wholly withdrawn after finishing the injection, it should be done slowly and with the stylet quite removed. If, then, there be any deep oozing it will show through the needle, when the stylet is replaced, the needle pushed back to the point bleeding, or just beyond it, and left there until the hemorrhage stops. Occasionally the oozing point is in or just beneath the skin, in which case the needle is withdrawn and the hemorrhage controlled by pressure. If the operator has reason to believe that he has reached the nerve but blood follows withdrawal of the stylet, he may make the injection just the same (though it is apt to be less effective), replace the stylet and wait for the oozing to stop.

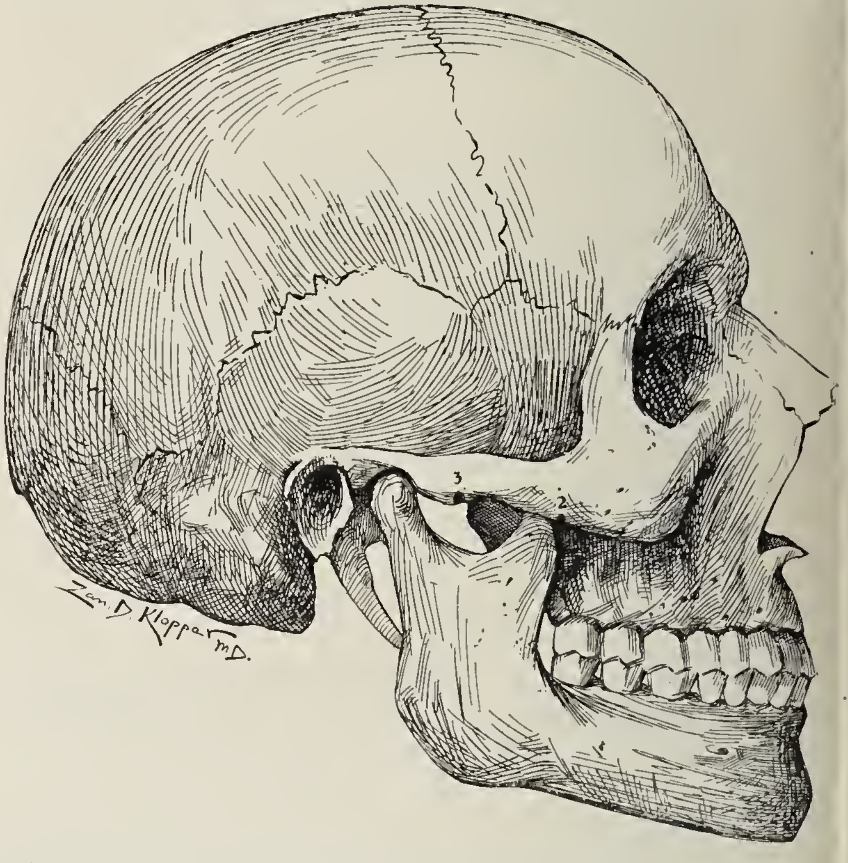

Fig. 2.—An average skull. Dots 2 and 3 indicate points of entrance for injection of middle and inferior divisions, respectively.

In any event, the alcohol having been introduced, it is a good plan to leave the needle in place while an assistant examines for analgesia. If deep pin-pricks in the area supplied by the branch in question cause no pain at all, the injection has been successful. If the numbing be only partial or limited to only part of the area, the injection is partially successful and the operator should try another point or two in the immediate vicinity. If there be no sensory blunting at all, the injection is a failure and the operator must then or later try other points. Occasionally the analgesia appears a few minutes after termination of the operation. With appearance of analgesia the pain ceases. But this means that the alcohol has been put near, not in, the nerve and such delayed analgesia is always transient and the relief from pain of short duration. Still, such a partial success may serve as guide for the next injection. The injection having been made and the needle withdrawn, the point of puncture is dried and covered with a drop of collodion, completing the operation. I like to have the patient remain recumbent for fifteen or twenty minutes (more if there has been oozing), but do not always insist on it. Many patients wish to get up at once.

How many injections may be made at one sitting, supposing more than one branch to be affected? Formerly I made but one, allowing a couple of days between. Now I frequently do three: a deep one for middle and inferior respectively, a superficial one for supraorbital. The patient decides. If he wishes to get through as soon as possible, I do them all at once.

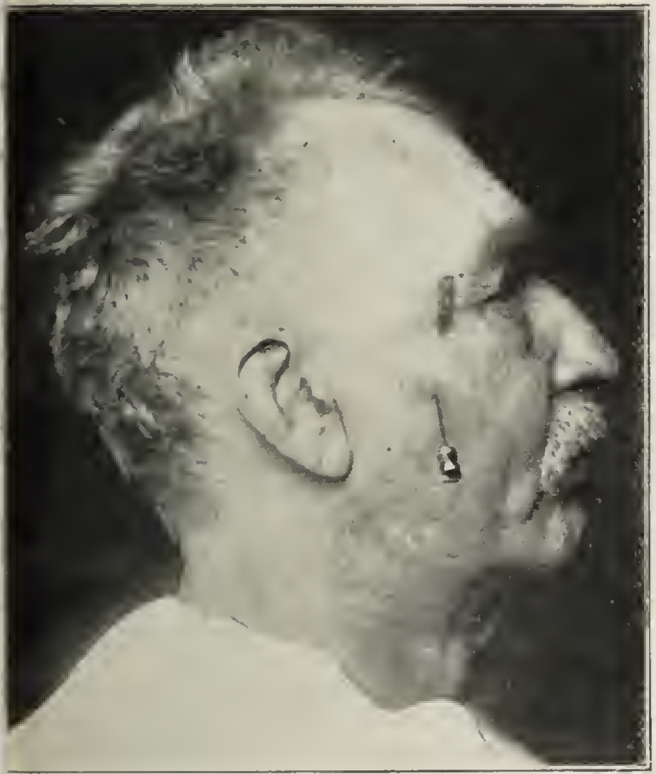

Fig. 3.—Needle placed for injection of middle branch. Ink-mark above indicates orbital process of malar bone. Small dot a short distance posterior to needle and at slightly higher level indicates where needle was inserted for injection of inferior branch.

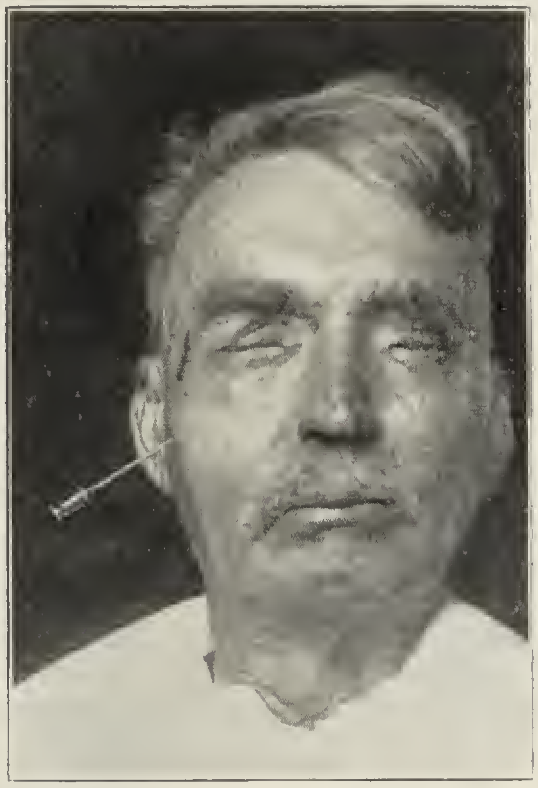

Fig. 4.—Same as Figure 3; front view.

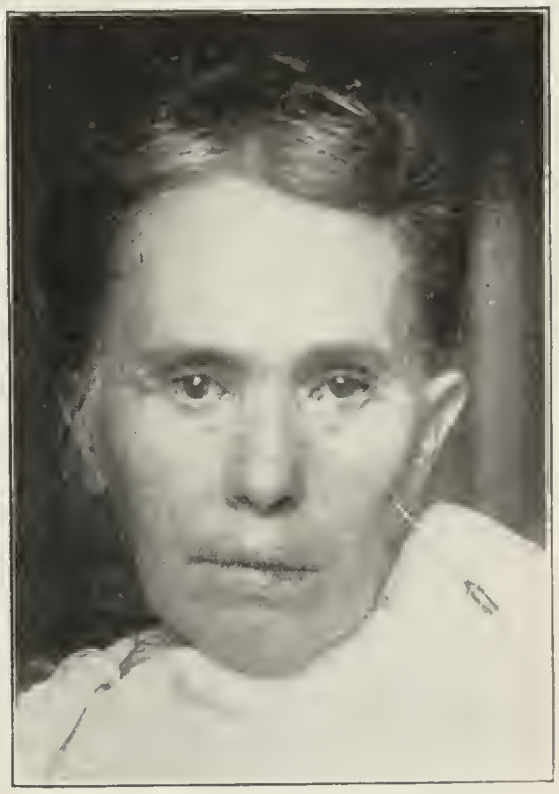

Fig. 5.—Needle placed for injection of middle branch. Note that needle is lower than in Figure 4 and has greater upward inclination.

How soon may injection for a given branch be repeated? I like to wait for two or three days, but often do repeat the following day; sometimes I even give a third injection one day after the second. But more than this should not be done. Frequently repeated injections not only cause swelling and discomfort, but so harden the tissues as to make the operation more difficult and uncertain. In one case, sent to me from a distance, in which a lot of injections had been made (fruitlessly) within a short time and in which I gave one injection against my better judgment at the earnest solicitation of the patient, when I injected the alcohol it returned through two of the recently made punctures. That is, the tissues were so sclerosed that a canal made by a needle, 1.75 mm. thick, remained patulous for two days.

In relation to this treatment, one clinical feature of tic douloureux is important. In practically every case the jabs or paroxysms of pain are started by commonplace sensory impressions such as washing the face, eating, talking, even ordinary nictitation. Now, sometimes such a sensory stimulus of one branch causes pain not in that branch but in an adjoining one. The supra-orbital is especially liable to these secondary or referred pains. For instance, the act of swallowing may cause a shoot of pain above the eye. Rubbing the chin may start a pain felt in the wing of the nose. In all such cases, the nerve supplying what I venture to call the dolor-genetic zone must be treated. A physician familiar with this treatment brought to me a patient for injection of the middle branch, which he had operated on a number of times with only partial relief. He really had injected the middle branch as well as it could be done, but I found that, though there was no pain in the inferior maxillary area, rubbing the skin in this area caused the middle branch pain; injection of the lower branch at once stopped it. Occasionally the dolor-genetic zone is found on the upper part of the side of the nose, and injection of supra-orbital and infra-orbital nerves will not suffice. The supratrochlear, which supplies this area, must also be injected. I suspect that it may have been the effect of these unnoticed dolor-genetic zones which led Lévy and Baudouin to advise injection of both middle and inferior branches, even though only one was affected. This I have not found in the least necessary, provided the painless area be not dolor-genetic. Needless to say, a branch not involved at the time of treatment may later become so. But I do not believe in prophylactic injections.

INJECTION OF THE SUPERIOR MAXILLARY NERVE

To inject this nerve, a point of entrance is selected at the lower border of the zygoma, 0.5 cm. behind a perpendicular let fall from the posterior edge of the orbital process of the malar bone (Fig. 2). This edge is easily felt. The needle is directed straight in with an inclination upward; that is, perpendicular to an anteroposterior line, but so inclined upward that the point at a depth of 5 cm. shall be on a level with the lower end of the nasal bones or slightly lower than the posterior pole of the orbit (Figs. 3, 4 and 5). At this depth and angle the point of the needle is supposed to engage the nerve as it emerges from the foramen rotundum into the sphenomaxillary fossa. But, unfortunately, the internal features of human kind are about as variable as the external and some of the variations affecting this operation must be enumerated.

The line of the zygomatic arch is exceedingly inconstant. Sometimes it is high, sometimes low and occasionally the anterior segment dips at an angle of 45 degrees or more. These factors influence the upward inclination of the needle. The width of the bony process (orbital) varies from about 0.5 cm. to about 2.0 cm. This affects the position of the perpendicular let fall from the bony edge. But probably the most frequent disconcerting variation is found in the coronoid process of the lower jaw. Quite often it is found so far forward that penetration at the point of selection is impossible (Figs. 6 and 7). Ordinarily, by palpation this can be determined beforehand and the needle is then inserted far enough forward to avoid the process. But this shift may involve new difficulties. In the first place, it puts the point of entrance lower (sometimes much lower; Figs. 8 and 3) as well as more forward, which means quite a different angle for the needle and an added depth not so easy to estimate. But the most serious difficulty this shift may present is that the needle from this starting-point directed toward the foramen rotundum may impinge on the superior maxilla. And here is another variation. In some persons the posterior boss or curve of the body of the upper jaw, above the alveolar process, is no curve at all, but is quite flat. In such cases a needle can easily be passed from well forward to the foramen rotundum. In other individuals this posterior surface is very convex and projects well backward (Fig. 9). Even the lateral bulge may be pronounced. If then the superior maxilla be avoided, the needle is so deflected outward (from the median line) that it cannot possibly reach the nerve at the foramen rotundum or at any other point. The alternative is to go behind the coronoid process, and sometimes this can be done at a point only slightly back of the point of selection. But the coronoid process may be very broad, so that to go behind it starts the needle so far back that it is blocked off by the root of the pterygoid plate or of the wing of the sphenoid before it can reach the nerve. When the nerve can be reached neither from in front of, nor behind, the coronoid, the operator must perforce try above the zygoma, and in this manner I have succeeded several times. Indeed, a surgical friend at one time chose this as the route of selection, and it is advised by Offerhaus, but it is not the best.

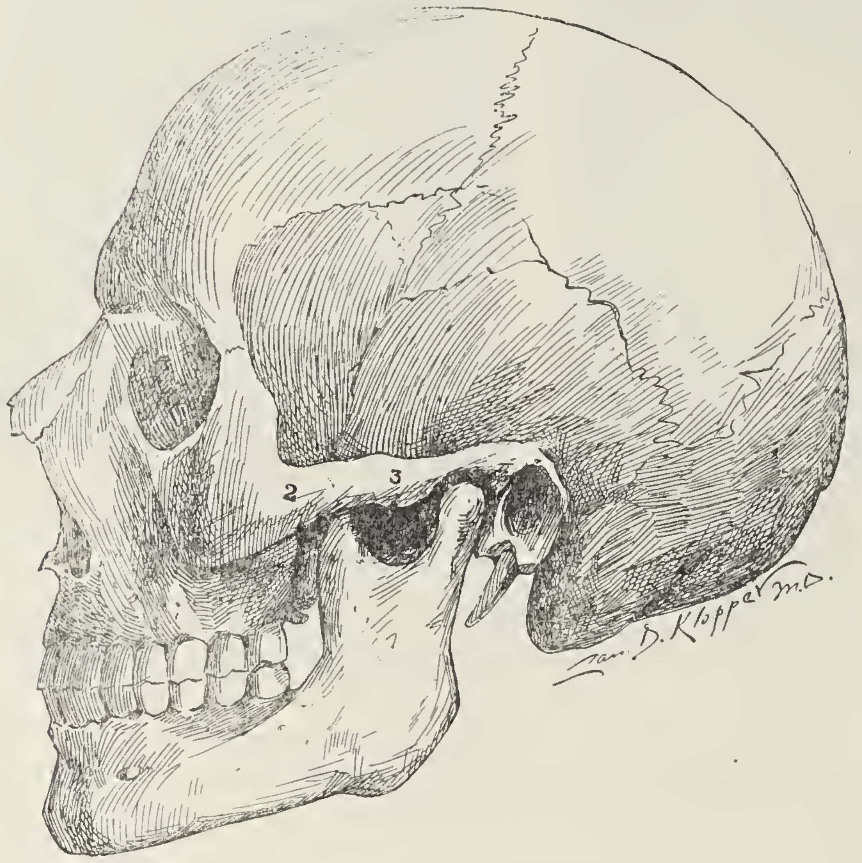

Fig. 6.—Dots 2 and 3 indicate same as in Figure 2. Coronoid process well back; pterygomaxillary fissure easily accessible.

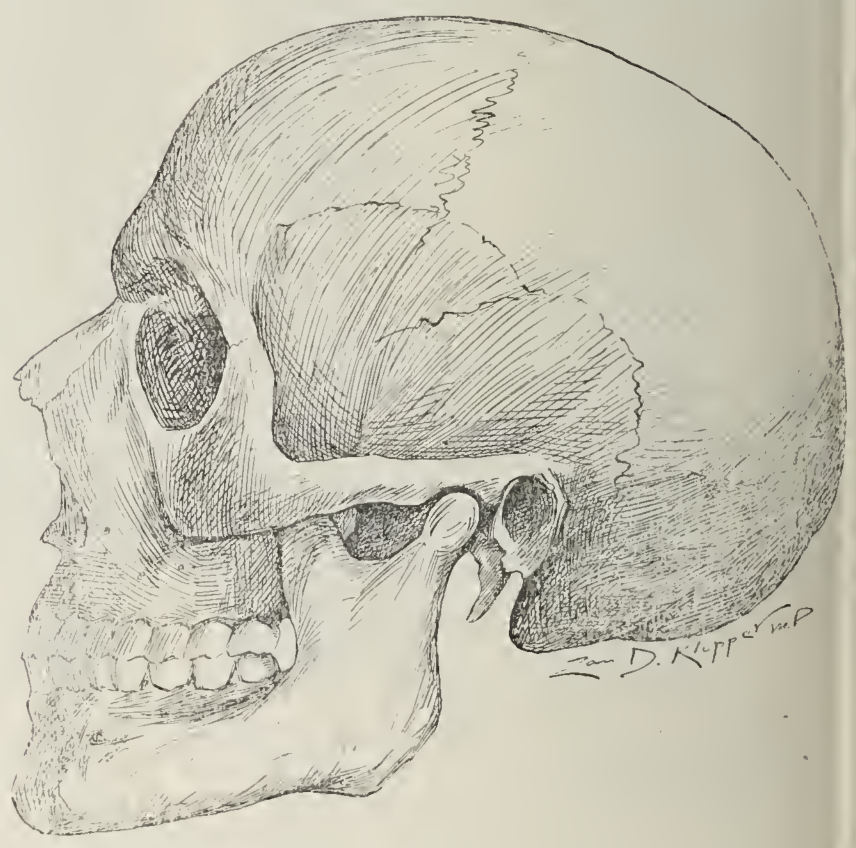

Fig. 7.—Coronoid process further forward than in Figure 6. Fissure not visible. In some patients the coronoid process is still further forward than indicated here.

Assuming that the coronoid process has been passed, the variation of depth may next be considered. Lévy and Baudouin said that the nerve would be found at 5 cm. I have found it at from 4 cm. to 6 cm. Since November, 1908, I have taken the interzygomatic diameter of the head in every case (over eighty in all) and have found this of some assistance. Analysis of these cases shows that when the interzygomatic diameter is 5 inches the middle branch will be found at about 5 cm. When the interzygomatic is 4¾ inches the nerve will be reached at rather less than 5 cm. When the interzygomatic is 5½ inches the depth will be 5.25 cm., and with a diameter of 5¾ inches or more the depth will be about 5.5 cm.[4] But these relations are only approximate; variations are frequent and not inconsiderable. Early in 1910 Offerhaus, an assistant in the surgical clinic of the University of Groningen, published the results of some investigations on this subject.[5] He found the foramen rotundum to be in the antero-posterior line of the inner surface of the molar teeth. Hence, to determine the depth of this foramen he takes half of the difference between the interdental distance and the interzygomatic distance taken at the point of injection. I procured the instruments of Offerhaus and, since Oct. 14, 1910, I have tried them in every case, but have found the scheme of but little value. In the first place, but few of these patients have any upper molars left and an estimation of where their inner surfaces formerly were must be pretty vague. Second, variations in dental arch and angle of teeth are great. Generally, I have found the Offerhaus figures to be low; i. e., the nerve was deeper than estimated.

In some skulls the pterygomaxillary fissure and the sphenomaxillary fossa are mere chinks, so narrow that the needle goes in with great difficulty or not at all. In such a case the operator must simply keep on trying at different angles until he finds the one which will allow the needle to slip into the nerve—or until he gives up in disgust or the patient objects to further attempts. That is to say, I believe there *are* cases in which this operation cannot be done because of bony impediments. On the other hand, one must not be too quickly discouraged. In several instances, after success was almost despaired of, the needle has slipped by the obstruction straight to the nerve—a delightful surprise for both physician and patient. And I hasten to add that the cases in which injection is impossible are very rare indeed. But one of the most disappointing experiences is to make the injection without a bit of trouble and then, at a later date, when further treatment is needed, be able to reach the nerve only after repeated trials.

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[4] When I began to take these measurements it happened to be convenient to take them in inches. The needle is graduated in centimeters. Hence the mixtures of two systems of linear measure.

[5] Offerhaus: Arch für klin. Chir., xcii, No. 1; Deutsch. med. Wchnschr., 1910, No. 33.

In operating on the middle branch two things in particular are to be avoided: first, the orbit; second, the sixth nerve. The first error is committed by going too far forward. Careful attention to the direction of the needle will guard against this. The second is the result of going too deep and I think it is not always to be avoided. But it need not amount to much. The alcohol is injected a little at a time and if, after every few minims, the patient is asked to look outward (that is, upward as he lies on the side—abduction or outward rotation), the operator will at once detect any weakness of the external rectus and stop injecting. The paresis will then be insignificant and transient: a few minutes to a few days. Since adopting this precaution I have had no trouble with the sixth nerve; that is, in the last eighty-one cases. Inspection of a skull will show, too, that it would not be difficult for a careless operator to pass the needle through the spheno-palatine foramen into the nasopharynx—an accident that might be uncomfortable but not dangerous. If the needle be inclined upward this could not happen. In practice I have found it a good plan to direct the needle a little more backward than I expect the foramen to be *so that the point strikes the external pterygoid plate*. From this point it is gradually worked forward until it slips by the anterior border of the process. This settles the anterior posterior position of the foramen, and, a little further in, the point will find the nerve, provided the upper slant of the needle is right.

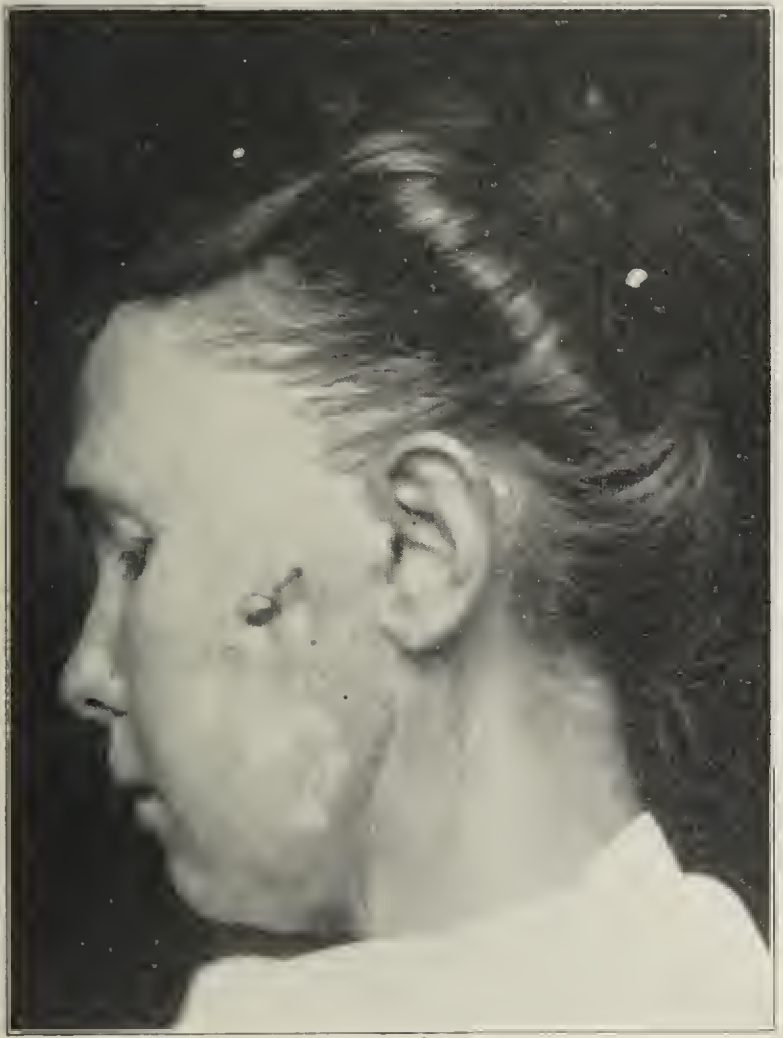

Fig. 8.—Needle placed for injection of inferior maxillary division. The small dot anterior to and below needle at angle of more than 45 degrees indicates point from which middle branch was injected. Note that difference in level is much greater than in Figure 3. The white scars are from former abscesses.

When it is found impossible to reach the nerve by the deep route, the infra-orbital can readily be injected at the infra-orbital foramen. This stops the pain unless twigs given off further back are involved. Even though there may be no pain in these little branches, they may be gain-genetic, as explained before.

For this superficial injection an ordinary (long) hypodermic needle is used (Fig. 10). To find the foramen is not always easy. The opening into the canal is nearly always oblique, generally upward and outward, never at just the same angle. It may be impossible to introduce the needle to any length along the nerve, but this should be attempted. Fifteen or twenty minims of the solution are plenty if accurately placed. On withdrawal of the needle, firm pressure should be made to minimize swelling and prevent ecchymosis. Relief from these superficial injections is shorter-lived than from the deep ones, but they are very useful.

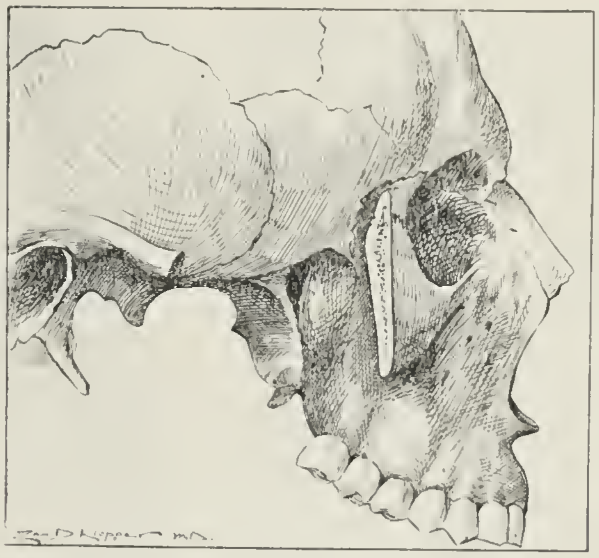

Fig. 9.—Shows rounded superior maxilla. Here the pterygo-maxillary fissure is wide. In some patients it is very narrow.

INJECTION OF THE INFERIOR MAXILLARY NERVE

For this division the Lévy and Baudouin point of entrance is at the lower border of the zygoma, 2.5 cm. in front of the anterior root of the zygoma (Figs. 2 and 6), a descending process which forms part of the anterior wall of the auditory canal and the posterior limit of the glenoid fossa. It can always be felt. The needle is directed somewhat backward and slightly upward and at 4 cm. should reach the nerve (Figs. 8, 11, 12, 13 and 14). Offerhaus[5] selects a point just in front of the preglenoid tubercle, which constitutes the anterior limit of the glenoid fossa, and directs the needle at right angles to the anterior posterior plane. As a rule, either will serve. The directions of Lévy and Baudouin certainly are rather vague as a guide to a thread of a nerve nearly 2 inches below the surface. The rule of Offerhaus is more definite—but it does not work with any uniformity. Here, as elsewhere, the conformation varies greatly. In dolichocephalic individuals, or those with a long zygoma, the point of Lévy and Baudouin does very well. In the brachycephalic, or those with a short zygoma, this point is too far forward. On the whole, the point of Offerhaus is better, but to go in very close to the jaw-joint gives the patient unnecessary subsequent discomfort. Occasionally the sigmoid notch of the lower jaw is so shallow that the ramus of the jaw almost reaches the zygoma and the operator must go in where he can. In two or three cases I could not get the needle by until the patient opened the mouth. In practice I have come to vary the point of entrance from 1.5 to 2.5 cm. anterior to the bony ridge taken as a landmark, or from a point immediately in front of the tubercle to one a centimeter farther forward.

A really valuable landmark is the external pterygoid plate. The foramen ovale, at least in the vast majority of cases, is directly back of this and at about the same depth. Hence I aim to strike this plate close to its posterior edge and then work backward until the needle slips by it. Then I have every reason to believe that the point of the needle is just in front of the nerve and at about the proper depth. But here, as in the case of the second division, it is well to make beforehand some estimate of the depth of the nerve. From what has already been said it is obvious that the 4 cm. of Lévy and Baudouin hold good in only a certain proportion of cases. Offerhaus[5] says that the foramen ovale is on a line with the external surface of the alveolar process of the upper jaw in the molar region. Hence, he deducts this interalveolar distance from the "intertubercular" (zygomatic) diameter and divides by two—which should give the depth of the nerve. It does not work out very well. Generally the nerve is somewhat deeper than the figures indicate. Very rarely it is less than 4 cm.; frequently more. Analysis of my measurements in eighty cases indicates the following: When the interzygomatic diameter is 5 inches the nerve will be found at 4 to 4.25 cm. When the interzygomatic is 5½ inches the nerve is apt to be at over 4.5 cm. But these are only approximations. In one case, with an interzygomatic of 5¾ inches, I found the nerve at 5.5 cm. and in another, with an interzygomatic of 6 inches, the nerve was found also at 5.5 cm. Indeed, if it had not been for the plan of striking the ptergyoid plate as a preliminary, I should scarcely have had the courage to go so deep. In one of my earlier cases I made a most successful injection because, at the moment, I confused the depth of the inferior branch with that of the middle one and went to 5 cm. instead of stopping at 4. In one case I was forced to the conclusion that the foramen lay behind the pterygoid plate and could not be reached. In some cases the nerve is far back, quite a distance from the posterior edge of the pterygoid plate, necessitating a strong inclination of the needle backward.

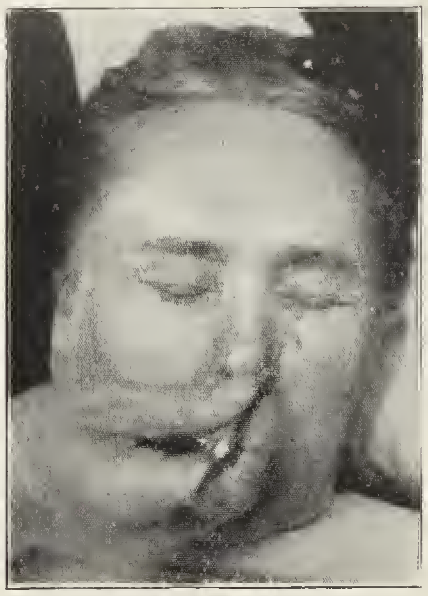

Fig. 10.—Superficial injection of infra-orbital nerve.

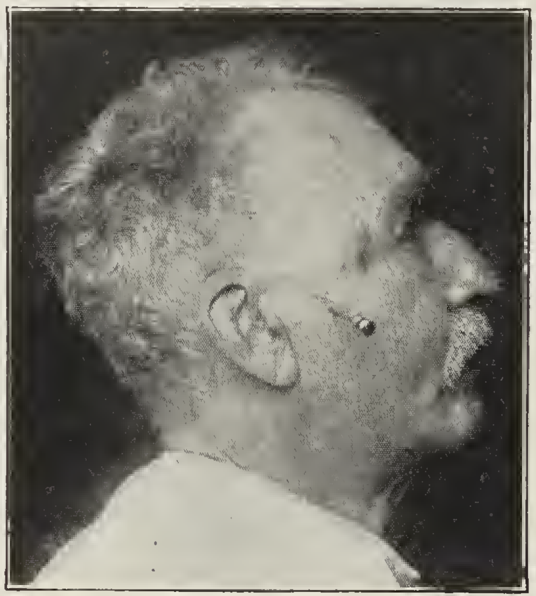

Fig. 11.—Needle placed for injection of inferior branch.

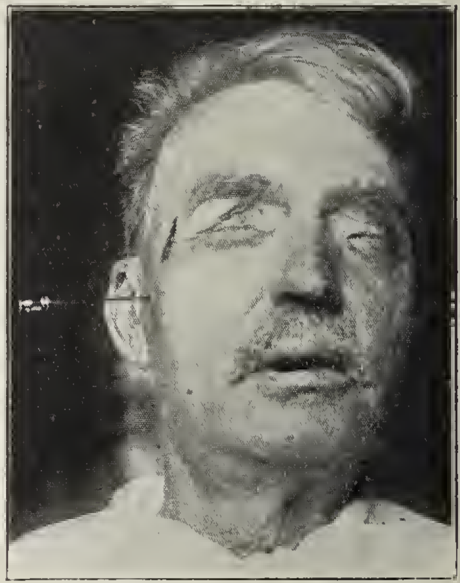

Fig. 12.—Same as Figure 11; front view.

In a former paper[6] I advised hugging the base so as to pierce the nerve just at its exit from the foramen. In many cases this is not a good plan because the under surface of some skulls is very uneven and the irregular and unnamed processes serve to confuse the operator: he feels bone everywhere. A little lower the nerve is more easily found.

When the needle reaches the nerve the patient, as a rule, feels a pain in the lower lip or jaw or tongue, but occasionally this pain is wanting and occasionally there is simply a pain, the patient does not know where. If the needle goes too far back, the patient is apt to complain of pain in the ear. That is, the operator must then look for the nerve more anteriorly. Although, as just noted, it may be necessary to go as deep as 5 cm., this should be ventured only when measurements indicate unusual depth and the needle should first be directed enough forward to strike the pterygoid plate. To go too deep *might* mean disaster.

RESULTS

Concerning any proposed method of treatment the following are pertinent questions. Does it cure? Failing of cure, is it yet effective? Is it dangerous? Has it disagreeable or uncomfortable by-products? Is it difficult? Is it practicable? To these questions concerning the method under discussion I submit the following answers; perhaps I should say opinions.

Does it Cure?—It does not. So far as I know, nothing does except a perfectly executed Gasserian operation (or section of the sensory root?).

Is it Effective?—It is. The moment alcohol is injected into the affected trunk or trunks the pain ceases and cannot be started. The patient who a few moments before could not eat, talk, wash the face, etc., without paroxysms of excruciating agony, may do all of these things with impunity. In the whole field of therapeutics I know of nothing more striking. Many dramatic examples could be given. One or two will suffice.

Case 1.—A man of 51 had suffered for ten years and had had two neurectomies. The paroxysms were of great severity and were started by even lightest touches on the face. He was weak and thin from lack of food, his wife feeding him small quantities of milk with a teaspoon carefully introduced on the good side. His face was incrusted with filth, the accumulation of months. In a few seconds after completion of the injection he was perfectly at ease.[7] I could rub and scour his face without causing a trace of pain and he drank a glass of ice-water without the least discomfort. He was relieved for eleven months, then he was again injected, again with relief.

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[6] Patrick, Hugh T.: The Journal A. M. A., Nov. 9, 1907, p. 1567.

Case 2.—A poorly nourished, nervous, highly sensitive woman of 62 years, for four years had been unable to touch the face or eat without starting severe pain. Immediately after the injection I bunched up my handkerchief with the idea of giving her face a rub to test the result. She saw my intent, yelled with terror and tried to dodge, but when the rub caused no pain at all her astonishment was ludicrous.

But will the relief continue long enough to be worth while? Naturally, this will be a matter of opinion. My own opinion is expressed further along. A good injection will give relief for from six months to four years. By a good injection is meant one which produces pronounced analgesia (lasting more than two or three days) and which makes it impossible to start the pain by the ordinary sensory stimuli. Whether the relief shall be for six months or four years will depend on the accuracy with which the injection is made and on the virulence of the case. Just why some cases are more rebellious than others I do not know. That they are, I think I do know. I suspect that the more intractable ones are those in which all the twigs and ramifications of the nerve are involved, thus affording more dolor-genetic zones.

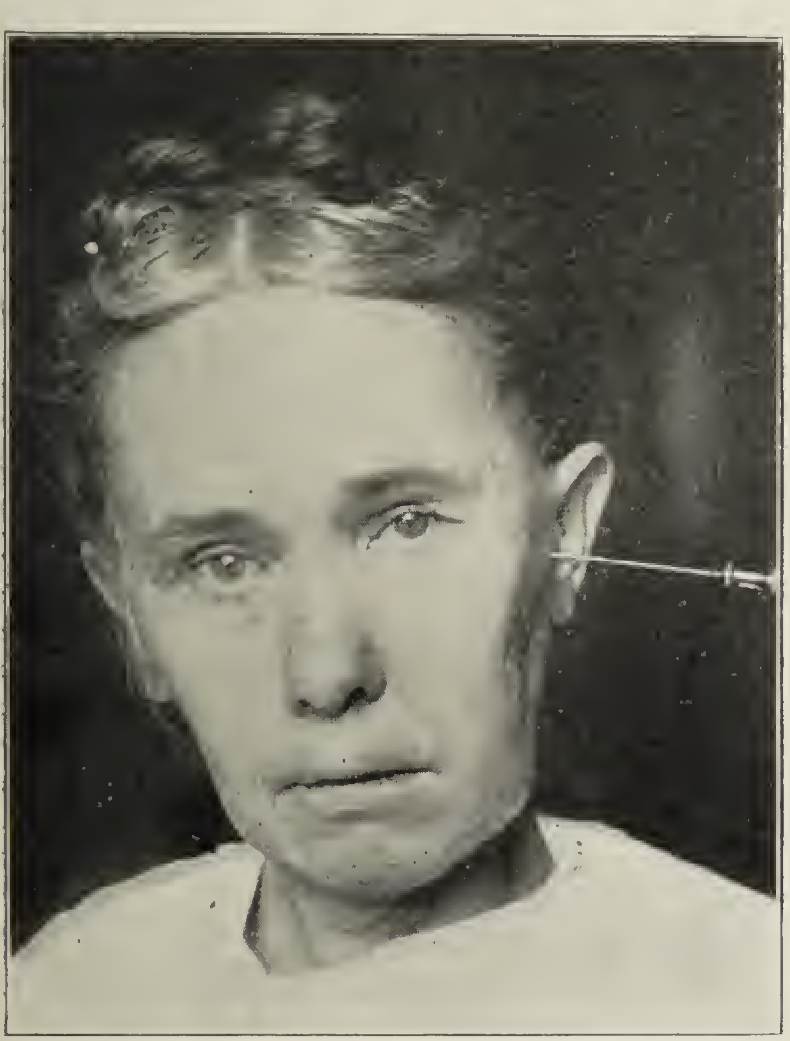

Fig. 13.—Needle placed for injection of inferior branch.

Perhaps this is the best place to speak of cases of recurrence after previous cutting operations and previous alcohol injections. I have treated patients for recurrence after all the customary operations for this disease except the Gasserian operation. And injection of these patients seems to be just as successful as of the non-operated ones. The same is true of recurrence after the injection treatment. I have often wondered whether in the course of years repeated injections of alcohol would not finally so harden the tissues as to stop the treatment or even aggravate the neuralgia. Up to date I have not encountered this trouble. The sclerosis obviously caused by the alcohol gradually disappears.

Is it Dangerous?—It is not. I have never heard of a fatality. I know of one case in which a surgeon evidently got his needle into the foramen rotundum and introduced alcohol into the cranial cavity. Obviously this would cause edema and pressure. The patient was unconscious for several hours and apparently in bad condition for twenty-four hours, but recovered with complete relief from his neuralgia.

Has it Disagreeable or Uncomfortable By-Products?—It has or at least may have. In two cases I have caused a considerable paralysis of the sixth nerve and a keratitis. The first patient completely recovered in about three months. The second passed from observation and I can get no report.[8] As I have already explained, I think this complication can be avoided. In the last eighty-one cases I have had no such trouble, indeed no complication of any sort. In one case (No. 50) there was some necrosis of soft and hard palate, which lesions healed kindly. The patient was 76 years old with advanced atheroma and senile myocarditis. The injection caused a rather free deep oozing with formation of a hematoma, and evidently the pressure was too much for the patient's bad vessels and poor heart. The neuralgia was relieved. A few other times injection of the middle branch has caused a distinct hematoma, followed by ecchymosis as low as the chin or even on the neck. Resolution was always rapid and perfect. I have not observed this complication since adoption of the plan of watching for oozing through the needle and, when present, leaving needle and stylet *in situ* until it stops.

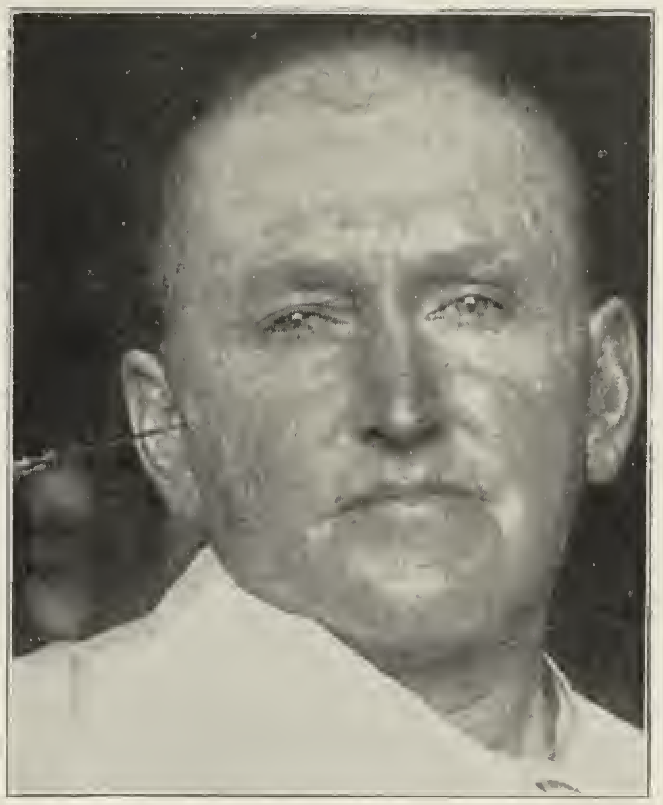

Fig. 14.—Needle placed for injection of inferior branch.

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[7] In this case an anesthetic was indispensable. Even palpation of the face was impossible without it.

[8] Case reported in The Journal A. M. A., Dec. 11, 1909, p. 1987. Case 69.

Following injection of the inferior branch there may be some stiffness of the temporomaxillary joint lasting for several days and in a few cases the same injection caused some weakness of the pterygoid muscles, not disabling and not of long duration.

In patients who have had the middle branch cut or avulsed, injection of this branch is apt to cause swelling. But sometimes, in a patient who has not been operated on, the swelling is quite perceptible. In one case (No. 6) in which I inadvertently put the injection into the orbit, there was produced marked edema of eyelids and conjuctiva, but no other ill effects.

I have never had a case of infection.[9] As already noted, an anesthetic is not used. A hospital is unnecessary. Nearly all of my operations have been done in the office. As a rule the pain is inconsiderable. Occasionally it is severe for an instant when the needle strikes the nerve. Queerly enough, the alcohol itself is painless. After the injection there is no burning or throbbing such as one might expect from 2 c.c. of strong alcohol placed in the tissues. When considerable force is used in making the injection, the patient generally feels some headache. Even without force headache may be caused. It rarely lasts more than an hour or two.

Naturally, some patients are more nervous than others. Very rarely a patient is rather upset and trembly for half an hour or so afterward; he has what one might call emotional shock. But real shock I have not seen. One patient became nauseated and vomited, but was well within thirty minutes.[10]

Is it Difficult?—It is not. But it is very uncertain. Herein lies the greatest drawback to the operation. Any physician can be clean. Any physician can insert the needle in the proper place and project it in the general direction of the nerve. But will he strike it? He does not know. No operator can be sure that any given attempt will be successful. On the contrary, he knows beforehand that a good many of his efforts will result in clean misses. And a good many will be only partially successful.

To put this uncertainty in figures is impossible. Statistics are notoriously misleading, and this particular point does not well lend itself to statistical elucidation. But, in my opinion, the uncertainty of the operation has hitherto been touched on rather lightly and vaguely. Consequently I shall try to state it as definitely as may be. I have made about 500 deep injections. In the case of the middle branch about 25 per cent. have been misses, about 42 per cent. partially successful and 33 per cent. good. Of those for the inferior branch about 27 per cent. have been misses, 45 per cent. partial successes and 28 per cent. good. In only about 18 per cent. could the first attempt at either branch be considered successful. But notwithstanding this uncertainty, nearly all the patients who gave the treatment a fair trial were relieved. As may be imagined, sometimes when the first attempt failed the patient lost courage and wished no further injections. This could not reasonably be counted a failure. Quite naturally, too, many a patient is satisfied with an imperfect injection and consequently has relief for a short time only. That is to say, an injection is placed not in the nerve, but alongside of it. This stops the pain; the patient is perfectly comfortable. But as there is only a little or no analgesia, the operator knows the relief will not be for long. Formerly in such cases I urged continuance of the treatment until a perfect result could be obtained. Now, unless the patient resides at a great distance, I do not do so because I found that some of the injections which I thought would relieve for a few weeks at most, kept the patient comfortable for six months or more; in at least one case for more than a year.

Is it Practicable?—It is. The instruments are simple, inexpensive, readily obtained. A prolonged surgical training is not a prerequisite, the necessary anatomic knowledge not difficult to acquire. But the beginner should carefully study a couple of skulls before operation, and it is well at all times to have one at hand. Of course, practice on the cadaver is still better. Consequently any careful general practitioner of average skill may do the operation. A number of my patients have had further successful injections by their family physicians. Many of these unfortunate people cannot well go long distances to reach a surgeon skilled in the radical operation, cannot well incur the expense of a capital surgical procedure with hospital residence. Such, then, may be treated at home.

From the foregoing it is hoped that the reader may form some opinion as to the value of this treatment and as to the place it should occupy in the therapeutics of trifacial neuralgia. But that I should express my own opinion—provisional though it may be—seems only fair.

CONCLUSIONS

1. For the very old, the very feeble and for those with grave organic disease, I believe this to be incomparably the best treatment. Practically without danger, without shock, without an anesthetic, almost without inconvenience the great majority of such patients may be kept comfortable until length of years or intercurrent disease brings the end. A few examples will illustrate.

Case 3.—A clergyman, 77 years old, for twenty years had suffered from tic douloureux of such severity as to invalid him from the beginning. He had advanced atheroma and senile myocarditis and four months previously had sustained a cerebral thrombosis, leaving him word-blind. He received two injections and never had another pain. Although, of course, his vascular and cardiac degeneration gradually progressed and finally were fatal, immediately after the injections he gained in weight and strength and was entirely comfortable for the two years and three months he survived.

Case 4.—A woman, aged 72, with atheroma, dilated heart, irregular and intermittent pulse, had had neuralgia for forty-three years, for which she had undergone eighteen operations. The paroxysms were of exceeding severity. She was very weak, but could not eat on account of the pain. Relief was imperative. Her surgeon referred her to me. Two injections stopped the pain, but eight months later reinjection was necessary. She was again relieved, this time for nineteen months. When she returned it was obvious that dissolution was not far off. The heart was greatly dilated, pulse weak, irregular and intermittent, ankles swollen, gait feeble and ataxic. One injection completely relieved her and she was free from pain until her death about five months later.

Case 5.—A man of 74 years, with typical neuralgia of lower branch, was apparently in good health for his years, but examination showed nephritis (interstitial), enlarged heart and arteriosclerosis. Two injections relieved the neuralgia, and he died fourteen months later of uremia, having had no recurrence.

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[9] I wish to add that the alcoholic solution does not necessarily make the patient proof against an infected needle or other surgical dirt. Figure 8 shows scars left by abscesses caused by promiscuous and ill-advised injections some months before the patient came to me. Asepsis in the operation is assumed.

Since writing this paper I have learned of a case in which extensive sloughing of buccal, malar, temporal and parietal regions followed a deep injection for the third division. I do not know what method was used.

[10] One earlier patient vomited several hours after the injection. This I attributed to morphin, then used in the solution, but since discarded.

CASE 6.—A friend of the foregoing, 77 years old, also apparently in good health, but with atheromatous arteries, was at once relieved and remained free from pain until his sudden death five months later from angina pectoris.

CASE 7.—Quite recently I was consulted by a man of only 68 years, but with serious infirmities. His pulse was 120, at times higher, irregular and intermittent; there were pus, albumin and casts in the urine; systolic blood-pressure from 130 to 210 (so much did the force of the systole vary), no pulse in the dorsalis pedis; some dyspnea and edema; memory poor; gait slow, *à petits pas.* This last was of grave prognostic significance. Obviously this was a most unfavorable case for anesthetic or operation. A single injection made in the office on the occasion of the first call gave instant relief.

CASE 8.—In June, 1907, was sent to me a woman of 82 years in pretty good general condition, but weak from lack of food. She received one injection each for middle and inferior branches, with complete relief for a long time. Of late (August, 1911) she had again had pain, but apparently not bad enough to require interference.

2. Save in the hands of a few exceptionally experienced and skilful men, the Gasserian operation is a dangerous and somewhat uncertain procedure; certainly a capital operation.

3. Nevertheless, when the sufferer from tic douloureux is young and vigorous with a prospect of living many years, it would be better for him to have the radical operation done at once by a first-class man, as in all probability eventually he will come to it.

4. There is a considerable class of middle-aged patients in good or fairly good health for whom a choice of treatment is not so simple. Concerning these I venture to submit the following:

A. In addition to expressing his own predilection the physician should make a plain statement to the patient of the different methods, their probable results and hazards. The prerogative of choice lies with the patient.

B. Injections of alcohol make subsequent more radical operation no more difficult or dangerous.

C. When the patient is exhausted by long-continued pain and loss of sleep and is weak from lack of food the temporary relief afforded by alcohol injections enables him to recuperate and get into condition for operation.

D. Occasionally immediate relief is demanded, if possible. For instance, there came to me one day a robust woman of 46 years with very violent pains in supra-orbital and infra-orbital nerves. Though receiving hypodermics of morphin every day, she disturbed the neighbors with her screams. Her face was coated with a scum of old epidermis, residue of liniments and dirt. She would hardly wait until we could get some sort of history. Immediate injection of both nerves gave complete relief.

I venture to note that deep injections of alcohol are not good for migraine, sinus disease, alveolar abscess, brain tumor, brain abscess, syphilitic periostitis, brain syphilis, glaucoma, pressure of a septal spur or softening in the optic thalamus. And I venture to make this note because cases of all of these diseases have been sent to me for alcohol injections.

34 Washington Street.

Adhesive Plaster to Patch Automobile Tires.—Dr. Harry M. Wegeforth, San Diego, Cal., writes: "I would like to call the attention of physicians, who have automobiles, to the fact that the quickest way to patch a puncture of an automobile tire is to use a piece of adhesive plaster. I have used it a number of times with success. The idea is simply to clean up the rubber around the puncture and apply a piece of adhesive 3 or 4 inches square, sometimes putting on several thicknesses."

A PRACTICAL METHOD FOR THE CONTROL OF TYPHOID FEVER

AS APPLIED TO THE WATERSHED OF BALTIMORE *

MARSHALL LANGTON PRICE, M.D.
Secretary State Department of Health of Maryland
WILLIAM ROYAL STOKES, M.D.
Chief, Bureau of Bacteriology
AND
C. W. G. ROHRER, M.D.
Acting Chief, Bureau of Communicable Diseases
BALTIMORE

Whatever may be the difference of opinion among sanitarians as to the best means of dealing with the corollary problems involved in the propagation, transmission and implantation of the *Bacillus typhosus*, there is certainly unanimity of opinion as far as the fundamental problem is concerned.

Given the fact that the typhoid bacillus does not propagate outside of the human body and given that each case can be recognized from or before the beginning of its infective stage, the solution of the problem resolves itself into the immediate destruction of the bacillus at the time it leaves the body of the patient with the bodily excretions.

It would appear, then, that under a proper system of control the only two elements necessary to eliminate typhoid fever as a cause of sickness or death would be proper diagnosis (and by the word proper we mean a diagnosis that is both correct and immediate) and bedside disinfection. On the other hand, "proper control" introduces a third element into the situation, namely, registration or notification. Proper notification also necessarily implies immediate and correct notification.

The necessity for registration lies mainly in the adoption of standard and uniform methods of control of an approved character, and such standards can only be adopted and enforced by the state or sanitary authority having jurisdiction in the premises. The public danger involved is certainly sufficient warrant for the state to require cases of typhoid fever to be cared for under such regulations as the state may prescribe.

It will be clearly evident that any system of control must necessarily be based on diagnosis and it must be also admitted that many of the difficulties of diagnosis are almost insuperable. Under the best of conditions there will be large numbers of mild ambulant cases and bacillus-carriers that will escape the most vigilant observation on the part of either the attending physician or the health officer.

For these reasons, the whole solution of the problem of the control of typhoid fever will never lie in bedside disinfection alone, though bedside disinfection is, at the present, the most important and logical method for the control of typhoid fever and will be of increasing importance as diagnostic methods improve in accuracy and efficiency.

The plan which we have devised for the control of typhoid fever on the watershed of Baltimore, while only applicable to some thirty or forty cases annually, is a plan that we have had in mind for some time for universal adoption throughout the state as soon as the necessary money and authority is furnished by the legislature.

During the administration of Water-Engineer Quick, the water department of Baltimore has made numerous efforts to prevent or at least mitigate pollutions of the water-supply from cases of typhoid fever on the watersheds. In addition to the various legal methods of general and specific character to restrain and prevent the entry of human sewage into the water-supply, all of which it is unnecessary to consider here, the water board has endeavored as far as possible, to locate the cases of typhoid fever on the watersheds and to have each case visited by an inspector. The inspector has always endeavored to secure the cooperation of the family in some method of bedside disinfection. In most instances the family has cooperated as far as possible, under the circumstances of the case, but in other cases the efforts of the inspectors have been met with indifference, if not with actual hostility.

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* From the State Department of Health of Maryland, Baltimore

To secure adequate bedside disinfection is not as easy a matter as might at first appear. It is necessary to secure utensils which are often not at hand in the average household, the family must go to the trouble and expense of buying disinfectant and all of the methods employed may be useless on account of the inferior or worthless character of the disinfectant, improper care in mixing, or too short exposure to the effects of the germicide.

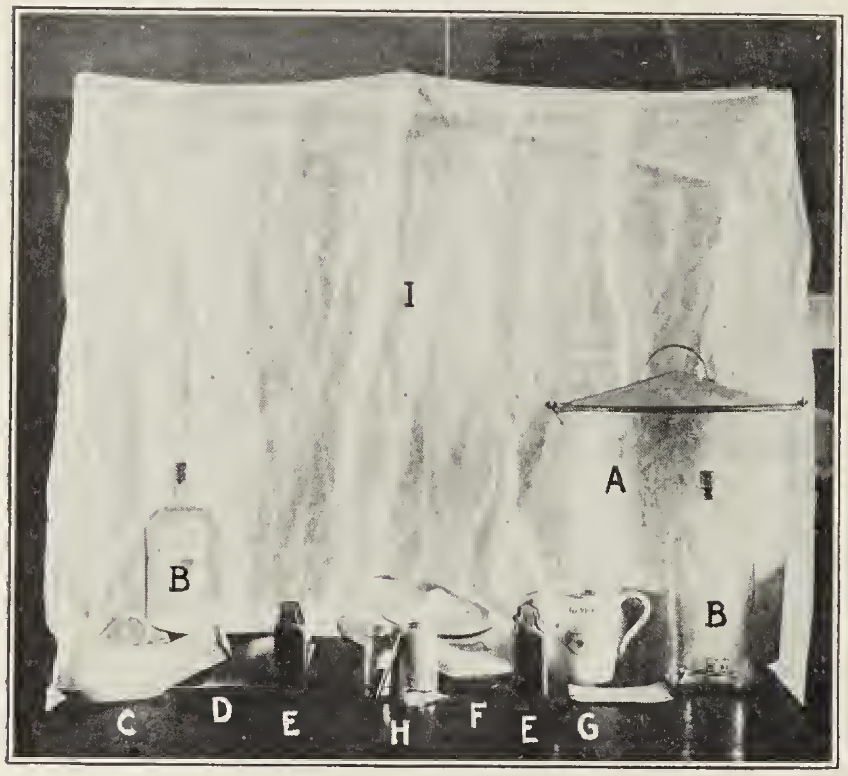

Fig. 1.—Standard typhoid prophylactic outfit. A, one of the 5-gallon buckets; B, carbolic acid (phenol) 90 per cent.; C, urinal; D, enamel basin; E, mercuric bichlorid tablets; F, bed-pan; G, enamel measure; H, lactose bile outfit; 1, mosquito netting canopy.

For these reasons, in consultation with the water board, we devised some special outfits to be delivered by the inspectors at the patient's home with full directions for their use. Printed instructions are also left by the inspectors for the attending physician, nurses or other attendants. These materials are specified in the circular which appears below, "Directions for the Use of the Standard Prophylactic Package for Typhoid Fever."

It may be stated here that the water-supply of Baltimore comprises two distinct and separate watersheds, known as the Lake Roland Water-System and the Gunpowder River Water-System, respectively. Under normal conditions about one-half of the city is supplied by the Lake Roland Water-System and the other half by the Gunpowder River Water-System. On the average about forty cases of typhoid fever are registered on the two watersheds during the year. Both watersheds are subject to pollution, but that of the Lake Roland Water-System is mainly direct while the pollutions on the Gunpowder River Watershed are mainly indirect.

The system of control adopted by the water board is about as follows: As soon as a case of typhoid fever on either watershed has been notified to the county health officer, as the law provides, duplicate copies are at once sent to this department and to the water board of Baltimore. An inspector then carries to the household one of the standard packages, which he unpacks, makes up the necessary disinfectant solutions and explains fully their method of use. Enough disinfectant is provided to last four weeks. The inspector is also supposed to see that the physician and the attendant or nurse receive a printed copy of the directions printed below; he also gives them as many oral instructions as are practicable. He may again visit the household during the course of the patient's illness, in order to see if his instructions and the regulations of the state department of health, have been complied with. After the recovery of the patient he removes all the vessels and utensils listed as non-expendable, which after cleansing and disinfection, are repacked with additional disinfectant and are then ready for reissue to another case.

In order to enforce the proper carrying out of bedside disinfection, the State Board of Health has adopted and promulgated by publication the regulations set forth in General Order 39, which has been incorporated in the pamphlet already referred to.

This pamphlet reads as follows:

DIRECTIONS FOR THE USE OF THE STANDARD PROPHYLACTIC PACKAGE FOR TYPHOID FEVER

Directions for Using Outfit

INSTRUCTIONS TO INSPECTORS

The inspector, as soon as he reaches the household in which there is a case of typhoid fever, should unpack the package and prepare the necessary disinfectant solutions and demonstrate their use to the physician, nurse, or attendant on the sick person.

1. In one of the large buckets make up five gallons of disinfectant, as follows:—with the agate-ware measure, measure out 19 quarts of hydrant or well water and 1 quart of 90 per cent. carbolic acid (phenol). This will make sufficient disinfectant to last for 10 days. The other large bucket should remain empty. Instructions should be given the nurse or attendant every time the urinal is used to empty it into the large empty bucket and to wash out the urinal with a quantity of disinfectant out of the other bucket equal to the amount of urine passed. The agate-ware measure should be used to measure out the disinfectant.

The inspector should also instruct the nurse or attendant whenever the bed-pan is used to wash it out with an amount of disinfectant from the solution in the bucket at least equal to the quantity of feces and urine passed into the bed-pan.

The nurse or attendant should be enjoined to receive all discharges in the bed-pan or urinal and to empty them into the second iron bucket and not to dispose of them in any other way.

Before leaving the house the inspector should secure a broom-stick or iron poker and instruct the nurse or attendant to thoroughly mix the contents of the bucket every time a fresh quantity of stools or urine is poured into it. The broom-stick or poker should be kept permanently in the bucket in which the discharges are disinfected, but may be lifted out temporarily when a fresh quantity of material is added in order to avoid contaminating the parts which come in contact with the hand.

After the case has recovered the broom-stick should be destroyed by burning, or if a poker is used it should be heated red-hot in the fire throughout its whole length.

The bucket should be emptied at least once daily, and a period of two hours should elapse from the time the last discharges have been poured into it before the bucket is emptied.

The inspector should warn the family of the poisonous character of the disinfectants and should also impress on them the danger of spreading the disease to others, if the discharges are not properly disinfected. He should also ask the family to call the attention of the nurse and physician to their special instructions which follow.

2. The inspector should place the enamel-ware basin on a table somewhere near the patient, or at any rate in the same room. He should then drop in three tablets of bichloride of mercury into the basin and add three pints of water with the agate-ware measure.

Nurses, attendants, or other persons caring for the sick person should be carefully warned to immerse the hands in this solution for one minute, vigorously washing during this time, after bathing the patient, changing the bed linen, handling bed-pans or urinals, handling ice-caps, or in any other way coming in contact with the patient or the discharges from the patient. This solution should be made up fresh every other day.

3. Before leaving the premises the inspector should endeavor to secure a wooden or fiber wash-tub and place it outside the door of the sick-room. Into this tub throw 32 of the bichlorid tablets, and with the agate-ware measure add 80 quarts of water. The nurses and attendants should be carefully instructed that whenever the bed-linen or clothing of the patient is changed it should be thrown into the tub and soaked over night before being laundered.

4. Separate table-ware, eating and drinking utensils, should be provided for the patient, and may be disinfected by boiling in a large dish-pan. Table napkins, towels and handkerchiefs may be placed in the solution in the wash-tub with the bed-linen.

5. Before leaving, the inspector should place the large mosquito netting over the patient's bed and call the attention of the nurse, and attendant, and family to its importance in preventing the transfer of infectious materials to food through flies, and also how much it will add to the comfort of the patient by keeping away flies and mosquitoes.

6. Inspectors should carefully point out to physicians and nurses the instructions under the subheadings, "Instructions to Physicians," and "Instructions to Nurses," respectively. A copy of General Order No. 39 should be placed in the hands of the nurse or attendant, another copy should be given to the householder, and a third copy to the physician if possible. The two bile culture outfits should be left with the nurse or householder for the physician.

INSTRUCTIONS TO PHYSICIANS

1. Physicians are requested to read over carefully the instructions to inspectors and to see that the measures instituted by the inspectors are continued during the illness of the patient.

2. Attention of physicians is called to the provisions of General Order No. 39, especially to paragraph 2, *et sec.*

3. The attention of physicians is especially called to the importance of determining when the feces and urine of the convalescent are free from typhoid bacilli. This matter is extremely important, since one convalescent or one chronic carrier case is capable of producing a widespread epidemic of typhoid fever. Special mailing outfits, containing sterile bile and full directions for making cultures from the discharges, will be found in the outfit.

INSTRUCTIONS TO NURSES

1. Nurses, or attendants, and householders are requested to read over carefully the instructions to inspectors, and to see that the measures instituted by the inspectors are continued during the illness of the patient.

2. Attention is called to provisions of General Order No. 39, especially paragraphs 1, *et sec.* Attention of nurses is especially called to the great importance of thoroughly disinfecting all discharges in order to prevent the spread of typhoid fever through water-supplies, milk, and by flies, or by other means.

GENERAL ORDER NO. 39

REGULATIONS TO PREVENT THE SPREAD OF TYPHOID FEVER THROUGH THE DISCHARGE OF INFECTED PERSONS

In accordance with the provisions of Section 70 of Article 43 of the Code of Public General Laws, the following regulations are hereby promulgated:

1. It shall be the duty of any householder when he shall have reason to know or suspect that a person within his family or house is sick of typhoid fever, to cause the stools and urine of such persons to be properly disinfected according to a method approved by the state board of health, during the full period of sickness and convalescence of such person.
2. It shall be the duty of any physician, nurse or attendant, attending upon or caring for any person known or suspected to be sick of typhoid fever or convalescent from said disease, to cause the stools and urine to be properly disinfected according to a method approved by the state board of health, during the full period of sickness and convalescence of such person.
3. Any person violating the provisions of these regulations will be subject to the penalties provided by Section 70 of the said Article 43.
4. These regulations having been passed by the State Board of Health at a regular meeting, June 1, 1911, and having been duly promulgated, have the force of law.

By order of the State Board of Health.
MARSHALL LANGTON PRICE, SECRETARY.
6 E. Franklin St., Baltimore, June 7, 1911.

So far as we know, this is the first attempt made by the sanitary authorities to directly regulate and control the practice of bedside disinfection.

The outfit used by the inspectors contains a mailing case for sending bile cultures to the bacteriologic laboratory, and this is for the purpose of determining when the stools are free from typhoid bacilli. When the disinfection of the stools is about to be discontinued the attending physician is requested to send a specimen from the stools to the laboratory, and the inoculated bile is plated out and examined for the presence of the typhoid bacilli. If the stools still contain colonies of typhoid bacilli the family is furnished with more disinfectant, and the stools of the convalescent are required to be disinfected until typhoid bacilli are no longer present in the stools or urine. The outfit for sending bile specimens of feces and urine through the mail has already been described in an article by Stokes and Stoner,[1] and a quotation from this article which follows will describe this outfit in detail.

> The specimen for examination is placed in 10 c.c. of Conradi's bile medium in a test-tube, stoppered with a rubber stopper, and covered with a rubber cap. This test-tube is then placed in a cylindrical tin box made of I. C. bright tin plate with soldered joints. This box is closed by a metal screw-cover and a rubber or felt washer. The test-tube in the box is completely and evenly surrounded on all sides by closely packed absorbent cotton. The box with its contents is now placed upside down in a larger box prepared in exactly the same manner except that it is lined on the inside with compressed paper not less than 3/16 of an inch in thickness to hold the inner box snugly. This outfit is shown in Figure 2.

For work within the city limits we use a simpler outfit which cannot be sent through the mail. These outfits are distributed bimonthly to our culture stations; the physician inoculates the tube of bile medium with feces or urine, and sends it by a messenger to the laboratory. The tube containing bile medium has a rubber stopper and is wrapped in cotton and placed in a cylindrical pasteboard box with a screw top.

The outfit also contains a swab for inoculating the bile medium with feces, and the directions for obtaining cultures from the feces and urine in cases of convalescent and carrier cases follow:

> Directions for cultures from the feces and urine of cases of typhoid fever, paratyphoid infections, epidemic dysentery and convalescent or carrier cases from such diseases.

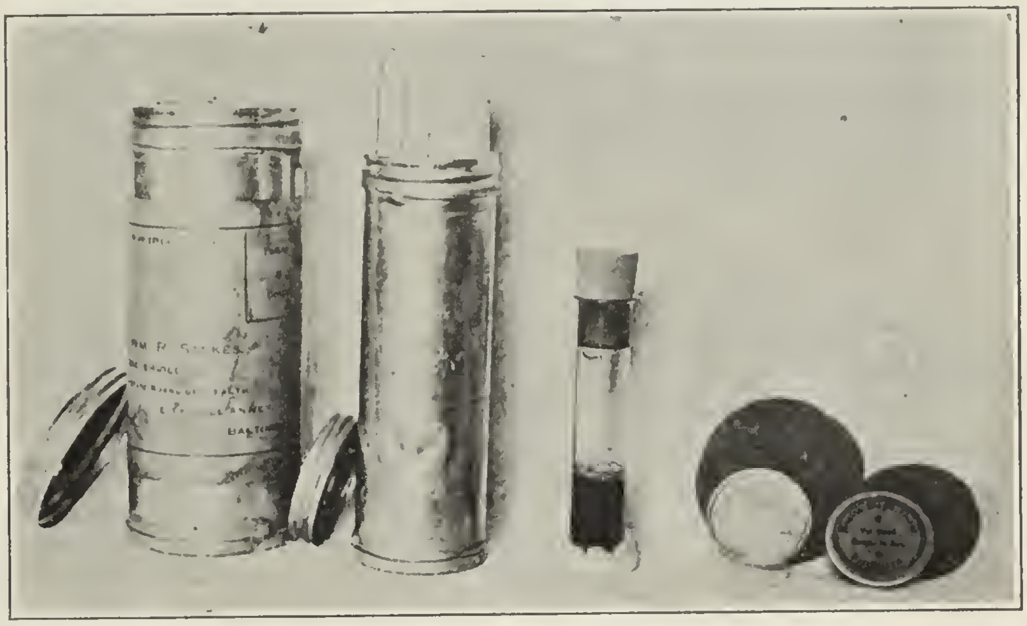

Fig. 2.—Lactose bile outfit for typhoid specimens.

> Fifteen drops of urine should be put in the bile tube in order to detect the presence of the bacteria in this fluid. In order to take a culture from the feces, simply obtain about 1 gm. or 15 grains of the feces on the cotton swab which will be found in the outfit. Rub this up in the bile and then burn the swab. Place the bile tube in the outfit in the same way it was found, and send to the department. Wrap the bile tube carefully in cotton before replacing it in the case. Please fill out the blanks to be found in the outfit.
>
> These outfits cannot be sent by mail.

Since this method has been in use in Baltimore we have studied thirty-nine cultures from the stools, and the typhoid bacillus was isolated from eleven, or 28 per cent., of these cases, and the paratyphoid from nine, or 23 per cent., of the cases. Five of these positive cases were from typhoid carriers, two of which had caused outbreaks of typhoid fever.

Several culture materials are useful in isolating the typhoid bacillus from the stools, and litmus-lactose-agar plates or Endo plates may be used. We have preferred to use a modification of the semisolid agar devised by Hesse, and this medium is described in an article by Stokes and Hachtel,[2] as follows:

> Jackson, in his article, describes very thoroughly the evolution of a differential medium for the typhoid bacillus, but as the latest medium seems to be the most successful, we shall

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[1] Jour. Infect. Dis., 1910, vii, 257.

[2] Arch. Int. Med., 1910, vi, 121.

simply describe Hesse's semi-fluid medium, including our own modification, quoting from the aforementioned article in a somewhat condensed manner.

The formula of the medium is as follows:

Agar (dried at 105 C. for half an hour)	5.5	gm.
Liebig's extract of beef	5	gm.
Peptone (Witte)	10	gm.
Lactose	10	gm.
Glycerin	50	gm.
Sodium chlorid	8.5	gm.
Distilled water	1,000	c. c.

Before using, the agar should be dried at 105 C. for half an hour to free it from all moisture. This medium should be kept in an ice-chest, the air of which is artificially provided with moisture.

The agar is dissolved in 500 c.c. of distilled water by heating and the loss by evaporation is made up. The peptone, lactose, beef extract and salt are dissolved in another vessel containing 500 c.c. of distilled water and the loss of weight by evaporation is made up by the addition of distilled water. The two solutions are then mixed and boiled for thirty minutes, the loss of weight being again made up by the further addition of distilled water.

It is next filtered, the reaction corrected to a neutral reaction and the 100 c.c. of glycerin added, and 10 c.c. are placed in each test-tube. It is then autoclaved at 15 pounds pressure for twenty minutes and stored in the ice-box.

When the bile culture is received at the laboratory it is incubated for twenty-four hours, and a series of dilutions from the incubated bile is then made in the following way:

One loopful of the incubated bile is transferred into a water blank, which is shaken, and one loopful from this water blank is transferred into a second water blank. A series of eight dilutions is then made in the melted Hesse medium, cooled to 40 C., and the medium from each tube is then poured into a separate plate. The plates are then incubated for twenty-four hours, and if the typhoid bacillus is present the colonies will appear as medium sized, with concentric rings, the colonies showing a distinct pink color. This enables one to distinguish between the typhoid bacillus and the *Bacillus alkaligenes,* and the large size of the typhoid colony is due to its motility. We have found this medium of great service in detecting the presence of typhoid colonies from stools, and when suspicious colonies are obtained a small quantity is mixed in a proper dilution of an immune serum or known typhoid blood. If agglutination takes place the diagnosis is confirmed by a study of the cultural characteristics.

The above method has been described in detail because we consider it very important that the stools of patients, and convalescents from typhoid fever, should be examined at intervals until they are declared free from typhoid bacilli. As long as the stools remain positive they should be disinfected with the 5 per cent. phenol solution, and it is our belief that negative cultures from typhoid cases should be required in the same way that negative cultures from throats which have been infected with the diphtheria bacillus are required at present. By observing these two measures, namely, the careful disinfection of the stools and urine, and the examination of these materials until they are free from typhoid bacilli, we believe that the starting-point of what might otherwise be many cases of typhoid fever can be removed, and we think that this is the most important source at which to attack the spread of typhoid fever throughout the community.

6 East Franklin Street.

THE COMPARATIVE MERITS OF SEVERAL ANESTHETICS

MYRON METZENBAUM, B.S., M.D.
CLEVELAND

The department of anesthesia has made strides commensurate with those made by any other department of medicine or surgery, and the reasons for administering a certain anesthetic in a definite manner are now based on experimental as well as clinical findings.

During the past twelve years I have dwelt on four points as important to anesthesia, all of which are now generally accepted.

1. Chloroform must be considered as a dangerous anesthetic even in the hands of an expert.

2. Ether is administered best by what I have termed "ether-air-anesthesia by the drop method,"[1] that is, administering warm ether, drop by drop, on an open mask, the same as is used in giving chloroform, thereby mixing it with quantities of air, inducing anesthesia gradually. By this method ether can be used more universally than any other known anesthetic.

3. From 1/200 to 1/100 grain scopolamin (hyoscin) hydrobromid,[2] combined with ⅛ to ¼ grain morphin, should be administered by mouth or hypodermic injection one-half to one hour before a general anesthetic or any extensive operation under local anesthesia, excepting in those above 55 or in the very young, and in febrile patients. These drugs dull the sensibilities so as to lessen materially, and often to prevent, the dangerous element of fear from exhausting the patient before the operation.

Morphin and scopolamin produce a very considerable amount of anesthesia of a desirable form, without the element of danger. They lessen the amount of general anesthesia otherwise necessary. Their influence on respiration must be taken into account when giving an anesthetic. Scopolamin, like atropin, prevents reflex stimuli coming through the superior laryngeal nerve or its branches from causing a sudden inhibitory stoppage of the heart, thus safeguarding the patient in operations of the throat and neck.

4. A skilful professional anesthetist[3] is always desirable. The successful outcome of an operation depends, in a large measure, on how carefully an anesthetic is administered without inducing fear or fright, how completely it is maintained and how mildly it is given. The professional anesthetist, by years of study and practice, becomes as skilful in the administration of the anesthetic as the surgeon in performing the operation. A well-administered anesthetic is a valuable factor, not only during the operation, but also to the postoperative stage.

The administration of *warm* nitrous oxid-oxygen anesthesia has been developed, in Cleveland, to a state close to perfection. The patients pass quietly under the anesthetic, are sufficiently relaxed for any abdominal operation, and can be kept under it with greater safety for even a longer period than with chloroform or ether. They awaken and are in possession of their faculties almost immediately, which proves that the anesthetic has ceased its action on the brain. There is no irritation or congestion to the lungs with pulmonary sequences. Suppression of urine and albuminuria are almost unknown; jaundice does not occur; the color soon returns to normal. In a series of seventy-five comparative cases in Crile's clinic, the average pulse-rate, covering the first twenty-four hours, showed that ether increased the pulse-rate eight beats, while nitrous oxid with oxygen decreased the pulse-rate ten beats. Nitrous oxid-oxygen does not contribute to a postanesthetic depression. In infectious cases it does not seem to lessen the immunity of the patient as does chloroform or ether.

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[1] Metzenbaum, Myron: Ether-Air Anesthesia or the Drop Method for the Administration of Ether; 650 Cases, The Journal A. M. A., Nov. 17, 1906, p. 1653.

[2] Metzenbaum, Myron: Hyoscin-Hydrobromid as an Adjunct to Cocain Anesthesia and as a Preventive to Cocain Poisoning, Ohio State Med. Jour., December, 1910.

[3] Metzenbaum, Myron: The Professional Anesthetist and Anesthesia, Ohio State Med. Jour., September, 1908; see also Ohio State Med. Jour., March, 1910, and the Laryngoscope, January, 1911.

An anesthetic puts to sleep only the sensory areas of the brain and holds in check the natural reflex-actions to prevent or resist the injury being done to the parts during the operation. But the anesthetic does not put to sleep the entire brain and prevent all destructive impulses from reaching the cortical brain-cells.

Crile's recent experimental researches have shown that, in dogs in which death was similarly induced by shock, the destruction of the cortical brain-cells was far greater under ether anesthesia than under nitrous oxid-oxygen anesthesia, which leads to the conclusion that ether itself must have some destructive action on the cortical brain-cells, or that nitrous oxid-oxygen in some manner prevents injurious impulses from reaching the brain-cells. Crile's experiments have further shown that if, in addition to the general anesthetic, 1/400 per cent. novocain or 1/500 per cent. cocain solution be injected into the skin, tissues, nerves and nerve-trunks of the field of operation, painful impulses are further blocked from reaching the brain-cells at the time of the operation. If a 1 per cent. quinin urea solution be generously injected into the tissues of the field of operation, at the end of the operation, a lasting anesthesia is established, often for a period of twenty-four hours, thus preventing subsequent painful impulses from exhausting the cortical brain-cells. The application of the double or combined anesthesia has been of very great clinical value in casualty surgery, operations for exophthalmic goiter, and in operations on the young and the aged and in critical surgical cases. In many of these precarious cases the operations have been withstood exceptionally well. This combined anesthesia is a decided contribution to surgery and is a potent method of preventing, in a large degree, in certain classes of patients, that state which is termed shock.

766 Rose Building.

OPERATING CYSTOSCOPE FOR REMOVING PEDUNCULATED TUMORS *

HENRY MEYER, M.D.
SAN FRANCISCO

It is acknowledged that pedunculated tumors in the bladder, when not large, are best treated by removal with the operating cystoscope. After the removal of papillomata from the bladder by the open method, the growths have returned rapidly in the majority of cases and often in great numbers; while when they are removed with the operating cystoscope, recurrences are quite uncommon; so that to-day the removal of such neoplasms, when small and pedunculated, with the operating cystoscope, is the acknowledged operation of choice.

The illustrations show a new instrument built for me according to my own ideas of the desiderata for an instrument intended for the removal of pedunculated tumors from the bladder; its simplicity is sufficient to recommend it to all who can appreciate work of this description. I can do everything with the Nitze instrument that I can do with my own in the treatment of bladder tumors, but with my instrument I can accomplish as much at one sitting, which completes the operation, as I can accomplish at two or more sittings with the Nitze instrument. My new instrument embodies the principles of clamp and cautery in one, acting simultaneously. The advantages of the new instrument are the following:

1. The snare problem is eliminated. The snare must be placed over the tumor and if we intend to employ the hot snare, which is the most desirable, we must use platinum wire, which is very soft and occasionally causes us annoyance by deviating to one side, or forward or backward; or its shape may become distorted if it happens to touch the tumor or bladder-wall, on account of the great flexibility of the wire. Then again, it does not always catch the tumor close to its attachment, and we must cauterize the stump with the cautery at another sitting. The new instrument is so constructed that its branches go under the tumor and at the same time lifts it, thereby catching the mucous membrane immediately around the tumor and destroys it.

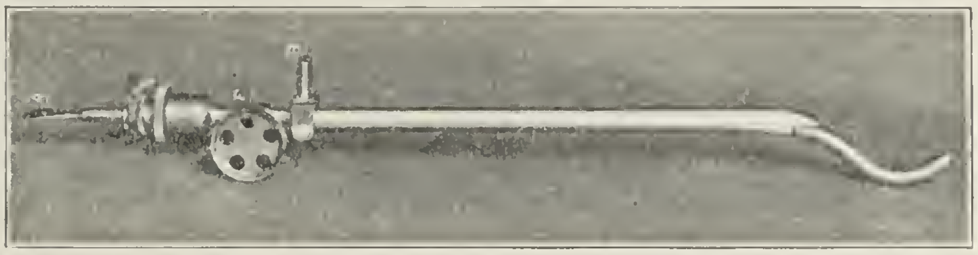
Fig. 1.—Operating cystoscope ready for insertion into the bladder. A, handle of the mandrin; B, contacts for cautery; F, wheel to open and close the clamp.

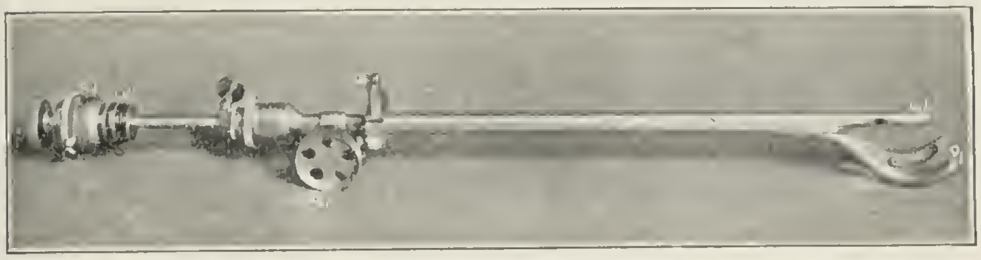
Fig. 2.—Instrument open, with cystoscope inserted, ready for use. A, cystoscope; B, contact for cautery; C, contact for lamp; D, double cautery, one on each blade of the instrument; E, cystoscopic lamp; F, wheel to open and close the cauterizing clamp.

The illustrations are one-half the size of the instrument.

2. It is much easier for a person expert in the use of the cystoscope to learn to use my instrument than the Nitze instrument.

3. This instrument can be used to remove a foreign body from the bladder, such as a piece of catheter, with the greatest ease. It can crush a small vesical calculus, and thus is a combination instrument.

4. Men who have seen this instrument and who know from experience the difficulties which we must overcome in order to obtain perfection in the performance of this class of operations, consider it the best instrument to accomplish the work for which it was intended. It was built as a result of my experience with the Nitze instrument, with which I have performed twenty-nine operations. The experiments made with this instrument were all done on the cadaver by sewing pieces of sponge to the mucosa of the bladder and in the manikin, and in

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* Demonstrated before the San Francisco County Medical Society, Oct. 17, 1911.

each instance the artificial tumors were grasped with a degree of ease impossible with any other instrument.

5. Operations done with the clamp and cautery are practically bloodless, which is no small factor in this class of work. These operations are carried out in the surgeon's office without anesthesia and the patients immediately resume their occupations. To use the instrument successfully, I would advise that the bladder be distended with 200 to 250 c.c. of clear sterile water.

The complete Nitze instrument is a combination of three instruments, and one must be able to judge which one to use, depending on the situation of the tumor; while my one instrument will reach every tumor that can be reached with any part of the Nitze instrument.

240 Stockton Street.

EXOPTHALMIC GOITER AND SYMMETRICAL LIPOMATOSIS

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NEW YORK

Patient.—M. S., an Austrian Polish Hebrew, aged 42, presser by occupation, was first seen April 12, 1909. Family history was negative for tuberculosis, rheumatism, gout, cancer, insanity and exophthalmos. The patient denied all venereal diseases. He used alcohol in large amounts, and had used it excessively since 10 years of age, his average lately being four glasses of whiskey and ten glasses of beer a day. His present condition dated back for two years, when he noticed a swelling in both pectoral areas and a tumor the size of a pea on right and left sides of the back of the neck, which grew rapidly and very often caused him severe cramp-like pains in the affected areas. About a year before examination other masses appeared, situated below the occiput, and six months later, at the back of the neck, mammary areas, abdomen, back and arms. The masses on the arms were diffuse and increased these limbs to twice their natural size (the rest of the body being emaciated), giving him the appearance of a man of tremendous muscular development; appetite was fairly good; bowels were regular. He had had occasional headaches. The chief complaint was severe cramp-like pain in these masses, particularly over the lower and back part of the neck.

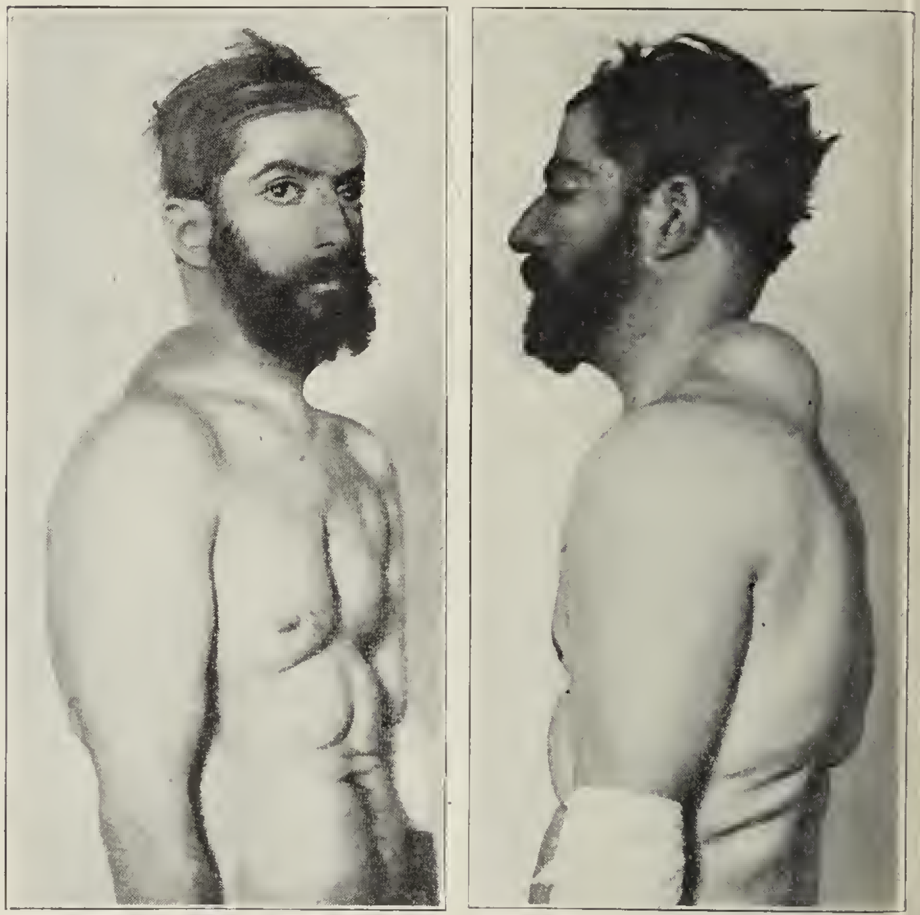
Examination.—At the first glance at the patient a marked exophthalmos was noticed with the positive von Graefe, Stelwag and Moebius signs. His hair was prematurely gray and sparse, with the remains of a former favus. There was a marked acne in the midline of the face. The cervical and inguinal glands were slightly enlarged. The eye-grounds were normal; pupils reacted to light and accommodation. Exophthalmos was very marked. The thyroid gland was distinctly palpable, feeling very much like a bag of worms, and moved with deglutition; both lobes and isthmus enlarged. The sizes of the tumors varied, from one the size of a pea to the largest, which was between the scapulæ, about 4 inches in diameter. The consistency of the tumors was that of cysts under low tension. The skin over the tumors was not freely movable, especially in the arms, where the fat seemed to infiltrate the skin. Temperature was 98.8 F. The pulse was variable and ranged between 92 and 120 within a half hour. Respirations numbered 21. The lungs, heart and abdomen were negative. The spleen was not enlarged. On extension of the hand there was a slight tremor. Knee-jerks were slightly increased.

Urine examination: Reaction acid, specific gravity 1.024. Albumin and sugar negative. Urea, 2.2 per cent.; indican and skatol normal. Microscopic examination showed a few pus and epithelial cells and no casts.

Blood examination: Hemoglobin, 79 per cent.; red blood-corpuscles, 4,240,000; white blood-corpuscles, 7,200. Differential count, polynuclears, 68 per cent.; small mononuclears, 19 per cent.; large mononuclears, 11 per cent., and eosinophils, 2 per cent. Wassermann reaction was negative.

Medicinal Treatment.—The patient was put on thyroid extract, 5 grains, three times a day, under careful supervision with the hope of influencing the fatty tumors and the goiter. After two days the pulse increased to 134 and the dose was reduced to 1 grain three times a day, which was continued for two weeks, during which time there was no appreciable diminution in the size of the tumors, but the patient's general condition was somewhat improved. He was then put on Fowler's solution, 5 minims, and saturated solution of potassium iodid, 10 minims, three times a day, when his pulse again came down to 120 and he felt much improved, with the exception of the tumor between the scapulæ, which pained him most, and he asked to have it removed for cosmetic reasons and for reasons of dress. He was admitted to the Washington Heights Hospital, Dec. 7, 1909. He had reduced his use of alcoholics to one glass of whiskey a day on promise of operation, and I intended to remove the interscapular lipoma.

Operation.—Dec. 9, 1909, under ether anesthesia lasting forty-five minutes, an elliptical incision was made over the lipoma and an attempt was made to enucleate the lipoma, but this was abandoned because of the adherence to the skin and to the subjacent muscular layer. The tumor was ablated with difficulty. A rubber tissue-drain was inserted and the skin sutured with silkworm gut.



Exophthalmic goiter and symmetrical lipomatosis.

Postoperative History.—The subsequent history showed the onset of delirium tremens. December 10 he was restless and made attempts to leave the bed. Slept little. He was given whiskey half an ounce every four hours with soft diet. He then became delirious, talking incoherently and picking at the bed-clothes and finally was put in a strait-jacket. He was also given triple bromid 20 grains every three hours, with little or no effect. He was then given chloral hydrate 15 grains every four hours, whiskey one-half ounce. Temperature, 102.5; pulse, 108; respiration, 32.

December 11 he refused to eat; temperature was 103.4; pulse, 116; respiration, 36. Extreme delirium almost maniacal.

December 12 temperature was 104.6; pulse, 130; respiration, 38. The patient's comatose condition ended in death.

Autopsy.—The operative field, with the exception of considerable oozing serum, showed no signs of infection. The section of the removed tumor showed nothing but adipose tissue. The tumors were all situated symmetrically on both sides of the body, with the exception of the one removed, which was in the midline. There were no tumors below the level of the umbilicus.

As to the diagnosis of exophthalmic goiter, the marked exophthalmos with the positive von Graefe, Stelwag and Moebius signs, the enlarged thyroid and rapid pulse, tremors and extreme nervousness left no doubt as to the diagnosis.

2424 Seventh Avenue.

THREE OUTBREAKS OF TYPHOID FEVER TRACED TO MILK INFECTION

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AND
ERNEST E. IRONS, M.D.
CHICAGO

The outbreaks of typhoid fever here briefly described are put on record partly because of certain special features they present, partly because of our conviction that the frequency with which typhoid fever in this country is milk-borne needs to be more widely known.

I. LAGRANGE EPIDEMIC

This outbreak occurred in the autumn of 1899 in the village of LaGrange, a suburb of Chicago. A partial house-to-house canvass which we made under the auspices of the local board of health, together with information obtained by the aid of physicians, disclosed the existence of forty-five cases developing in the months of September, October, November and December, 1899. This was in the ratio of about one case to every ninety inhabitants, while in the adjoining city of Chicago during the same period the typhoid rate, as estimated from the number of deaths, was about 1 to 1,000. There was thus no doubt that the amount of typhoid fever in LaGrange had been excessive for that season and locality.

The water-supply of the town was derived from a deep well, and inspection of the surroundings showed no ground for suspecting contamination of the source. This opinion was confirmed by a number of analyses, bacterial and chemical, of the water obtained direct from the well and also from taps in various parts of the town. *B. coli* was not found in water from well or tap. The view was held by some citizens that the water from a disused reservoir, which had been pumped into the mains during an emergency caused by a fire on August 27, was responsible for the outbreak. No source of contamination of the reservoir water was apparent, however, and the distribution of cases was such as to weaken the hypothesis of infection having occurred on that date. *B. coli* was not found in the reservoir water. Finally the order in which the cases developed effectually disposed of the belief that the epidemic was an explosive outbreak due to water infection. Tabulation of the cases showed that twenty-five of the forty-five cases had occurred on one milk-route (X), eleven on another (Y) and only nine on all the other milk-routes in LaGrange. Five different milk-supplies were represented among the nine cases not on Routes X and Y. The number of customers on the different milk-routes—two with many cases, five with few—was not exactly ascertainable, but so far as could be learned each of the seven routes supplied about the same number of families, except Route Y, which was far less extensive than the others. The following table shows the order of development and the distribution of cases on the several milk-routes:

Cases developing in weeks ending	Routes		
	X	Y	All Others
September 3	2	0	0
September 10	2	0	1
September 17	2	1	0
September 24	0	0	0
October 1	0	0	0
October 8	0	0	1
October 15	1	3	1
October 22	2	0	1
October 29	1	0	0
November 5	0	0	2
November 12	3	0	0
November 19	6	0	0
November 26	1	0	1
December 3	2	4	0
December 10	3	1	1
December 17	0	1	0
December 24	0	0	1
December 31	0	1	0
	25	11	9

There was hence no reason to postulate a water infection on August 27, but rather an infection of the milk delivered by two dealers. The age distribution of the cases bore out this view: no fewer than sixteen of the forty-five cases were in children under 10 years of age, while only five were in persons between 20 and 30. As regards the nine cases occurring on other routes than X or Y, it was found that eight of these cases could be accounted for on the hypothesis of contact or out-of-town infection.

Further investigation showed that a case of typhoid fever had occurred on Farm Y just prior to the outbreak, and inspection of the premises showed that infected fecal matter could readily have found its way into the milk by way of a shallow well in porous soil 20 feet away from the outhouse in which undisinfected discharges had been emptied. The water of this well was used for rinsing the milk-cans. Flies also may have played a part in transmission. The individual who suffered from typhoid fever on the farm was said to have had nothing to do with handling the milk. At the time of our inquiry he had left the neighborhood and further investigation was blocked.

There was no evidence of direct infection of the milk produced on Farm X, but a large part of the milk produced on Farm Y was distributed on Route X throughout the period of the epidemic.

There thus remained little doubt that the majority of cases of typhoid fever occurring in LaGrange during the months of September, October, November and December, 1899, owed their origin to an infection of the milk produced on a certain farm (Y) and distributed on two milk-routes (X and Y).

II. HOOPESTON EPIDEMIC

The history of typhoid fever in Hoopeston, a thriving manufacturing town in central Illinois, about 100 miles from Chicago (population, 1910, 4,698), is briefly as follows: Up to 1908 only a few scattered cases had occurred yearly; these were apparently not sufficiently numerous to cause serious alarm. In 1908 it is estimated there were at least ten cases, in 1909 about thirty, and in 1910 we secured a record of ninety-four cases, including three fatal cases, developing in the town itself between July 1 and November 2. Special interest attaches to the first appearance of cases in noteworthy numbers in the year 1908, as will be made clear presently.

A house-to-house canvass under the auspices of the board of health, covering all cases of typhoid fever of which we could learn, was first undertaken. In this work we had the hearty cooperation of all physicians. Owing to removal, death and other causes we were able to fix the approximate date of onset in only seventy-eight of the ninety-four cases.

Tabulation of the cases follows:

	Milk Routes						
	M	G	A	B	C	All Others	Total
July 1-15	3	0	0	0	0	1	4
July 15-31	2	1	1	0	0	0	4
Aug. 1-15	6	0	0	0	0	1	7
Aug. 15-31	6	0	1	0	0	1	8
Sept. 1-15	6	0	0	0	0	4	10
Sept. 15-30	9	1	0	0	0	1	11
Oct. 1-15	8	7	1	0	0	4	20
Oct. 15-31	4	5	2	0	0	3	14
							78

The grouping of cases by ages showed the age-incidence characteristic of milk-borne epidemics.

Years	Cases	Years	Cases
0- 5	7	31-45	10
0-15	33	45 +	5
16-30	36		

The approximate number of customers on the five principal milk-routes, together with the cases of typhoid fever developing on each, is as follows:

Milk-Route	No. Customers	No. Cases Typhoid Fever July 1-November 2
M	150-200	44
G	40	14
A	200	5
B	50	0
C	25	0

It thus appears that the majority of cases developed among the customers on two milk-routes. Route G may be first considered. About September 1, the young daughter of the G family (aged 14) became ill with typhoid fever. The case was not a serious one. Before her illness and during her convalescence she assisted in the distribution of the milk and in work about the household and dairy. On September 27, a case of typhoid fever appeared among the G customers and this was followed by twelve others within a month. During this period four additional cases developed in the G family. In all, eighteen cases of typhoid fever could be traced to the first G case.

Milkman M supplied a larger number of customers than Milkman G and the number of cases on his route was correspondingly large (44). It is practically certain that the M milk was responsible for other cases of typhoid fever than those occurring among the private customers of M. It was found that the M milk was used (uncooked) by one large dealer (P) for making ice-cream. Twelve persons who had typhoid fever and were not on the M milk-route are known to have eaten P ice-cream, in several cases in large quantity, within two weeks of the onset of the disease. It seemed likely that in the first case on the G farm which gave rise to eighteen others, the patient contracted infection from the P ice-cream. M milk was delivered to several restaurants in the city, but we were not able to trace surely any specific cases of infection to this source. It is possible that three or more of the five cases occurring on milk-route A may have been due to infection with the M milk, since several times during the summer a few bottles of M milk were used by A to supply a temporary shortage.

Altogether the typhoid cases occurring in Hoopeston between July 1 and Nov. 2, 1910, may be tabulated as follows:

Cases due to infection contracted outside Hoopeston; certainly 1, probably 1	2
Cases due to M milk directly and indirectly	62
Cases possibly due to M milk	4
Cases due to G milk (including 4 cases in G family)	18
Cases due to miscellaneous causes (contact infection, visiting typhoid patients, etc.)	5
Cases unaccounted for	3
Not all facts ascertained	2
	96

Although no case of typhoid fever existed on the M farm during the summer of 1910, the origin of the epidemic seems sufficiently clear. We found that Mrs. M. had suffered from an attack of typhoid fever in 1896, and she was reasonably assumed to be a "carrier." Subsequent examinations of the feces of this woman showed the presence of bacilli corresponding culturally in all respects with the typhoid bacillus and agglutinating in high dilutions with the serum of an immunized rabbit. Thirteen months after the epidemic the feces still contained typhoid bacilli and the woman's blood gave the agglutination reaction. There were present on the M farm at the time of our visit ample possibilities for the spread of infection. Not even the usual country privy existed, and no proper disposition was made of the excretal refuse. Abundant opportunity existed for contamination of the milk through the agency of flies and in other ways. We found the water of the well close to the milk-house badly contaminated with fecal bacteria. It is a significant fact that typhoid fever first became conspicuous in Hoopeston in the year the M family entered the town (1908) and began distributing milk from a few cows. As the M milk-business prospered and the number of M customers increased, typhoid fever became more prevalent.

The especially interesting features of the Hoopeston epidemic are the occurrence of ice-cream infection, the infection of a second milk-route in addition to that primarily responsible, the steady increase in the amount of typhoid fever coincident with the increase in business of a particular milk-dealer and the large proportion of cases that could be traced directly or indirectly to milk, leaving relatively few to be accounted for by other modes of infection. Careful studies of case-groupings in respect to locality and time were made, and it is worthy of note as bearing on the frequency of fly transmission that, although both badly constructed privies and flies were not lacking in Hoopeston, this mode of typhoid communication does not seem to have been an important factor.

The epidemic ceased abruptly after the closing of the infected dairies. Only seven cases of typhoid have occurred in Hoopeston during the year which has elapsed since the investigation (from November, 1910, to December, 1911). Three of these are known to have been contracted in small epidemics elsewhere in the state, and two, and possibly three, of the remaining four are regarded by the board of health as imported cases.

III. HOTEL EPIDEMIC

In March and April, 1911, some ten or eleven persons resident in Chicago, New York, Philadelphia and other northern cities developed typhoid fever, shortly after their return from a winter hotel on the Gulf of Mexico. At the request of the hotel management, an investigation was made to determine the source of the infection.

The hotel grounds overlook a bay and are about a mile distant from a small village, and 27 miles from a large city. During the season (January 1 to April 1) the number of guests varied from 200 in January to 350 in February and March. Many of these guests came early in January and remained throughout the season, so that the population of the hotel was unusually constant.

The investigation of this epidemic, undertaken five weeks after the closing of the hotel, presented difficulties not encountered in the investigation of communities with a fixed population. A careful inquiry into the previous health, previous and subsequent residence, diet, dates of onset of illness, etc., of the typhoid sufferers supplied valuable preliminary information. Several individuals (ten) had been residents at the hotel for from four to ten weeks before becoming ill and had had no demonstrable opportunity for contracting typhoid elsewhere. All ten developed typhoid within two weeks of the time of leaving the hotel. A tabulation of the dates of onset of illness showed that these were comprised within a relatively short period, March 17 to April 7. Within this short period a closer scrutiny showed two subgroups: March 17, one case, March 19, two cases, March 20, one case, or four cases March 17-20; March 27 and 30, one case each, April 1-4, three cases, April 7, one case, or six cases March 27-April 7.

Allowing for an average incubation period, and counting back ten to fourteen days, we have approximately the period March 1 to 20, or if we consider the subgroups we have two periods, March 1 to 10 and March 15 to 25, when something unusual happened. Furthermore, on extended inquiry we were unable to find that any guest became ill who left the hotel before March 1, and all who subsequently became ill arrived at the hotel before March 20. One additional probable case (No. 11) from whom we were unable to obtain full data left the hotel March 9, so that if the cases were due to a common cause it was operative as early as March 9.

A tabulation of the customary articles of diet of the ten individuals, such as oysters, fish, vegetables, showed no common factor which might serve as a clew to the source of the infection—likewise a sanitary survey of the hotel premises and a thorough examination of the water-supplies, epidemiologic, sanitary and bacteriologic, furnished no evidence that these had any causative relation to the epidemic.

Milk-Supply.—The milk-supply of the hotel was derived from two sources, (1) a local dairyman and (2) a wholesale distributing company in the city. There was no evidence of contamination at 1, and three private families who used this milk remained healthy. The distributing company furnished from 20 to 25 gallons of milk during the height of the season (February and March). This dairy company obtained milk from a number of dairies in or near the city, and distributed the mixed milk to its customers including the hotel and two other hotels in the city. Dairies A, B, C, D, E and F furnished milk in constant quantities from January 1 to April 1. With the exception of F, which was carelessly managed, these dairies were fairly clean and well conducted, and there was no history of typhoid among the employees. Dairies G, H and K, which furnished small amounts of milk during January and early February were somewhat inferior from a sanitary point of view, but the periods when they appeared in the general supply did not coincide with the period when the infection must have occurred. We had, therefore, no adequate evidence for thinking that the fever originated in the milk-supply. Further, several of the typhoid sufferers used no milk, and other guests drank much milk and remained well.

Cream-Supply.—The cream was furnished by the same wholesale distributing company, which in turn obtained it from sources L and M (wholesalers in neighboring states), from Dairies N and O, and from milk (by separator) obtained as indicated above. The latter supply together with that from L and M was constant throughout the season. Dairy N supplied cream in small amounts in January and February only.

Dairy O furnished cream to the wholesale company as follows:

Period 1. January 3-8 —2 gallons per day.
Period 2. January 16-18 —2 gallons per day.
Period 3. February 3-8 —2 gallons per day.
Period 4. March 7-10 —4 gallons per day.
Period 5. March 14-24—4 gallons per day.

The consignments during the first three periods were small, and we were informed that they were sent out in original packages to fill the orders of local drug-stores, and hence did not reach the general cream-supply. The daily consignments during the two later periods were larger, and though on some days they may have been sent to local dealers in original packages, we were informed that on other days they were mixed with the general supply, two-fifths of which went to the hotel. A portion of the remaining three-fifths went to Hotel Y. This hotel closed about April 1, and we were unable to obtain a subsequent record of the guests. One case of typhoid which occurred at this hotel during the season was thought to have been infected in another city. In the absence of records of the guests after leaving the hotel, no conclusions can be drawn as to the effect of the cream at Hotel Y, for such instances of typhoid as might occur would develop after the guests left the hotel, as was the case at the hotel under investigation. The remainder of the cream from the distributing company was supplied to drug-stores to be served in iced drinks.

Sanitary conditions in Dairy O were filthy. The milk-room (in the cow-barn) was unscreened and swarming with flies. Within 20 feet of the open cow-barn and 30 feet from the milk-room was an open, shallow, used privy. The methods of milking and handling the milk as witnessed by us were as objectionable as the surroundings.

On February 1, the owner of this dairy employed three new milkers to replace men previously discharged. One of these men had had typhoid fever some ten years previously. From the feces of this man we isolated the typhoid bacillus. There had been no illness on this farm at the time of our inquiry, but we have learned that shortly afterward two members of the family suffered from typhoid fever.

A portion of the milk from this dairy (total 100 gallons per day) was distributed to customers (60-70) on a retail milk-route belonging to the proprietor. The remainder of the milk was passed through a separator, and the cream, with the exception of that sold to the wholesale distributing company as indicated above, was delivered to local drug-stores through a second dairy company.

Typhoid fever is present every year in the city, but during March and April, 1911, the cases began to increase so that we estimated their number at from 100 to 200. A tabulation of facts concerning some thirty unselected cases showed no common factor such as milk-supply, etc., but in a number of instances there was a history of the taking of iced drinks containing cream in drug-stores. This indirect method of infection is probably responsible for a portion of the total cases. Incidentally we learned of another dairy not in any way connected with our investigation in which there had been two cases of typhoid fever within four months. Neighborhood infection by means of contaminated privies and flies may also have been a factor in the city epidemic.

The special features of this hotel epidemic are as follows: Ten guests contracted typhoid during their stay at a hotel. One group of four became ill March 17-20, and a second group of six, March 30-April 7. Allowing an average incubation period, the infection probably took place March 1-10 and March 15-25. The relative isolation of this hotel, and the prolonged residence there of the guests made it possible to exclude many of the ordinary sources of typhoid infection. On March 7-10 and March 14-24, certain unusual cream-supplies reached the hotel from a dairy where extremely insanitary conditions prevailed, and to which a typhoid carrier came on February 1. Cases of typhoid are also known to have occurred among the users of milk from this dairy, and among those who partook of its cream product in drug-stores.

From the public health point of view it is especially important to control the milk- and cream-supplies of hotels since a large number of persons may become infected and since infection contracted while traveling is often particularly difficult to trace. Under conditions such that the source cannot be satisfactorily controlled pasteurization of hotel cream and milk should be required.

STRANGULATED FEMORAL HERNIA

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Strangulated femoral hernia is a surgical condition in which early diagnosis and prompt operation result in a fairly low mortality; while failure to recognize the condition and consequent delay directly increase the danger and operative risk. The fact that a large proportion of these cases are not diagnosed promptly, or an incorrect diagnosis is made with a resulting delay of the necessary surgical treatment, prompts the writing of this paper, with the brief report of the following nine cases:

Case 1.—R. W., woman, aged 54, had swelling in groin for two years, which had increased in size for past six weeks; vomiting four days before she was referred to Bellevue Hospital. Pain in swelling was complained of for only twenty-four hours before admission. Intestine was found blue and congested, but circulation returned and hernia was reduced and ring sutured. Patient was discharged as cured on twenty-ninth day.

Case 2.—S. F., woman, aged 28, had swelling the size of a marble in groin for three years; had sharp pain in abdomen after lifting weight, four days before admission to Bellevue Hospital. Pain was accompanied by persistent vomiting and absolute constipation. On admission, gangrene with perforation of the strangulated intestine had been present a sufficient time to result in suppuration in the sac, and the formation of a mass resembling a broken-down bubo. General peritonitis was also present. The gangrenous intestine was resected and united by a Murphy button. Median abdominal incision was made to sponge and drain peritoneal cavity. Button was passed on twelfth day. Patient was discharged as cured on thirty-fifth day.

Case 3.—Patient M.T., woman, aged 63. Strangulation was present for two days; treated as an enlarged gland and gastritis, until fecal vomiting appeared. Operation in private house. Color returned to middle of loop of strangulated intestine, but a band existed at both ends of the loop, where pressure on the sharp edge of Gimbernat's ligament had thinned out the intestinal wall to almost resemble tissue paper. Six inches of intestine were resected and united by a Murphy button, which was passed on the sixteenth day. Recovery followed.

Case 4.—L. B., woman, aged 42, two days before admission to Bellevue Hospital had sharp pain in lower abdomen, followed by persistent vomiting, which became feeal; absolute constipation. Patient did not know she had a hernia; was sent into the hospital with a diagnosis of acute gastritis. Intestine was in bad condition; did not react. Resection of 2½ inches was performed and end-to-end anastomosis by suture through median abdominal incision. Bowels moved four times on third day after operation, and continued to move daily until seventh day. Patient did not vomit until seventh day. Temperature was high the day following operation and continued high until death on the seventh day. Post-mortem examination showed no leakage or obstruction at line of anastomosis, but an evidently virulent peritonitis with very little exudate.

Case 5.—M. W., woman, aged 62, had swelling in groin for twenty-two years. Three days before admission to Bellevue Hospital, after eating corned beef and cabbage, she began to vomit and have abdominal pain; vomited for seventy-two hours. After forty-eight hours, vomitus became brown. Absolute constipation was present for five days. Operation showed strangulated small intestine in which the vitality had not been lost. Intestine was reduced and ring sutured. Patient was discharged as cured on twenty-first day.

Case 6.—L. S., woman, aged 60, had swelling in groin for one year, which was treated as enlarged gland with ichthyol. Vomiting and pain were present twenty-four hours before admission to St. Luke's Hospital. Operation showed strangulated intestine in which the color returned to the middle of the intestinal loop, but the portions where the sharp edge of Gimbernat's ligament had caused pressure and constriction were sufficiently damaged to require resection. Resection of 5 inches was done through median abdominal incision; end-to-end anastomosis by suture. Patient was discharged as cured on nineteenth day.

Case 7.—E. G., woman, aged 68, had hernia for fourteen years. Four days before admission to Bellevue Hospital she became nauseated and had abdominal pain. Hernia became large and irreducible and painful. Vomiting continued and became fecal. Absolute constipation existed three days before admission; patient in poor condition. Operation, under local anesthesia was rendered difficult by a partial ankylosis in semiflexion of the hip, due to rheumatoid arthritis. Intestine was not damaged, and returned. Patient was discharged as cured on thirty-fifth day.

Case 8.—M. B., woman, aged 41, had swelling in groin one month. Two days before admission to Bellevue Hospital, she was seized with sharp abdominal pain, and vomiting which became fecal. Mass became harder and more painful. Abdomen became distended and constipation was absolute. Operation showed a strangulated femoral hernia of the Richter type, in which the constricted portion had almost ulcerated through. Resection of 4 inches was done, with end-to-end anastomosis by suture. Patient was discharged as cured on twenty-eighth day.

Case 9.—B. S., woman, aged 35, had had hernia for three years. It had always been reducible up to three days before admission to St. Luke's Hospital. There was no vomiting; bowels had not moved for two days; there was slight elevation of temperature. Flatness over mass; no impulse. Operation showed strangulated omentum, in sac very tense with fluid. Omentum was resected; ring closed. Patient was discharged as cured on fourteenth day.

The brief report of these nine cases shows the frequency of delay (two to four days) before operation was performed, and the errors of diagnosis, and failure to recognize the early necessity of surgical interference. Five of them required resection of the intestine. One patient died; of the four not requiring intestinal resection, all recovered. The damage to the intestine, however, does not depend alone on the length of time constriction has been present but also, to a large extent, on the nature of the constriction — the larger hernias seeming to be less apt to be damaged than those with a small ring where a small knuckle of intestine, or even a Richter's hernia, is tightly constricted by the sharp edge of Gimbernat's ligament.

DIAGNOSIS

Femoral hernia occurs much more frequently in women than in men. The nine patients referred to above were all of the female sex. Of fifty-nine patients suffering from strangulated femoral hernia, from the records of St. Luke's and Bellevue Hospitals, only seven were men—a proportion of less than one in eight.

When the hernia is reducible, the diagnosis between the femoral and inguinal variety is made by the direction in which the sac contents return to the abdominal cavity, and the relations of the sac, and particularly of the neck of the sac, to Poupart's ligament and the pelvic spine. When strangulated, the differential diagnosis between femoral and inguinal hernia must be made by the relations of the tumor to the two anatomic landmarks above mentioned. One of the most frequent errors in diagnosis is the mistaking of a small strangulated femoral hernia for an enlarged or broken-down femoral gland. The impulse on coughing is lost and the percussion note when the sac fills with fluid is no longer tympanitic. When perforation and gangrene of the intestine occur, the signs of suppuration appear in the mass.

The above are the local visible signs. But in a number of cases strangulation of a femoral hernia occurs, in which the patient has not been aware of the previous existence of a hernia, and in which the general abdominal symptoms are so marked that the patient does not complain of the local condition, and unless the attending physician makes a careful physical examination, a diagnosis of acute gastritis or intestinal obstruction of unknown cause may be made. The case histories cited show that the first symptoms of strangulation are frequently general abdominal pain and vomiting, and even with a superficial examination, a small strangulated femoral hernia, especially in a fat woman, may escape detection. Hence, in every case of severe general abdominal pain with intractible vomiting, or when signs of intestinal obstruction are present, the femoral rings should be carefully examined.

TREATMENT

The facts that femoral hernia is especially liable to strangulation, and that it is with the greatest difficulty kept reduced and almost never cured by means of a truss, while operative treatment by practically any of the many different methods of operation for radical cure is nearly universally successful, indicate the wisdom of the advice of operation when the diagnosis of femoral hernia is made. Obviously, sufficiently early diagnosis and operation in the event of strangulation would eliminate the necessity of resection, and therefore greatly lessen the mortality.

When operating in the presence of strangulation, if after the relief of the constriction, usually by nicking or dividing Gimbernat's ligament, the color of the strangulated intestine returns to normal, showing that the intestine is viable, it should be returned to the abdominal cavity and the crural ring closed. If, after waiting, and the application of warm towels, the color does not return to normal, and the intestine or part thereof is obviously damaged, one of the several procedures may be done. In certain cases, the return of the circulation in the loop of the intestine is prevented by traction on the mesentery, in which event the intestine may be partly or entirely returned temporarily to the abdominal cavity for a short time until its viability can definitely be determined. The latter suggestion has recently been made by Plummer,[1] who writes that he could find no mention of it in the text-books. Surely the value of this suggestion is so obvious that it must have been used by other surgeons when it was evident that it was traction on the mesentery which prevented the return of circulation to the intestine. In the presence of any evidently gangrenous area on the intestine, or infection of the sac contents, the temporary return of the intestine risks infection of the general peritoneal cavity and, of course, should not be done.

It has been suggested that after relief of the constriction, if there is still question of the viability of the intestine, it may be left in place surrounded by gauze, wrung out in hot salt solution, until this question is determined, when it may be replaced and the hernia repaired or a resection done, as indicated, at a second operation (operation in two stages); or the doubtful intestine may be returned just within the ring and held near the opening by means of sutures, the hernial ring not being closed. These procedures are certainly preferable to returning damaged intestine to the free peritoneal cavity, but if a secondary resection should be necessary, the chances of recovery of the patient will probably not have been increased by the delay, and it would seem wiser to resect at once in doubtful cases.

It has also been suggested that in those cases in which the circulation returns to the loop of the intestine, except in a band where the pressure of Gimbernat's ligament has caused what is practically a pressure necrosis, as in Cases 3 and 4, the damaged area might be inverted without resection. Hodge[2] reports a case of intestinal obstruction following this operation, which necessitated a subsequent resection ninety-six hours later. This would seem a not unlikely result where any considerable breadth of intestine had to be inverted. Statistics also show the very high mortality (90 per cent. in the combined Bellevue and St. Luke's statistics) of cases in which an enterostomy has been done, although this is probably used only when the patient's condition has been allowed to become so desperate that a resection and anastomosis would almost certainly be fatal.

When the intestine is gangrenous or obviously damaged beyond viability, resection and anastomosis should be performed. Whether this can best be accomplished through the enlarged femoral opening or through a secondary abdominal incision will depend on the size of the enlarged femoral opening, and also on the length of the mesentery of the loop to be resected. If the mesentery is not sufficiently long, traction on the loop of the intestine interferes with its circulation, and in such cases an abdominal incision allows greater freedom in performing the anastomosis, and better judgment in determining the amount to resect, doing less damage to the intestine on each side of the anastomosis. Also, there is sometimes difficulty in returning the anastomosed intestine through a not greatly enlarged femoral ring. On the other hand, the performance of the anastomosis through a secondary abdominal incision necessitates the reduction of the damaged and perhaps gangrenous and infected intestine, and the carrying of it across a free, clean area of the peritoneal cavity to the

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1. Plummer: Surg., Gynec. and Obst., June, 1911.
2. Hodge: Ann. Surg., 1908, xlix, 723.

second incision, with the danger of peritoneal infection. As to the method of anastomosis, whether lateral, end-to-end, by suture or Murphy button, depends on the speed, skill, familiarity with the operation, and personal preference of the surgeon. Lateral anastomosis can usually be performed more rapidly and is generally believed to be safer and easier than an end-to-end anastomosis, and is probably preferably done when operating through the secondary abdominal incision. It requires a longer loop of intestine, however, than it may be possible to pull down through the femoral ring in the event of a short mesentery, and in such cases an end-to-end anastomosis is preferable. Also, it is more difficult, or may be impossible, to return into the abdominal cavity without very greatly enlarging the femoral ring.

The method of closing the ring after tying off and displacing the neck of the sac, employed in the nine cases reported, was by means of a purse-string suture through Poupart's and Gimbernat's ligaments, the pectineus sheath and muscle, and the sheath of the femoral vessels. This has been found most satisfactory in these cases, as well as a number of non-strangulated femoral hernias. Sprengel, however, has collected fifty different methods of repair of femoral hernia, and Ochsner states that a cure will be effected by carefully tying off the sac alone. Recurrences, however, have occurred where no attempt has been made to unite the muscular and ligamentous strictures forming the crural ring, and is especially apt to occur where enlargement of the ring has been necessary to relieve constriction in a strangulated hernia.

Finally, as to the anesthetic: Relief of the constriction, reduction of the hernia, and repair of the ring, and even resection and anastomosis, can be obtained under morphin and local anesthesia, with very little pain in most cases, and in the presence of fecal vomiting, even after lavage, this is a safer, though slower method of procedure. However, in cases in which it is necessary to make considerable traction on the mesentery in order to resect, the pain is severe and a general anesthetic is necessary.

CONCLUSIONS

1. Because of the danger of strangulation and inability to cure by other than operative measures, operation should be advised when a diagnosis of femoral hernia is made.

2. Sufficiently early diagnosis and operation would prevent the necessity of intestinal resection, and thus lessen the mortality.

3. Intractable vomiting with pain, either abdominal or localized in the groin, especially in women, should indicate careful examination of the femoral rings, even before it is obvious that intestinal obstruction exists.

4. Operation should be performed as soon as the diagnosis of strangulated femoral hernia is made, if gentle attempts at reduction fail.

5. If the strangulated intestine is damaged beyond viability, resection and anastomosis should be performed. When there is a sufficiently long mesentery not to hamper the operation, this may be done through the primary incision made over the femoral ring; otherwise, a secondary abdominal incision should be made.

6. Except in the most desperate cases, when the patient's condition is so extremely bad that it is impossible to perform an anastomosis, an enterostomy, even as a temporary resort, should not be done.

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ON WHAT DO THE HYGIENIC AND THERAPEUTIC VIRTUES OF THE OPEN AIR DEPEND? *

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Many of us can trace our first interest in the hygiene of ventilation to reading of the ghastly incidents of the Black Hole of Calcutta on a night in June of 1756. The "Hole" was a room, 18 or 20 feet square, having two small windows obstructed by a verandah. One hundred and forty-six Europeans were confined over night in this dungeon. In the morning but twenty-three were taken out alive.

The physical conditions endured by these victims of close air must have included: diminished oxygen tension in the air and corresponding excess of carbon dioxid; excessive heat, combined with humidity; pollution of the air with organic exhalations from the lungs and skin. The effect of this physical environment must have been aggravated by the associated psychic factors of fear and rage.

It would seem to be a very simple problem in this experimental age for a jury of laboratory workers to present a verdict declaring the exact cause of death in these victims of close air; yet the annals of research nowhere more vividly illustrate our labored progress toward truth than in the history of the attempt to establish the factors which physiologically distinguish closed from open air, and a knowledge of which must underlie any rational system of ventilation.

Numberless observations have all led to the one conclusion that prolonged confinement in close air tends to lower vitality and increase the incidence of certain infections, especially pulmonary tuberculosis. Even aside from the established fact that the transmission of infectious disease in closed rooms is dependent on the incidental concentration of the infective material and not on any deleterious property of the air itself, it will be generally admitted that there is a vital difference between closed and open air which makes for the advantage of the latter in the preservation of health and in the recovery from, at least, certain diseases.

Already, by the middle of the last century, it had been experimentally determined that the carbon dioxid of the expired breath could not be held accountable for the deleterious qualities of air under any endurable conditions of crowding indoors. It was found by Leblanc,[1] in 1842-43, that animals could be confined with impunity in an atmosphere containing as much as 30 per cent. carbon dioxid, provided the proportion of oxygen was raised to 70 per cent.

Other observers recorded similar results. In short, animals and men can tolerate without distress an increase of carbon dioxid in the air far beyond any concentration which it is likely to acquire under the worst conditions of crowding, provided the oxygen tension is maintained at a high level. It has been found, however, that animals breathing in sealed vessels, in which the proportion of oxygen falls while that of carbon dioxid rises, readily succumb. The reason for this opens an interesting chapter in physiology which has been written chiefly by Zuntz and by Haldane and his associates.

The gist of the matter is contained in the statement that the normal excitement of the respiratory nerve-

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* Read before the Denver County Medical Society.

[1] Billings, Mitchell and Bergey: The Composition of Expired Air and Its Effects on Animal Life, Smithsonian Institution, 1895.

center depends on the accumulation within it of carbon dioxid, a waste product which it is a prime object of respiration to remove. Wide fluctuations in the oxygen tension of the air breathed are physiologically indifferent until the proportion falls to about 13 per cent. of an atmosphere; then the body begins to suffer from lack of oxygen. The internal effect of this deprivation is a disturbance of metabolism resulting in an excessive production of acid substances, especially of lactic acid, in the body.

This acid in the circulation lowers the "threshold of irritability" of the respiratory center for carbon dioxid; so that under the conditions named, simultaneous failure of oxygen and accumulation of carbon dioxid in the respired air, we have a vicious circle established involving both a progressive increase of irritability and an increase of the irritant of the respiratory center, the outcome of which is physiologic disaster.

Under the influence of von Pettenkofer, in the early sixties, views were accepted which for many years established the requirements for good ventilation. It was conceded that, though carbon dioxid itself could not be regarded as the deleterious factor of the breath, its concentration in an inhabited apartment afforded a safe and readily determined index of the purity of the air. Hygienists now took their stand on a presumptive toxicity of exhaled air due to organic pollutions derived from the lungs. It was this insidious poison, of whose concentration in the air the carbon dioxid percentage formed an index, which it was the object of ventilation to remove.

Substantial support was given to this doctrine by the renowned experiments of Brown-Séquard and d'Arsonval in 1887.[1] These authors found that the liquid condensed from expired air when injected into animals produced toxic symptoms or even death. They confined animals in a series of cages connected together by rubber tubing through which air was aspirated. Each animal, therefore, was forced to breathe the air which had already been respired by the creatures preceding it in the series. The authors found that the last animal in the chain, which had respired in air already breathed by all the others, first succumbed to the atmospheric conditions; the next to the last died second; the first and second animals usually remained alive. When the air entering the last cage was washed by passage through concentrated sulphuric acid, the death of the animal therein was prevented. These workers considered that they had furnished crucial evidence that whatever toxicity is possessed by exhaled air is due to organic effluvia contained in it. Doubt was soon thrown on these conclusions by other observers who either failed to obtain the results of Brown-Séquard under similar experimental conditions, or explained such results as due to errors in technic.

Among the most authoriative pronouncements on the subject was that published in 1895 by Billings, Mitchell and Bergey,[1] who specifically denied that there was any evidence of a special toxicity in the expired air. "The injurious effects of such air observed," they write, "appeared to be due entirely to the diminution of oxygen, or the increase of carbonic acid, or to a combination of these two factors." They consider that the principal, though not the only, causes of discomfort to people in crowded rooms are excessive temperature and unpleasant odors. So the idea gained ground that the deleterious qualities of rebreathed air are not due to organic pollution, and as will presently be seen, many recent researches tend to support this view. Only the other day, however, Rosenau and Amoss[2] gave an account of careful experiments which inevitably suggest the position assumed by the school of Brown-Séquard. These workers condensed the vapor of human expiration and injected the liquid into guinea-pigs. No symptoms followed this procedure. But after an appropriate interval of some weeks a little of the blood-serum from the persons supplying the moisture was injected into the same animals. The outcome was unmistakable anaphylactic reaction. According to current beliefs the result showed that the expired air must have contained proteid matter which sensitized the pigs toward proteids in the blood of persons from whom the first proteid was derived. The authors offer, as yet, no opinion as to whether the proteid in the expired air possesses hygienic significance. We may assume *a priori* that when air is rebreathed, its proteid content may or may not be resorbed. In the former case it might be simply indifferent to the tissues, or it might sensitize them and prove more or less disastrous to the general resistance powers of the body, or the process of sensitization might be carried on to complete immunity. Since the respiratory channels of every person must continually contain the organic matter found in the exhaled air, it is difficult to see how the body could escape acquirement, through auto-inoculation, of any specific alterations which could be imposed on it through rebreathing the air. We find a suggestive analogy in the physiologic relations of carbon dioxid which it is one of the chief objects of respiration to remove. Added to the air to a sufficient percentage it is deadly to animals, yet so far from its being useless in the body, Haldane and Priestley[3] found that it must form 4 to 5 per cent. of the alveolar air for the maintenance of normal respiratory movement, and a considerable lowering of its tension in the body would be followed by speedy death. In fact, as will be seen later, Boycott and Haldane note that the subjective sense of invigoration and well-being excited by cold weather is associated with a high tension of carbon dioxid in the alveolar air.[4] It is, perhaps, to be regretted that the experiments of Rosenau and Amoss were made, apparently, only with air that had passed through the mouth and was therefore liable to local pollution. Formanek,[5] for example, had concluded from an extended review of the subject that all the poisonous properties that had been demonstrated in expired air could be attributed to ammonia arising from decompositions occurring in the mouth.

In recent years the hygiene of ventilation has been the subject of renewed and widespread investigation from a different point of view. It has been attempted, namely, to ascertain the physical elements underlying the subjective sense of discomfort suffered in the bad air of ill-ventilated spaces.

In 1905, Heymann, Paul and Ercklentz performed in the laboratory of Flügge several series of experiments of fundamental importance.[6] It was found that when a man was confined in an air-tight box no discomfort was felt until both temperature and humidity of the air within the box had increased to certain degrees; then were experienced with increasing intensity the various symptoms produced by foul air, as headache, fatigue, dizziness, nausea, etc. When the confined air was set in motion by an electric fan the disagreeable sensations were almost immediately relieved. If, while suffering from the conditions within the box, the subject breathed pure air from outside through a tube fastened in the wall of the space no relief from the symptoms was experienced. If, however, the subject was situated wholly outside the box and, through tubes inserted in his nostrils breathed air from within which had already been made foul by another person, no discomfort was felt. The percentage of carbon dioxid within the box often rose to 15 or 16 parts per 1,000, which is many times its concentration in an ordinary room.

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[2] Rosenau and Amoss: Organic Matter in the Expired Breath, Jour. Med. Research, 1911, xxv, 35.

[3] Haldane and Priestley: The Regulation of the Lung Ventilation, Jour. Physiol., 1905, xxvii, 225.

[4] Boycott and Haldane: The Effects of Low Atmospheric Pressures on Respiration, Jour. Physiol., 1908, xxxvii, 359.

[5] Quoted by Benedict and Milner, Note 9.

[6] Heymann, Paul, Ercklentz, Flügge: Ztschr. f. Hyg. u. Infektionskr., 1905, lix.

> "Under this condition of excessive carbon dioxid no discomfort was experienced by the subjects until the temperature had risen to about 78.8 F.; on the contrary, if the humidity of the air was 75 to 80 per cent., the discomfort was invariably noticed at 75.2 F. Accurate observations of the body temperature were taken at the breast with a delicate thermo-element, and measurements of the temperature and humidity of the clothing showed that as soon as the disturbance of the heat evolution of the body began, there was a maximum increase in the temperature of the skin and increase in the humidity of the covered portions of the body. These objective observations invariably accompanied the subjective disagreeable sensations."[5]

Flügge,[6] in summarizing the results of these researches, says, "Numerous investigations on people both well and sick have shown that chemical changes in the character of the air in inhabited rooms exercise no deleterious effect on the health of the dwellers."

Interesting observations in the same direction were made by Leonard Hill and his colleagues.[7] Eight men were confined in an air-tight chamber of about 3 cubic meters' capacity, having windows in the walls and three electric fans in the roof. Hill writes:

> After forty-four minutes the dry bulb stood at 87 F., the wet bulb at 83 F. The carbon dioxid had risen to 5.26 per cent. The oxygen had fallen to 15.1 per cent. The discomfort felt was great, all were wet with sweat and the skin of all was flushed. The talking and laughing of the occupants had gradually become less and then ceased. On putting on the electric fans and whirling the air in the chamber the relief was immediate and very great, and this in spite of the temperature of the chamber continuing to rise. On putting off the fans the discomfort returned. The occupants cried out for the fans. No headache or after-effects have followed this type of experiment, which has been repeated five times.

Prof. Theodore Hough describes an experiment in which a person was confined in an air-tight box with dimensions 3 by 5 by 7 feet.

> The percentage of carbon dioxid rose to 50 parts or more in 10,000. When the observer opened the door the odor of the air within was almost overpowering; and yet, provided the water vapor was absorbed and the temperature of the box kept down, the subject of the experiment had not only been unconscious of this odor but had actually suffered no discomfort.[8]

In their classic experiments on the conservation of energy in the human body with the respiration calorimeter, F. G. Benedict and R. D. Milner[9] kept a subject for twenty-four hours in a chamber, the air of which held an average carbon dioxid content of 220 parts per 10,000, or over seventy times the normal, together with a reduction of oxygen to less than 19 per cent. The humidity was kept down and the temperature held uniform. The subject of the experiment suffered no discomfort and his body metabolism, as determined by the number of calories of heat given off, the weight of oxygen consumed and of carbon dioxid exhaled, did not differ from that of a control experiment made in pure air.

In their experiments on the variations of carbon dioxid tension in the alveolar air, Boycott and Haldane express the opinion that "the alveolar carbon dioxid tends to a lower level in warm weather." They say:

> The authors are of the opinion from general experience, which it is not possible to express in numerical terms, that this diminution in the alveolar carbon dioxid is associated with the feeling of warmth of a rather unpleasant kind rather than with any absolute point on the thermometer. It is clear that it has nothing to do with body temperature as measured in the rectum, and is produced by contact of warm air with the face and hands within two or three minutes. We think, indeed, that it is one of the physical expressions of the feeling of warmth and slackness, while the rise in the carbon dioxid tension is associated with the general exhilaration and stimulation produced by cold air.

The foregoing résumé presents the essential demonstrations of our knowledge of the physiology of ventilation. The facts seem to me to point to a tangible, measurable, physical basis for the known hygienic and therapeutic virtues of the open air. The definite conception of the prophylactic and remedial powers of fresh air which has gradually developed in recent times, chiefly through the clinical study of pulmonary tuberculosis, marks perhaps the most valuable discovery ever achieved in medicine.[10] There is nothing in the evidence before us which proves that the chemical changes in respired air, whether lack of oxygen, increase of carbon dioxid or the accumulation of organic effluvia are injurious to the organism under any tolerable conditions of bad ventilation. But it would be most injudicious to conclude from this negative evidence that these chemical changes of respired air do not render it noxious to living beings. The curious fact is mentioned by Benedict that green plants which are able, under the sunlight, to appropriate and decompose the carbon dioxid of the free air, of which it only forms three parts in 10,000, do not thrive when the carbon dioxid tension is increased. On the contrary, plants thus exposed to even a slight excess of carbon dioxid showed deterioration in growth and reproduction, "and it is believed that the comparatively sudden increase of the carbon dioxid in the air to an extent of but two or three times the present amount would result in the speedy destruction of all plant life." While a positive assumption that rebreathed air is chemically deleterious would be quite gratuitous, the contrary point of view is equally unfounded. We must simply admit that the exhaled air has not been proved poisonous. On the other hand, when we consider the feelings, the subjective state, of a person confined in close air our evidence is of the most positive kind that the sensations and symptoms of discomfort have no relation to the chemical changes in the close air, but depend wholly on elevation of temperature combined with excessive humidity. These physical factors operate on the body by interfering with the loss of heat from the skin. The temperature regulation of the body, that delicate equilibrium which depends on the exact coordination of so many physiologic factors, is overturned.

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7. Hill, Leonard: The Relative Influence of Heat and Chemical Impurity of Close Air, Jour. Physiol., 1910, xli, p. 3.

8. Hough, Theodore: The Physiologic Aspects of Ventilation, Am. Jour. Pub. Hyg., 1910, xx, 262.

9. Benedict, F. G., and Milner, R. D.: Experiments on the Metabolism of Matter and Energy in the Human Body, Bull. 175, U. S. Office Exper. Sta., 1907.

10. James, W. B.: Environment in Therapeutics from the Standpoint of Physiology, Am. Jour. Med. Sc., 1906, p. 665.

It is obvious that mechanical disaster to the vital machinery would ultimately result from accentuation of the conditions interfering with the physiology of heat regulation and concomitant reactions. Nature, however, has provided a fender against this evil.

As the sense of pain is, on the whole, the great though immaterial protector of the body against injury, so the distress, the feeling of ill-being suffered by one confined in close air is the psychic forerunner of physiologic incoordination. In moist, heated air the skin becomes congested; radiation, the principal means for the loss of heat to the body, diminishes with rising external temperature. Now an associated reflex, the secretion of sweat, becomes of increasing importance. By the evaporation of water thus accumulated on the skin the loss of heat may reach almost any rate and amount. But evaporation is effectually repressed by the saturation of the layer of air next the skin and can be resumed only when motion is imparted to the gas, replacing the humid coat with a dryer covering. It is therefore clear why a breeze should be so immediately beneficent to the sweltering body.

A physiologic analysis of the skin makes it well-nigh certain that all these vascular and secretory changes are but reflexes dependent on the irritation of peripheral afferent nerves, the nerves which are specifically relegated to the *temperature* sense. The feeling of warmth and coolness normally depends on their excitement: they are the sole messengers through which the master mechanisms of the body are put in touch with its thermal environment and when, perchance, the normal effort at readjustment fails, the body temperature rises or falls with the warning psychic accompaniments of discomfort or pain. No limit can be set to the authority exercised by the temperature nerves of the skin over the metabolisms of the body. In the tropics they open in man his channels for the loss of heat, while in the polar regions they excite the appetite, stimulate digestion and render possible the appropriation of indispensable potential energy in the food. Even in the hungering animal they reflexly fan the combustions in the muscular tissues with the wonderful result that the body temperature remains practically constant in a thermal environment ranging through many degrees. When the reflexes are abolished under a general anesthetic the body of a man behaves like that of a cold-blooded animal; its temperature rises and falls with that of the exterior.[11] It cannot be urged too insistently that definite chemical and physical changes are wrought in the vital tissues under the influence of nervous impulses. The phenomena of muscular contraction and of salivary secretion have long been fields for laboratory demonstration. Recently, Howell[12] has shown that potash ions are set free in the heart through stimulation of its inhibitory nerve. Crile[13] has elaborated a chain of evidence that afferent fibers exercise no less organic effects on their nerve centers than do efferent nerves on peripheral tissues.

There is, then, no theoretical difficulty in the way of believing that the temperature nerves of the skin are specific organs, though not the only ones, for the regulation of the metabolisms of the body; as a corollary to this thesis we can hardly doubt that through them, largely, are developed and maintained the innate "resistance powers" of the body and its ability to respond protectively to the assaults of poisonous antigens. The clinical physiologist must feel no less sure that the "warm" and "cold" nerves of the skin have independent specific relations to the vital chemistry. For the present we must leave out of consideration the metabolic significance of the pressure nerves of the skin and the related sensory nerves of the muscles. Many facts, however, point to the conclusion that the cooling, moving air of the open operates on them as a stimulus of high importance. In fine, the open air furnishes an environment most favorable for that infinitely complex play of nervous impulses involved in the balance of vital forces. The ceaseless adjustment of the organism to the fluctuation of the physical factors of climate gives the internal exercise needed for the maintenance of health. Every breath of air, every degree of temperature and humidity alters, as it were, the physiologic center of gravity of the body and is answered by a vital response directed toward maintaining the equilibrium of the system, an equilibrium which we crudely recognize through the reading of the clinical thermometer. But the open air embraces other attributes which render futile the imitation of its conditions indoors.

The beauty of Nature appeals to an esthetic sense which cannot be neglected in any scheme of physiologic development. The feeling which distinguishes a natural from an artificial flower, which expands best under the ceiling of the sky, which puts one in harmony with living things has a power for good in itself.

CONCLUSIONS

1. No proof has been furnished that the increase of carbon dioxid, the decrease of oxygen or addition of organic animal matter in the air of ill-ventilated apartments is, under any ordinary circumstances, injurious to health.

2. It has been proved that such chemical changes are not the cause of the sensations and symptoms due to poor ventilation.

3. The subjective and objective effects of close air are the result of the combined elevations of temperature and humidity incident to the association of living bodies.

4. It is argued that the temperature nerves of the skin are specific sense organs for the appreciation of the variations of temperature and humidity and through which a wide range of metabolic actions in the body is regulated. It is through the genius of the moving air of the open that the temperature nerves find their most salutary stimulus and induce metabolisms characteristic of highest machine efficiency in the body. The physiologic difference between "open" and "closed" air depends partly or wholly on differences in the stimulation of the temperature nerves of the skin under the two conditions.

5. The environment of the open air is conducive to an esthetic state that should not be ignored as an aid to healthy living.

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[11] Pembrey, M. S.: Animal Heat, Schäfer's Textbook of Physiology, 1898, i, 866.

[12] Howell, W. H., and Duke, W. W.: The Effect of Vague Inhibition on the Output of Potassium from the Heart, Am. Jour. Physiol., 1908, xxi, 51.

[13] Crile, G. W.: Phylogenetic Association in Relation to Certain Medical Problems, Boston Med. and Surg. Jour., 1910, clxiii, 893.

Inheritance.—Inheritance is said to be blended when the characteristics of the two parents are evenly blended in the offspring, as in the case of the mulatto. It is said to be particulate when the characteristics of one parent are expressed in one part of the body and the characteristics of the other parent in another part of the body of the offspring, as in the case of piebald animals. Again, the inheritance is said to be exclusive when the offspring resembles one parent only. In such cases the parent who is resembled is said to be prepotent.—A. H. Stewart in *Dietetic and Hygienic Gazette.*

ANAPHYLAXIS

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Immunity is now one of the most important phases of modern medicine. In order to understand the process of immunity or antianaphylaxis we must understand anaphylaxis, a condition which precedes immunity. Prophylaxis depends on anaphylaxis. Recent work has done much to advance our knowledge of anaphylaxis, although there remains much to be made clear. The name "anaphylaxis" was given by Richet in 1904, and was used to define the condition of acquired or congenital hypersusceptibility of an organism to a strange protein, or antigen with a reaction body formed in the body of the organism undergoing immunity.[1] The substance must be protein in nature, though not all of them will cause anaphylaxis (e. g., leucin and tyrocin).

For example, if we give a normal guinea-pig a sensitizing dose of 0.1 c.c. of horse-serum subcutaneously, intravenously, or intracranially, and after a period of from seven to nine days give this sensitized guinea-pig another dose in the same manner, the pig becomes very suddenly sick. He becomes restless, scratches at his nose and mouth and appears in great distress. His breathing becomes irregular, shallow and quick. He has convulsions and dies in so-called anaphylactic shock, the heart continuing to beat for some time after respirations have ceased. Had the pig survived the second dose, he would have been in a condition of immunity for the time being, and would have no longer reacted to a dose of the same serum. If after giving the first dose no more serum had been given, no symptoms would have resulted.

The period of incubation is the time that must elapse before the second or intoxicating dose will produce the characteristic symptoms. This period is from one to three weeks, after which the animal is sensitized or hypersensitive. The average time of incubation is ten days.

Rosenau and Anderson used doses varying from 0.000001 c.c. to 8 c.c. and did not find the period of incubation appreciably prolonged by a large sensitizing dose.[2] When the interval between the sensitizing dose and the second dose is three, four or five days there are no symptoms.

So effective is the process of this biologic phenomenon that if the horse-serum be dropped into the eye of the guinea-pig, it may be sensitized to a second dose in seventeen days. The experiments that have been made show that the toxic action is specific so far as the various serums are concerned. A guinea-pig sensitized with horse-serum is more susceptible to horse-serum than to cattle-, sheep-, hog- or other serum. Anaphylaxis is therefore regarded as a specific reaction.

Many different proteins have been used, including horse-serum, egg-, donkey-, sheep-, rabbit-, eel-serum and others. The serum first used by Richet was obtained from the tentacles of a sea anemone (actinia).

In the experiments made by Rosenau and Anderson there was a reaction in each case for the various proteins on giving the second dose.

The specific nature of anaphylaxis is further shown by various experiments. For example, guinea-pigs sensitized with three separate proteins, viz., horse-serum, egg-white and cow's milk contain three separate anaphylactins in their blood.[3]

The toxic principles in the proteins resist the various physical and chemical forces that destroy. They are filterable through porcelain[4] and are not destroyed by drying. Heating for two hours at a temperature of 130 C. does not destroy them. The poisonous action is not destroyed by chloroform, formaldehyd, trikresol (0.4 per cent.), alcohol or permanganate of potassium. Extracts of dried mummy and eighty-year old cow's placenta and blood dried for fourteen years, the cells being destroyed, were capable of sensitizing and producing anaphylaxis.

Extract of peas is quite as active as horse-serum. Guinea-pigs fed with horse-serum or horse-meat are susceptible to subsequent injections of horse-serum, and guinea-pigs fed with beef are susceptible to cattle-serum.

The poisonous principle in horse-serum appears to act on the respiratory system, or centers, the heart continuing to beat after respiration ceases. The poisonous action has no relation to hemolysis, but the blood contains an acute poison entirely independent of any hemolytic action.

It was first thought that in the case of diphtheria antitoxin, the antitoxin was the cause of the poisonous action, but it is now known that diphtheria antitoxin is entirely harmless and that the horse-serum is the sole cause of the poisonous action.

Man reacts to the first injection of horse-serum in seven to fourteen days, while a guinea-pig shows no reaction to the first injection. Both man and the guinea-pig react to the second injection, the reaction differing in the severity and kind.

Of thirty-four deaths reported by Owens,[5] following the injection of horse-serum (in the form of antitoxin), the majority were persons subject to asthma, or inherited a susceptibility to the odor of horses, or discomfort when in the neighborhood of a horse.[6]

The following case is interesting as bearing on this point. A young man, aged 25, was a subject of hay-fever and occasional attacks of asthma. His brother is an asthmatic. So susceptible was the patient to the odor of horses that he was compelled to ride in a closed carriage or be made sick by the odor of the horses. Some children in his home contracted diphtheria. As a means of protection the young man was given antitoxin. In a few seconds he was in collapse and became unconscious and his respiration so embarrassed that it was thought that he was dead. After hard work, restoratives and artificial respiration saved his life.

According to Donaldson,[7] 80 per cent. of all serious accidents in the use of serum occur in those who have been previously inoculated. Reports from all parts of the country confirm this. I gave a child, 3 years old, an immunizing dose of antitoxin. There was little reaction. Eight months later the child developed nasal diphtheria. Antitoxin was given and the child became very ill. The respiration became rapid and labored so that pneumonia was suspected. A large area of the back surrounding the point of injection became very edematous and very dark. The child's condition seemed very grave. After three days of severe illness the symptoms began to subside and all symptoms of anaphylaxis rapidly disappeared.

Another case of interest presented some features that are unusual. A lady wishing to nurse her daughter took an immunizing dose of diphtheria antitoxin. She was taken suddenly ill and became very much swollen all over her body. An urticarial rash developed. Her joints became stiff and she was quite ill for one month. The stiffness in her joints remained for one year, after which time she entirely recovered.

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[1] Pediatrics, September, 1911.
[2] Hyg. Lab. Bull., No. 45.
[3] Hyg. Lab. Bull., No. 45, p. 60.
[4] Hyg. Lab. Bull., No. 29, p. 92.
[5] Northwest Med., July, 1911.
[6] Hyg. Lab. Bull., No. 50, p. 8.
[7] Med. Rec., Aug. 5, 1911.

The fact that the serum which carries antitoxin at times produces a severe reaction should certainly not prevent the use of antitoxin in diphtheria, as out of the enormous number of cases in which antitoxin has been used the mortality from the serum has been exceedingly small.

In the case of asthmatics for whom the serum conveying antitoxin is so poisonous and in the case of those who have taken the serum before, some test of their susceptibility is of great value. Dr. August Callé has used and recommends a scratch test.[8] The test is made in the same way as the von Pirquet test for tuberculosis. If a minute quantity of the serum be rubbed into a scratch in the skin and there follows a severe local or systemic reaction, its further introduction into the system in full therapeutic doses would be contra-indicated.

In cases in which there is danger from the use of horse-serum, atropin[9] has been used by a number of investigators to modify the shock. Chloral hydrate,[10] epinephrin and artificial respiration have given good results in a few cases, and has been useless in a large number of cases.

Rosenau and Anderson have pointed out the great similarity between anaphylaxis and the process that takes place in tuberculosis. The tuberculin reaction is one of the best-known instances of anaphylaxis.

The hypersusceptibility of the tissue surrounding a tuberculous area assists in encapsulating and limiting the process.[11] We see, therefore, that "resistance to disease may be largely gained through a process of hypersusceptibility, and that hypersusceptibility has an important bearing on the prevention and cure of certain infectious diseases or processes."

Should tubercle bacilli be lodged on tissue in a state of anaphylaxis then the protecting agencies of the organism are quickly concentrated where they are most needed.

It may be noted in this connection that the immunity caused by vaccinia is due to the power of rapid reaction in the organism.

The mother guinea-pig transmits the susceptibility to the toxic action of horse-serum to her young. This may throw some light on the hereditary transmission of tuberculosis. The fact that tuberculosis does run in families must, without doubt, be due to hypersusceptibility in a great number of cases.

The person who is hypersensitive to tuberculosis may, by the proper use of tuberculin, acquire immunity. By the wrong use of tuberculin in too large, or too oft repeated doses, the beneficial hypersensitive state of the tissue may be exhausted or destroyed. Beginning the use of tuberculin, it should be given in such small doses as to develop and not diminish the power of anaphylaxis.

The early failure in the use of tuberculin was due to too large dosage and overwhelming an already poisoned system. The small dose of tuberculin revolutionized the use of tuberculin. We must agree with Voltaire when he says, "the most mischievous ignorance is that of the critic." The critic in this case was ignorant and Koch builded better than he knew. Like Harvey, he lived ahead of his time. Diseases like hay-fever and dermatitis, such as those produced by poison-oak, find their explanation in hypersusceptibility.

Hypersusceptibility may be easily induced in guinea-pigs with protein extract obtained from bacterial cells. The first injection is quite harmless, but the second injection of the same extract, after a definite lapse of time, is followed by profound physiologic changes, and resembles the condition when horse-serum is injected. In certain cases the second injection is followed by immunity to corresponding infection.

> "Rosenau and Anderson believe that the phenomenon of hypersusceptibility has a practical significance in the prevention and cure of certain infectious processes. It gives a possible explanation to the period of incubation of some of the communicable diseases.
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> "It is coincident that the period of incubation of a number of infectious diseases is about fourteen days, which corresponds significantly with the time required to sensitize animals with a strange proteid. In certain infectious diseases with short periods of incubation, such as pneumonia, the crisis which commonly appears about the tenth day may find a somewhat similar explanation.[12]

The old expression, "one man's food is another man's poison," finds its explanation in anaphylaxis.

While I was an intern in a hospital in New York City, there was a man in the ward who would not have any form of mutton on his tray. He insisted that any form of mutton made him sick. It was decided to try him with a pill made of mutton disguised, given with his medicine. He was given the disguised mutton pill and he promptly became very sick, and declared he had taken sheep meat in some form.

Dr. Harold N. Cole[13] records a case of a man, aged 47, who first at the age of 9 had a severe urticaria, vomiting and general depression after eating buckwheat cake. After that time he was always very susceptible to buckwheat, and by means of his reaction was able to detect the adulteration of pepper with buckwheat. The patient was vaccinated with buckwheat flour, using wheat flour for control. Within fifteen minutes he had a very general depression, areas of edema and a large wheal at the site of the vaccination.

The connection between the toxemia of pregnancy and anaphylaxis is by some experimenters regarded as an established fact. Dr. Goodall of McGill University has reported three cases of sudden death in children after a copious nursing from an eclamptic mother. The manner and system of death were identical in all three cases. There was general depression, passing into coma and respiratory paralysis. The heart continued to beat after respirations ceased.[14]

In a recent article on "Anaphylaxis in its Relation to Pediatric Practice," Drs. Pisek and Pease[15] discuss the question of milk and the intolerance of milk by certain children and the resulting anaphylactic shock on taking milk. They say:

> This may give ready explanation of the failure of many atrophic children to take milk, no matter what the modification. It being impossible to sensitize an animal with its own proteins, a quick recovery would be expected if these children were placed on human milk, which in fact is usually the only method by which they can be saved.

Many children do well on cow's milk for a week or ten days, the period of incubation of serum sickness, and after that time begin to have trouble.

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[8] Pediatrics, September, 1911.
[9] Cleveland Med. Jour., May, 1911.
[10] Hyg. Lab. Bull., No. 64, p. 8.
[11] Arch. Int. Med., 1909, iii, p. 560.
[12] Hyg. Lab. Bull., No. 36.
[13] Cleveland Med. Jour., May, 1911, p. 447.
[14] Pediatrics, September, 1911.
[15] Pediatrics, September, 1911.

The toxic action of Jersey cow's milk on young infants is well known and probably finds its explanation in anaphylaxis.

Egg albumin, which is so often used when milk cannot be used, at times causes such severe anaphylactic reaction that discontinuing the egg albumin is necessary to relieve the condition.

It is necessary to understand clearly the difference between antiserums and vaccines in order to use these products. Antiserums, which contain antibacterial power, are elaborated in the blood of a horse. Vaccines are suspensions of dead bacteria in physiologic salt solution. The antiserum is a biologic germicide, and when injected into a patient conveys the protective substance produced by the horse. When the vaccine is injected the patient must by means of the vaccine produce his own protective bodies. It is clearly seen then that when a patient is overwhelmed with infection a vaccine will only do harm. Experience has shown this to be true.

In a general septicemia the serum is to be preferred, whereas in a localized or semilocalized condition the vaccines are better. Too large a dosage and at wrong intervals has been responsible for much of the failure with vaccines.

Furunculosis can be increased by a very large dose of streptococci. While the activity of the infecting agent is producing a negative phase the use of vaccine is clearly not indicated.

It is clear from what we have seen that in anaphylaxis we are studying a most important step in the process of prophylaxis and immunity. We are studying the use of vaccines and antiserums which are so rapidly forming such an important part of our work and which require as much study as the most dangerous drugs.

In addition to the references given in the footnotes the following may be of value:
Hyg. Lab. Bull., No. 38.
Jour. Med. Soc. New Jersey, June, 1911.
Med. Council, July, 1911.
Med. Rec., April 22, 1911.
Med. Rec., June 10, 1911.
Med. Rec., May 6, 1911.
Australasian Med. Gaz., Nov. 21, 1910.
The Journal A. M. A., Sept. 23, 1911, p. 1023.
Johns Hopkins Hosp. Bull., July, 1911.

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THE SIGNIFICANCE AND TREATMENT OF VOMITING IN INFANTS AND CHILDREN

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In presenting my views on the significance and treatment of vomiting in infancy and childhood, I do not wish to be understood as regarding this condition as a distinct disease entity. On the contrary, my main purpose shall be to emphasize its importance as a symptom. It becomes necessary to study in detail the etiologic factors concerned, so that an intelligent therapy may be arranged. It follows, therefore, too, that each case must be individually considered. The causes of vomiting differ somewhat in infancy, i. e., under 2 years, from those occurring in early childhood (after 2 years), hence a more or less elastic subdivision may be formed as follows: 1. Vomiting of infancy. 2. Vomiting of early childhood.

VOMITING OF INFANCY

In the early days of life, up to the age of 6 months, the stomach is almost entirely covered by the large left lobe of the liver, which cannot, when the stomach is filled, help but interfere with the rapid emptying of its contents through the pylorus, and by pressure causes the organ to assume a more vertical position than when empty. This, together with the undeveloped valve action of the cardiac end, permits and explains the easy regurgitation of food at this time of life. This type of vomiting, better called regurgitation, occurring immediately after feeding, might be regarded almost as physiologic, or simply as the overflowing of an overfilled reservoir, were it not for the fact that if left to continue it decidedly interferes with the nutrition of the infant. It becomes less frequent after six months, as there is, after this period, a decided increase in the greater curvature and the cardia, together with the development of the valve-like action at the cardiac orifice. Nor does the liver cover the entire organ. The prevention and cure of this variety of vomiting can be readily accomplished by the forming of regular habits permitting of a correct feeding interval and the giving of the proper amount of food at each feeding, and by seeing to it that the infant is not picked up immediately after its meal and that it is laid on its right side so that the rapid emptying of the stomach may be favored.

The pernicious habits of irregular feeding and of overfeeding are responsible for the vast majority of cases of functional vomiting occurring under 1 year both in the breast-fed and in the bottle-fed. In making this statement my own personal experience forces me to take issue with certain German authorities who advocate the giving of as much food to the infant as it wants and as often as it wants it. Physicians are led into this error by regarding crying as a sure sign of hunger. They forget that the baby may be thirsty or otherwise uncomfortable. The giving of food on account of its warmth or pleasant taste may momentarily relieve colic or distract the infant's attention and thereby quiet it. The pain returns with increased vigor and is again assuaged in a similar manner. Simple regurgitation of food now becomes a condition of true vomiting, dependent on fermentation and dilatation, if not on actual gastritis. The best argument that an infant should not be permitted to nurse until it voluntarily stops, is furnished by anatomic and physiologic facts. The capacity of an infant's stomach at birth is approximately an ounce, and according to the figures offered by Cotton this develops as follows:

End of first month	2½ oz.
End of second month	3½ oz.
End of third month	4½ oz.
End of fourth month	5 oz.
End of fifth month	5½ oz.
End of twelfth month	8½ oz.

My own experience, based on actual weighing experiments with quite a large number of breast-fed babies before and immediately after feeding, as to the stomach's ability to hold the amounts at the various ages indicated, would place the figures even somewhat lower. Taking these figures as a guide, however, one cannot help but see how foolish it is, not to say dangerous, to offer to an infant under 1 month of age from 4 to 5 ounces of food at a nursing, as I frequently see done by men of large patronage and experience. This practice is pernicious, and, when once it induces vomiting, the condition is most difficult to control, even after the quantity is reduced. The reasons for this have been mentioned, namely, dilatation and atony, if not true gastritis. A safe rule, perhaps, would be to regulate the quantity fed in such a manner that it represents in ounces the child's age in months up to about 6 months. After this the rate of progression should be slower so that at 1 year the infant does not receive more than 9 ounces at a feeding.

What is true of the quantity fed as a cause for vomiting, is likewise true of the interval of feeding. No new food must be put into the stomach until the organ has emptied itself, regained its tone and rested. Too frequent feeding is as pernicious as too much food at a feeding, amounts to the same thing, and is productive of the same ill effects. It retards gastric digestion, impedes gastric motility and hence produces fermentation, colic, vomiting and other symptoms on which depend, in turn, the early evidences of malnutrition and marasmus. It is a notorious fact, readily confirmed by any one who has had a large experience in the management of simple marasmus, that the vast majority of these infants present a history in which overfeeding or too frequent feeding, or both, are the determining factors. While it is important what an infant gets, it is just as important how it gets it and when it gets it. The caprices of its appetite or the whims of its caretaker are poor judges of what is necessary for its nutritional demands.

The prevention and cure of this type of vomiting is self-evident, viz., the proper regulation of the food as to the quantity and interval of feeding. The first has already been discussed. As to the second, no fixed rule will apply to each infant. The individual must be studied to learn his peculiarities, but when once the interval has been determined it must be adhered to strictly. A few general rules may be suggested, bearing in mind that the time between feedings becomes longer as the infant grows older. Thus up to 3 months most infants do well on a two-hour interval, counting from the time of commencing the feeding. After 3 months the time should be increased to two and one-half hours, lengthening this to three hours as 6 months is reached. Between 6 and 9 months nourishment should be given every three to three and one-half hours, and after 9 months every four hours. Regularity is important, and the infant should be awakened during the day for its food on the hour prescribed. During the night, during the first few weeks or in very weak infants, there may be two feedings. After the first month this should be reduced to one feeding and after the second month night feedings should be entirely omitted, the infant sleeping from 10 p. m. until 6 a. m. With a little courage and patience on the part of the parents these habits of regularity are as readily acquired as vicious ones, and the only effect on the infant is incalculable good. Where possible the infant should occupy a room by itself, and if expense is no consideration, I not infrequently employ the services of a trained nurse to do for the infant what the mother is too nervous to do herself. If the infant is not to vomit after feeding it is not to be picked up or shaken, but after its meal it must be permitted to lie undisturbed, preferably on its right side. The time spent at the breast should vary from ten to thirty minutes, depending on the age of the infant and the interval of feeding, but under no circumstance should the meal be interrupted to be resumed again later. These rules apply to the bottle-fed as well as to the breast-fed baby.

The causes of vomiting thus far detailed apply to both classes of infants. There are, however, certain conditions, which, while applicable to all infants, apply with more emphasis to the breast-fed or the bottle-fed as the case may be. Thus we have the importance of the composition of the food applying with greater force to the bottle baby although its significance cannot be ignored entirely when dealing with breast-fed children. The ingredients of the food most commonly at fault are the fat and sugar, and to those accustomed to dealing with these cases the clinical symptoms are significant and frequently permit of a correct interpretation. The vomitus due to excessive fat is distinctly sour and acid, smelling like rancid butter. It contains lumps of coagulated calcium casein, holding within its meshes the fermenting fat which is soluble in ether and reacts characteristically with osmic acid. These pieces of curd are large or small and have a yellowish appearance. The time of vomiting in this condition is important, occurring from one hour to one and one-half hours after feeding; i. e., after fermentation has occurred. The vomiting due to excessive feeding or to too frequent feeding, on the other hand, occurs immediately after a meal, the vomited matter being as a rule, in the beginning, unchanged and frequently uncoagulated. With fat vomiting there are characteristic bowel symptoms, as well, which will not be discussed here.

The remedy, if in the breast-fed, is to attempt the reduction of the fat percentage by modifying the mother's milk. This is, as a rule, more readily accomplished than to increase the percentage where the fat is too low. The free drinking of water by the mother, the partial or complete exclusion of milk, soup, malt liquors and meat from the dietary, increase in exercise and the occasional use of a laxative are measures well calculated to accomplish the result desired. While this is being accomplished the infant should receive a purge of iced castor oil. Stomach washing, done once or twice, is occasionally needed. This applies with greater force to the bottle-fed. Each nursing should be preceded by an ounce or two of some cereal water, preferably made from barley or wheat. Occasionally these cases progress more rapidly if the meal is followed by a grain or two of extract of pancreatin used simply as a temporary means until the fat-reduction is accomplished. In rare instances where it is impossible to reduce the fat the breast-milk may be withdrawn and diluted with a cereal water and fed from a bottle, or the first milk may be expressed or pumped from the breast and the infant allowed to suck "middle" milk or "last" milk, so-called. Very rarely the breast-milk may be withdrawn and pancreatized. Any of these maneuvers, alone or in combination, will usually suffice to overcome the condition in breast-fed babies.

In bottle babies, as a rule, the problem is simpler. Here, following the initial purge and stomach-washing, the infant is fed for twenty-four hours on some cereal water. The physician may then, by one of the many methods of milk modification, so adjust the fat percentage as to suit the infant's digestive capacity. This failing, resort may be had to pancreatization or whey feeding temporarily, whey containing but 1 per cent. of fat.

Where vomiting continues and all fat appears not to be tolerated, we may employ with success modifications of skim-milk, buttermilk or condensed milk. Sodium citrate added to the formula in the strength of 1 to 2 grains for every ounce of milk and cream in the mixture has, in my experience, been of considerable aid in overcoming vomiting.

Sugar is rarely a cause of vomiting, but may be. It practically never is in the breast-fed. When a source of trouble it is not uncommonly associated with a watery diarrhea. The vomitus is watery, sour and hot and occurs late after feeding and may cause crying as the regurgitated material may produce a burning pain in the esophagus. The remedy is an initial purge, rarely a stomach-washing, a colonic flushing and a reduction in the amount of sugar. The protein rarely causes vomiting, unless given in excessively large amounts, in which instance the resulting curd acts as a foreign body and is expelled.

As a cause for vomiting congenital pyloric obstruction is too rarely recognized. I have elsewhere called attention to this fact, but wish here to subscribe to this statement as my guide with the hope that others will adopt it as a means for diagnosis and for saving the lives of many infants whose condition becomes hopeless before it is recognized and whose deaths are largely ascribed to other causes. It is that all cases of vomiting beginning at birth or shortly thereafter and continuing in spite of a reasonable amount of food manipulation, especially in breast-fed infants, or in artificially fed ones as well, and associated with evidences of malnutrition, are to be regarded as cases of pyloric obstruction, until it can be proved that they are not. Vomiting, propulsive in character, occurring immediately after but more often from one-half to two hours after the taking of food or drink, sour and fermented as a rule, accompanied by visible peristaltic waves in the epigastric region, not necessarily reversed, with evidences of gastric dilatation and intestinal collapse, with partial or complete constipation, with or without a palpable pyloric tumor and a varying degree of emaciation depending on the duration of the case, is usually indicative of complete or incomplete pyloric obstruction, and calls for treatment other than the usual medicinal and dietetic remedies. If complete obstruction can be proved, and it often can, surgery, usually a posterior gastro-enterostomy, offers the only hope. If incomplete obstruction or pylorospasm be the cause, as evidenced by partial constipation and stationary weight, lavage, gavage, rectal feeding and the bromids may accomplish a cure.

In direct opposition to this fatal type of persistent vomiting should be mentioned a type of persistent vomiting or "spitting up" of an entirely benign nature. This occurs in either perfectly healthy breast-fed or bottle-fed babies who persistently continue to thrive and to gain in weight. An adequate explanation for its occurrence is difficult or almost impossible of determination and no treatment seems to be of avail. Dietetic manipulations usually give no help and as a rule do harm by interfering with the infant's nutrition, making the weight stationary or causing a loss. It continues until it is spontaneously arrested. The breast-fed milk by repeated analysis is found perfectly normal. While a cause for it undoubtedly exists, the most plausible explanation is a vicious habit which, perhaps, has its origin in faulty hygiene. The condition may be only cautiously diagnosed and a good prognosis given when all other probable causes have been entirely excluded.

Vomiting is a symptom of infectious or summer diarrhea, almost entirely confined to the bottle-fed. It is impossible to enter into a discussion of this disease, but I wish merely to refer to the symptomatic and prognostic importance of vomiting. Occurring at the very onset it results from the direct irritation of the gastric mucosa and is benign in character in that the system is saved from the absorption of a large amount of putrefying material as it passes through the intestine.

Occurring continuously throughout an attack, or manifesting itself as a late feature, it is ominous, resulting as a rule from toxemia and in the majority of instances foreshadows a fatal outcome. The treatment is unsatisfactory. Lavage, to be of value, must give speedy results and must not be continued too long or too frequently repeated. A valuable procedure is gavage. Not infrequently when the smallest quantities of food are expelled when fed by spoon or bottle, they will be retained if given by the stomach-tube. Care and skill, however, must be exercised in feeding by this method. An ordinary soft rubber catheter, 28 to 30 French, is attached to a small glass funnel. All air must be expelled from the apparatus by filling it with the liquid nourishment and then pinching the tube with the thumb and index-finger. The tube thus filled is rapidly passed into the stomach while the infant rests on its back. The pressure on the tube is alternately released and renewed many times and in this way a small measured quantity of nourishment is placed within the stomach. When the infant ceases to gag the tube is pinched again and rapidly removed with one swift stroke. The gavage should follow the lavage, using the same apparatus.

Not infrequently all food by mouth must be suspended and the infant sustained by small nutrient enemas following colonic lavage. If foods are given by the mouth they must be of the mildest kind and in small bulk, concentrated but non-irritating. Cereal waters or cereal gruels, egg water, condensed milk diluted eight to fourteen times with a cereal gruel, whey or mutton broth, are our main reliance. Thirst may be allayed by hypodermoclysis or by the Murphy treatment, which I have seen give brilliant results in desperate cases. Occasionally hot water dropped on the tongue will stop vomiting. Medicaments are of little value, perhaps the best being a small dose of bromid of strontium, from 1 to 2 grains. Vomiting is often a symptom of grave abdominal disease. As a rule it here depends on peritoneal irritation. Intussusception is the most frequent condition met in infancy, while appendicitis, peritonitis, purulent and tuberculous, occur more often in childhood. The character of the vomitus will not infrequently be the concluding point in the symptomatology of intussusception, although I have mistaken a fatal purulent peritonitis occurring in an infant 1 week old as the result of umbilical cord infection, for intussusception, on account of constipation and fecal vomiting. I have also seen a small retroperitoneal sarcoma in an infant 6 days old produce fecal vomiting and bloody stools. Vomiting under these circumstances has no special treatment, its main importance being diagnostic and its outcome depending entirely on the proper surgical treatment of the case.

VOMITING IN OLDER CHILDREN

The more common causes for vomiting in older children are the acute infectious diseases, pneumonia, dietary indiscretions, with or without acute gastritis, ingestion of poisons and ptomain poisoning, acute abdominal disease, uremia, brain disease, acidosis (cyclic vomiting, so-called), reflex causes and ocular conditions. Vomiting is an important initial symptom of scarlatina, small-pox, meningitis and less so of measles, and it may replace the chill of pneumonia. The direct origin of vomiting in these conditions, with the exception, perhaps, of meningitis, is toxic. Vomiting is a prominent symptom of pertussis and its cause here is purely mechanical. In this connection when occurring in very young infants it may be responsible for grave nutritional disorders. Therefore feeding should immediately follow a paroxysm and not precede it.

By far the vast majority of cases of vomiting in young children are due to dietary indiscretion. Included within this term are those cases, due to chemical or food (ptomains) poisons, or medicines ingested by accident or otherwise. These cases may or may not have the added element of gastritis as a causative factor. The treatment of this class of cases may be embraced within a general plan. The greatest element is prevention. It is a grave mistake not to supervise the food of a young child up to at least 4 or 5 years, and even after this vigilance should not be relaxed. Up to the age of 1 year, when possible, the infant should receive very little besides milk and that preferably maternal. A certain amount of latitude can perhaps be permitted in this direction, depending on the individual. I realize that most of my readers are in the habit of permitting a certain variety of dried bread called zwieback at a very early age. I have never seen any harm therefrom, but in the majority of American children I feel that an exclusive milk diet is best, at least up to 9 or 10 months, or until the infant has cut several teeth. Then cereals, preferably oatmeal, on account of its high protein content and its bone- and muscle-making properties, as well as for its laxative effect, and eggs, meat juices and mashed baked apples and junket, stale buttered bread and crackers, are permitted. After 18 months finely cut fresh boiled or broiled meat, chicken and fish are cautiously added once a day, baked potato moistened with butter or gravy, as well as the lighter puddings and stewed fruits as dessert. During this period and up to 2 years but four meals a day are permitted—at 7 to 7:30 a. m., 10:30 to 11 a. m., 1:30 to 2 p. m. and 6 p. m.—with absolutely nothing between. After 2 years a greater variety of well-cooked green vegetables are added and the same number of meals per diem are allowed. I maintain that a child can be trained to crave wholesome things as well as unwholesome ones; that the Biblical injunction "bring up a child in the way it shall go and when it is old it will not depart therefrom," applies to diet as well as to morals; that an adherence to the plan of diet just outlined and to absolute regularity will prevent as many, and more, cases of vomiting and indigestion as the vicious habits of continuous nibbling and overfeeding of improper foods will produce. Frequently children are brought to the physician by an anxious mother with the tale that they have no appetite. Careful inquiry will invariably elicit the history that the day is occupied by one continuous meal of small quantities of sweets and indigestibles.

The active treatment of this condition, after eliminating the cause, consists in the administration of an emetic if too much time has not elapsed since the ingestion of the substance. If the stomach has not been actively irritated or inflamed, lavage should be practiced. This is a very difficult procedure in young children and should be employed only if urgent. Following this a purgative, preferably iced castor oil or, if this is not tolerated, calomel, well triturated with sugar of milk, should, in small doses, be placed dry on the tongue. Food should be omitted for twenty-four hours, and when resumed should be of the mildest kind and given in small quantities often. Ice by mouth and a mustard paste on the epigastrium may be of service, while of medicaments, cocain, 1/30 grain, bismuth, 10 grains, and strontium bromid, 3 grains, are the best.

In acute abdominal disease, especially in appendicitis and peritonitis, as mentioned before, the interest attached to vomiting is purely diagnostic and prognostic. In peritonitis the vomitus may become fecal in rare instances, and indicates a fatal outcome. Rarely these cases are benefited by extensive lavage.

The insidious onset of nephritis and uremia is often announced by an unexpected attack of nausea and vomiting. This is especially true when occurring during the third or fourth week of an attack of scarlet fever, and such an occurrence should always lead to a urinary analysis. In this disease, therefore, vomiting becomes a symptom of much diagnostic import. Its treatment consists in the treatment of the underlying cause and is entirely eliminative, this being accomplished by a milk diet, diaphoresis, diuresis and catharsis.

Vomiting, when associated with, or rather due to brain disease, especially tumor, abscess, meningitis and rarely hydrocephalus, is also of diagnostic importance only. It is projectile in character and occurs without nausea. There is no special treatment. Of greater interest, perhaps, than all these, in that it is peculiarly a condition of childhood, is periodic or so-called cyclic vomiting. Children apparently otherwise well, but of delicate mold, the former subjects of scurvy, marasmus or rickets, perhaps without any apparent cause, certainly without any indiscretion of diet, are seized with severe attacks of vomiting. First the stomach contents are ejected and then with severe retching and exhaustion a large quantity of bile-stained material is thrown off.

There may or may not be associated fever. Jaundice does not occur, but the skin becomes muddy. Soon the attack ceases spontaneously and the child is as well as ever, and hungry, and remains so until the next attack occurs within a few weeks. Preceding the attack the child becomes languid, pale, loses interest in its play and has dark rings under its eyes. By these signs the caretaker can, if observant, foretell an attack by twenty-four hours. These children are usually anemic, have a hemoglobin percentage below 60 and are sometimes the subjects of purpura. There is usually a slight leukocytosis up to 15,000. The etiology of this interesting condition is obscure, although the researches of Edsall and others would point to an acidosis or an acidemia. Many of these cases present a highly acid urine containing large amounts of acetone. Treatment is unsatisfactory. The attack is self-limited and remedial measures are of no avail. Between attacks all effort should be directed toward building up the general strength, improving the nutrition and overcoming the acidosis. With this end in view the diet should contain starches and only a moderate amount of protein. Digestants should be given if needed, and large doses of sodium bicarbonate over a long period of time are regarded as specific by Edsall and do good in many cases as a preventive. Iron citrate given in small doses, hypodermatically, as advocated by Morse, does much good in overcoming the general weakness and anemia.

Vomiting may result from eye-strain, especially when due to high grades of mixed astigmatism or improper muscle balance. When every other cause has been excluded the eyes are to be examined by a competent oculist and proper glasses ordered.

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THE NEUROTIC BASIS OF JUVENILE DELINQUENCY

WITH A STUDY OF SOME SPECIAL CASES MOSTLY FROM THE SAN FRANCISCO JUVENILE COURT *

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A study of a good many children who have been brought finally to serious account for misdeeds, and especially children who were referred to me from the juvenile court, has shown in almost every case a state of the nervous system in which the symptoms, although often resulting in criminal acts, were none the less expressions of a condition having its beginning long before, in the bad handling of nervous habits, a stimulation of them, or a neglect of them altogether.

It was not punishment that seemed to be needed in a single case, and it is a matter of interest that in the juvenile court alone is crime considered a symptom, as it should be, for which the doctor-judge seeks a remedy, and, if possible, a specific one. A hundred years ago the medical profession emerged from the conception of disease as heaven-sent and from the almost dark ages of a therapy of blood-letting and calomel, and we are now trying to put and keep disease and its treatment on a scientific basis. That crime results only too frequently from a disease of the mind or body, or both, no one knows better than the physician, and it seems our function to emphasize at this time the need for putting the study and treatment of all crime on the same scientific basis.

When the government is sustained by the Supreme Court of the United States in its assertion of its right to limit the working hours of women in the interests of the children they may bear, it is certain that forces have been at work on female labor for a long period, making for a deterioration of the race. It is a habit of nations to act all too quickly if honor be assailed, yet when the very life of a nation is threatened by internal conditions, a peculiar apathy generally shows itself.

The awakening to the importance of internal decay has come. The principle of paternalism in republic and monarchy alike has shown a steady extension for several decades. The recent old-age pension law in Great Britain has carried it as far in that direction as it can go, while the effort of France to increase the birth-rate, the almost universal child-labor laws, the educational requirements and government inspection of schools, penalties for the neglect or abuse of children, even to taking them from their parents, municipal nurseries for babies of working women, the special protection of pregnant working women, the prevention of marriage of persons afflicted with a disease dangerous to the consort or offspring, the limiting of the working hours of women in factories, and, finally, the placing of an eight-hour limit in this state (California) on women's work in general, all show the tendency of the government to assume more and more the control of the conditions attending child-bearing, the unborn child and the infant after birth.

It is foolish to prophesy, but a review of the subject during the past twenty years alone indicates a rate of advance within the next twenty years, in the interest of the child of the future, through the study of the degenerating influences of the past, which gives us the hope that a constant lessening of feeble-mindedness, insanity, epilepsy, blindness, mental, moral and physical degeneracy may be brought about through government measures of control.

When Oliver Wendell Holmes said that the education of the child began several generations before its birth, he stated a fact that has a constantly widening application. The foundation for the child's nervous system is certainly well under way that far back, and it is in view of this that we must look for and encourage the preventive work of the future, through an extension of government interference, directing the interference by a careful study of the nervous child of to-day, the influences of every possible environment and occupation on him, his home, his parents and associates, work, play, temptation, emotion, excitement—in fact, everything that stirs his feelings in any way. It is with this part of the problem—the nervous child of to-day—that we, as physicians, are brought into contact.

Unfortunately, the problem rarely presents itself seriously to the average parent until it has taken a form far beyond the ability of the family to cope with, or a situation has developed in which the neurotic tendency appears in a form, the importance of which the parents are the last people in the world to suspect, and where some accident uncovers in part a most serious state of affairs unsuspected by the family, frequently with far-reaching ramifications only worked out by patient analysis. Vanity, sulking, unusual craving for notice or affection, irritability, violent outbursts of temper, the unusual persistence of what seems a single bad habit, may be all the parent sees. A few examples will serve to illustrate.

Case 1.—D. S., a very clever girl of 12, through but two grades in five years of school life, nervous and emotional, living with her widowed mother, supposedly a working woman, but in suspiciously comfortable circumstances, is caught, after great effort and weeks of watching, picking pockets in a crowded shop. She was an artist at the job and asserted that she was taught by a man whom she met on the street and who promised her a doll. She said she met him the same day each week and practiced her art in the same shop. Her story was doubted by the police and her mother was suspected of being the accomplice. Examination of the mother showed a bleached blonde in an untidy but showy gown and revealed the fact that amateur prostitution was remunerative far beyond the precarious pickings of a child in the weekly shop adventures. She protested her ignorance of the child's acts. The child was congenitally syphilitic and had adenoids and huge tonsils. A little surgery and mercury made a normal child of her, and a chance for some association and memory-tests convinced everyone of her truthfulness. The nervous and emotional conditions attending her promptly disappeared and she promises to be a strong influence in straightening out the wayward mother.

Case 2.—J. S., a large and well-developed boy of 14, is repeatedly expelled from private school on account of smoking and because of his general indifference. The headmaster of the last school he attended discovered other forms of abuse and, with the father's consent, sent the boy to me. He was a pleasing-mannered boy of the nervous, weak type who had been indulgently brought up in a small town where his father was a leading citizen, influential in the local government. The father had worked hard himself for his position in the business world and hoped to leave his family well provided for. His motives were good and he meant to be a kind and generous father, but he forgot that the boy needed some of the attention the father gave to his business far more than the boy needed the extra dollars. The mother was too nervous to have the strength to do more than worry and had also the idea that children just grew; she had not the faintest idea of the boy's mental processes or physical and mental needs. There was no history of alcoholism, insanity or unusual nervousness in any marked form in the family. Here was merely a weak boy, the product of his environment. The history that

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he gave me after friendly terms were established was this: He had lied and stolen as far back as he could remember; he had never been shown up with his lying or been caught stealing. Lying frequently saved a long explanation and it seemed always to work. Although he was indulged, it was easier to steal than to ask for money from his parent, so he always stole. It seemed the more certain way of getting what he wanted. For two or three years he had abused himself and had smoked and taken alcohol in some form. He gambled with the other boys in the town where he lived and with them visited houses of ill repute, although claiming only to drink beer while there. He had no power of concentration and his work at school did not interest him at all. He had never taken any systematic exercise, and had always eaten anything and all he wanted. He was unable to go through a day without planning in his mind how he might carry out one of the bad habits to which he had become addicted. His only form of activity, nervous or physical, directed itself in these channels. He had no ambition, no moral sense and no standards, and yet this nervous wreck came of a good family and apparently had far more than average advantages and environment. He came up in the juvenile court for stealing a box of apples.

Case 3.—D. B., the son of a very rich and self-made father, and an exceedingly neurotic but ambitious mother, was dealt with differently by his parents. He was put through the paces by the father, rushed through the lower grades of school, carefully watched and kept at work, all his nervous energy directed into productive and absorbing channels of the parents' choosing, without a counterbalance of play and fun. He had hardly finished grammar school when he was rushed into a business he did not care for, to begin as a slave at the bottom. Fortunately for him, he broke down nervously and physically and after years of begrudgingly-given outdoor life this youth with a forceful and intense nervous activity has regained his physical condition, but has violent headaches from nervous exhaustion and a chronic tic of the facial muscles resembling a bad habit chorea.

The two latter cases represent opposite attitudes of parents, the thoughtless generous indulgence, and the hard narrow grind; they show how harmful two common types of environment may be and how heavily the responsibility of the failures rests on the parents.

Case 4.—D. T., a girl of 17, whose aunt was epileptic and whose grandmother was alcoholic, locks herself up in a room for twenty-four hours at a time, and finally runs away, because she cannot have her way. She was never punished, or rather treated, for this form of self-indulgence when it began some years before, the excuse being that she was a delicate, nervous child. She ends by hurling anything she can lay her hands on at her mother when she is crossed in her wishes.

Merely ungovernable temper, trained to react the wrong way, and cured only by long continued and wise discipline; what is called in psychotherapy, reeducation. Such a case might easily be the beginning of a dementia præcox, but that unfortunate end could only be hastened by such indulgence and indecision as was brought about by a failure of the parents to understand the conditions.

Case 5.—Another girl of 17 reads only dime novels, is dull in school, moody, irritable, vain, untruthful, exceedingly dirty in her habits, although belonging to well-to-do and refined but indulgent parents. She finally strikes a servant and the family wakes up to the seriousness of the situation. A properly trained nurse placed in charge of her, away from home, discovers the enormous extent to which self-abuse is carried on. Only the romantic, or possibly the very commonplace, opportunity had been lacking to ruin the girl's life forever. Here again physical, moral and mental reeducation—carried on for years—is the only cure.

An ungoverned temper in a girl of 12, leading her to precipitate a storm if every wish is not granted, is easily traced to the reaction of the apprehensive mother to the child's demands in early youth. The brain storms came easier and easier until the well-established habit held the whole family in terror. The small beginning of such a possible state was shown in my 4-year-old daughter when she soberly announced to the cook that if bread and butter with jam wasn't forthcoming at once, she would "make a dandy fuss." There should be only one outcome to such a crisis, and the parent who neglects the issue or thinks it too "cute" to warrant notice does the child infinite harm.

Babies learn to cry for whatever they want in the earliest days of life. The well-regulated nursery of a maternity hospital is usually as quiet a place as you can find, simply because the routine care leaves the baby always comfortable, and does not allow it to learn that crying brings about some grateful change. Of course if one seeks to soothe its crying by any measure out of the ordinary, it goes a long way toward teaching it to cry when it wants that form of relief again. It can be taught to cry in a day of bad handling. Carried further, such treatment teaches the child that a fuss generally brings what it wants, and the training of its nervous system to act in unnatural ways is well established.

Selfishness is an early developed trait, and in nervous children it leads to all forms of trouble, frequently before it is fully appreciated by the parent. A child who cannot have what it wants does not always make a fuss but may sulk, and this may take a form easily escaping notice, yet there may be violent emotional disturbance in the child. This is far from being the result of self-control, as one might think. The moody and depressed child is a harder problem than the excitable one in most cases, and requires more careful study and training. The ease with which its moods escape detection frequently leads to a form of self-pity and habits of self-indulgence quite innocent in the beginning, but terribly suggestive to the child who finds how much it can do without it being known.

Some years ago I assisted in carrying out a study of the influences of environment on boys from 8 to 15 years old, in which some extraordinary things were shown. A hundred or more boys, all attending school and members of a boys' club in the district where a large number of working people lived, were asked to answer a set of questions bearing on their likes and ambitions. All of these boys had been well trained in playing question and guessing games, and took this matter seriously. The list of questions asked for their favorite boy's and girl's names, favorite poem, song, color, game; what each wished to be when he grew up; what he would do with a hundred dollars if he had it; what he most wanted for Christmas; where he would go if he had a railroad ticket to any place he wished to go in the world; how he would spend a holiday if he had one and could do what he wished.

The result of the study was amazing. A sort of family history of each boy had been made on cards and it included all the names and the occupations of the male members of each family. There was hardly a boy whose ideas carried him beyond the confines of his home and his street. The popular occupation was the father's; family names and the hand-organ tunes overwhelmed all others in their popularity. No shadow of romance could be found in the desire for journeys to African jungles or Arabian gardens. Indeed, the deeply pathetic side of the situation was shown when it was found that dozens of boys in the club had never been to Golden Gate Park, the city's great playground, or the Cliff

House, reached without change of cars for a five-cent fare, and very few boys had crossed the bay. A very large number had never been north of Market Street, the main thoroughfare dividing the city. In no case did any of the boys want a railroad ticket farther than across the bay. Vigorous manly games appealed to them more than games of chance. The proverbial period of wanting to be president of the United States was not indicated in one boy, nor was there apparent lust for wealth or power, further than that centered in the desire to be a policeman. Two bicycles were the largest things wanted. Altogether, there was not a single unreasonable or incomprehensible answer. I have known many of these boys in the seventeen years that have passed since then, and there are successful lawyers, contractors and business men among them. There are very few who have not moved into better conditions than attended them then.

One cannot but take all this as indicating how sensitive children are to environment, how deeply they are influenced by it, and yet how generally the tendency is toward right interpretations and healthy ideas. I have cited this experience not alone to show the dependence of the child on its environment, but to discuss with you the value to the child of combined personal and class training. We saw the baby's training begun properly in the hospital nursery. We know that if not provided with a harmless and engrossing toy, the creeping infant is quite apt to reach for the live coals of the fire-place or the fringe of the table cover, on which rests the ink and a lighted lamp.

There is energy to be dealt with and, if it be not provided for in a normal and healthy way, the infant is bound to work out its own way which may not be so good.

This is equally true of the child, the youth, the young adult, the mature adult and the old man. We count on training and respect for law to keep the energies of mankind within reasonable bounds as the age of youth passes, and when we study the transgression of the law we come invariably on the neglect of training, the early misuse of energy, the absence of normal outlets and the continuance of hereditary degeneracy, as one sees so commonly in the alcoholic father and the vicious, highly nervous or feeble-minded child. In inverse proportion to the early training must be the magnitude of the machinery of the law and its forces for order, until finally we come to see that it is the common interest of us all as members of human society, toward which we have a tremendous responsibility, to work for the coming of the utopia in which the interests of the child and the future of the race are paramount to the selfish human interests in tariff on woolen goods, kid-gloves and champagne.

It would be impossible to outline any scheme for the treatment of nervousness in children except to direct the lines along which one may safely go. It can never be too soon to begin, whether it be the child of to-day or his descendant two decades hence.

One who would get into the spirit of the problem should take the time to read two recent books, "The Century of the Child" by Ellen Key, the Swedish leader of the feminist movement in Europe, who has aroused all Germany to active interest in what she calls the greatest problem of the age; and Jane Addams' "Spirit of Youth and the City Streets," in which she gives voice masterfully and pathetically to the cry of the child for a hearing.

SCHEME FOR HISTORY-TAKING IN CASES OF DELINQUENCY, FOR PURPOSES OF PROGNOSIS AND TREATMENT

1. Complaint against the patient.
2. Family history:
   Details of heredity, nationality, social tendency; defects, illnesses and habits; character, occupation, with special reference to contact with poisons.
3. Patient's past history:
   Medical, development, etc.
   Habits, school life, etc.
   Environment and character.
4. History of present trouble:
   Sequence of development of nervous habits.
   Sequence of development of bad habits.
   Efforts at correction.
5. Physical examination:
   Complete, including eye, ear, nose and throat.
   Evidences of developmental conditions associated with degeneracy.
6. Psychologic examination:
   Including analysis of patient's story.

350 Post Street.

ABSTRACT OF DISCUSSION

Dr. John A. Colliver, Los Angeles: For several years I have examined nearly every boy coming before the Los Angeles juvenile court. We have been pioneers in this physical examination as a method of dealing with juvenile delinquents. Nervous irritability has been of special interest to us and we have had many cases. We think environment is the most important cause; 95 per cent. of them are from "broken homes," i. e., homes in which the parents are divorced or separated, or in which one or both parents are dead; or in which the children are left to shift for themselves because of unfit parents. Thus there is absolutely no discipline. So the greatest influence in the production of delinquents is lack of proper parental care, and over this we have little or no control. Criminality begins at home. The earliest symptom is "talking back" without cause, at first with regret, but later with indifference. This is followed by lying; then by truancy from home; later from school; then by bad company; finally by theft, and the boy lands in the court. I believe there is a physical basis for much of this nervous irritability which is the beginning of crime. It is not the natural tendency for a boy to be good any more than it is natural to raise a weedless crop without cultivation. Animals early leave the parent protection and fight for themselves. The deportment of boys, says Hall, is worse at or about puberty than at any other time. The whole organism, and especially the nervous system, is undergoing a rapid change. The boy has to adjust himself to his changing environment. What you could have done with impunity would to-day land him in the court. So the irritability on the one hand and the lack of discipline on the other accounts, I think, for the majority of delinquents. This irritability arises from physical defects, poor nourishment or the like, and by their removal the child gets control of himself and moral improvement follows. We have found great changes following simple operations; while in thirty-six so-called hopeless cases the effects of a needed circumcision was to change the periodicity of their appearance in court from one month to eighteen months and many of them were never returned for misconduct. Reports show them doing well. We have found that boys who are frequently in court often change in moral conduct when nourishment is improved. Again, a boy gets the reputation of being incorrigible when the only trouble is that he does not hear or see properly. We are establishing in the hospital here a department of psychopathy for the observation of certain neurotic children under the assumption that some cases are purely mental.

Dr. L. T. Royster, Norfolk, Va.: The question of delinquency as put forth by Dr. Brown and the question of irregularities in school go hand in hand. I think the causative factors in these cases are physical, environmental and hereditary.

There are cases due to imperfect hearing or imperfect vision. The child loses interest because it cannot hear or see and it gradually goes down the line and drops down finally to crime. We cannot get away from environment, and education is a modification of environment; yet back of that, and most important, is heredity. This has been shown in the work of all investigators, from Galton, in England, to Dr. Goddard, in America, who took 2,000 cases of delinquency and put them on a basis of physical and mental factors. In the latter he found three classes, the mentally delinquent, the imbecile and the "moron," as he terms it. The physical errors can be corrected. Then we have the three grades of mental delinquency. There is one degree that can be corrected; the second class can be taught the ordinary trades. The third is a dangerous class. But in not a single case of these 2,000 children did he fail to find delinquency or feeble-mindedness in one of the four generations back of him. From this come not only the petty thieves but often the drunkards and prostitutes. It has been stated that no woman who enters on a life of prostitution is a normal woman, and I agree with that. Unquestionably genius begets genius, not, perhaps, of the same type, but genius, nevertheless; and the same is true of crime. This may be prevented by controlling these children from the beginning, by proper teachers and finally by the prevention of incompetents from marriage.

Dr. F. R. Branham, San Diego, Cal.: I am tremendously interested in the play-ground movement. But I don't agree with Dr. Colliver when he states that boys are born bad and are going to be bad. They have a lot of vitality. Any good boy that amounts to anything has a lot of it in him and the only thing is to give him a chance to work it off legitimately. The boys in the country seem to have no trouble of that kind, and it is because of the outdoor life. In the cities they do not get a fair show. These suggestions of Dr. Brown are all right, but let us look after the normal boy and give him an opportunity to work off some of his steam and we will find that he will get along all right.

Dr. D. S. Hanson, Cleveland, O.: This study of the evolution of the child has been very interesting to me. Some years ago in our country districts the parents were assessed for a few months of school for their children. After a while the teacher was paid by the state, then we came to the graded schools in country districts, and in our cities improvements have gone on rapidly. The child was first furnished free books, then the poor children were given their breakfast, and later they were inspected in reference to their health. In some cities we have a double inspection, one for the school board and one for the health department. The children have their eyes inspected and attention is given to their hearing, and other physical defects noted, and if the same process keeps going on much longer it looks as if in the next forty years the state will take the child from the mother's breast and care for it. Yet I do know that what we are doing for the children is going to have wonderful results. If, for example, every adult had sound teeth, chronic disease would be reduced 50 per cent. in a few months' time. If you improve the children's eyes and hearing, you give them an opportunity to change from dull and apparently stupid, oftentimes to wide-awake and interesting children.

Dr. John A. Colliver, Los Angeles: I rise to correct an impression. I did not say that boys were bad. I said it is not a boy's natural tendency to be good. When they are good it speaks well for the parents. The delinquency among the boys in the play-grounds section decreased at once, and I think that is a matter of discipline and training.

Dr. Philip King Brown, San Francisco: I want to state my belief in the goodness of boys and to point out that of course you must give the boy an interesting thing and a helpful thing to play with. He will enjoy it a great deal more. You will accomplish the desired result of directing his energies properly in two ways; you give him something that is positively good and remove the chance of his selecting something positively harmful. Of course we should be connected with the play-grounds association, just as we should with the pure milk commission. We should be connected with the best things.

AN UNUSUAL CHOLERA CARRIER

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The following case of a convalescent cholera carrier is one of about sixty-two cholera cases and carriers, recorded at the New York Quarantine Laboratory in the bacteriologic examination of Italian immigrants during the months of July, August and September.

Since, from the time of the initial symptoms to the last positive examination, the interval was only fifty-four days, which period fell short of the longevity of several reported cases, the main point of interest in this case attaches not so much to the longevity of the cholera vibrios in the intestinal tract as to the irregularity of their presence in the stool.

The case occurred in a sailor aboard a transatlantic liner sailing from Genoa and Italian way ports. August 4, he presented himself to the ship's surgeon, complaining of vomiting and diarrhea. The symptoms were of such moderate nature that the ship's surgeon made the diagnosis of fireman's cramps, but on the advice of the royal Italian commissioner, who considered the case suspicious, the patient was isolated in the sick-bay.

August 17, the vessel arrived at New York Quarantine, and stool specimen was sent to the laboratory. Bacteriologic diagnosis of cholera was made by Dr. C. E. Baldwin, in charge of laboratory, and myself. The patient was sent to Swinburne's Island and at varying intervals stool specimens were sent to the quarantine laboratory for examination.

From August 17 to 30, all examinations were positive. On August 30 occurred the first negative examination. September 1, it was likewise negative. Thus far only a small amount of material was used to make the inoculation; as much as would adhere to a small cotton swab was planted in a peptone tube. September 2, a larger amount was used. Approximately 4 gm. of feces were planted in a flask of 300 c.c. of Dunham's peptone, and all subsequent inoculations were made of same amount and in same way.

From August 30, date of first negative examination, to September 27, date of last positive examination, the cholera vibrio was found present in four examinations and was absent in six (see table).

On the day of the last positive examination a smear from the original inoculation, after six hours' incubation, showed a few suspicious curves, atypical in form and bizarre staining. In fact, I was not thoroughly satisfied that vibrios were present. Subcultures, however, showed the vibrios in large numbers.

Because of press of routine work at the station no further specimen was sent to the laboratory till October 8, at which time the examination was negative, and continued so on the 10th, 12th, 14th and 18th, when the patient was discharged.

Throughout the patient's detention at Swinburne's Island, Dr. F. C. Clark and Dr. John Hamilton gave him potassium permanganate and hexamethylenamin (urotropin) with a view to destroying the vibrios. Both of these drugs were apparently without effect.

Most obstinate constipation was a persistent condition of the patient throughout. Stools were obtained only after the administration of large doses of some such cathartic as calomel, magnesium sulphate, compound cathartic pills or elaterium. Even large doses of these drugs had no more than a mildly cathartic effect. Stress is laid on this condition, because it is probable that the persistency of the cholera organism was due to the lack of thorough and repeated evacuation of the intestinal canal.

The question arises as to the cause of intermittency of the vibrio in stool. Error of technic can be eliminated, for Dr. A. J. Bendick, working from one stool specimen, obtained parallel results.

Gall-bladder infection does not seem likely, as cholera is not a bacteriemia, and direct extension of infection from the intestinal canal does not seem probable.

Considering all conditions, the assumption that there were residual masses of fecal matter containing the vibrios, a part of which was evacuated only at times of positive examinations, would furnish a logical explanation of the irregularity of the vibrios in stool.

If this condition operated to the continuance of vibrio in stool, doubtless the patient would have harbored the organism a much longer time had he not been given purgatives.

This case emphasizes the importance of thorough stool examination of all cholera patients prior to discharge.

It likewise illustrates the superiority of a bacteriologic standard for quarantine procedure in cholera work over the old clinical standard. Not so long ago this patient would have been discharged from quarantine after a wholly arbitrary period of detention and long before he had ceased discharging vibrios.

As to treatment, nothing new is offered. Hexamethylenamin and potassium permanganate did not seem to possess any value. In these cases of protracted carriers, repeated catharsis would seem a valuable measure. As an alkaline reaction is essential to the viability and propagation of the cholera vibrio, large and repeated doses of *B. bulgaricus* would seem to be a logical means of destroying the vibrios.

TABLE SHOWING STOOL EXAMINATIONS IN THE CASE OF AN UNUSUAL CHOLERA CARRIER

Date of Examination	Amount of Specimen	Character of Stool	Cholera Vibrio	Medication Before Stool
8/18/11	Swab.	Formed....	+ +	—
8/20/11	Swab.	Formed....	+ +	Mag. Sulph. ʒss
8/30/11	Swab.	Formed....	— —	Mag. Sulph. ʒi
9/ 1 /11	Swab.	Formed....	— — —	....
9/ 2 /11	4 gm.	Formed....	+ +	C. C. Pill iii av. Ol. Ricini ʒi
9/ 6 /11	4 gm.	Pultaceous.	— — —	Ol. Ricini ʒi
9/ 9 /11	4 gm.	Pultaceous.	+ +	Calomel, grs. v Mag. Sulp. ʒi
9/14/11	4 gm.	Formed....	— —	....
9/17/11	4 gm.	Liquid.....	+ +	....
9/19/11	4 gm.	Formed....	— — —	Mag. Sulph. ʒii
9/25/11	4 gm.	Formed....	— — — —	....
9/27/11	4 gm.	Liquid.....	+ +	C. C. Pill iii
10/ 8 /11	4 gm.	Liquid.....	— — — —	Elaterium .012 tid.
10/10/11	4 gm.	Liquid.....	— — —	Elaterium .012 tid.
10/12/11	4 gm.	Liquid.....	— — —	Elaterium .012 tid.
10/14/11	4 gm.	Liquid.....	— — —	Elaterium .012 tid.
10/18/11	4 gm.	Liquid.....	— — —	Elaterium .012 tid.

For the clinical notes in this case I am indebted to Dr. John Hamilton.

TECHNIC

The stool specimen was planted into the peptone (Dunham's) solution and incubated for six hours. At end of this period a loopful of the surface growth was subinoculated into a fresh tube of peptone solution, and this in turn was incubated six to eight or nine hours.

In making subinoculations, care was always exercised in avoiding any surface pellicle. As the element of time is of considerable importance in making subcultures, these were made as near as possible at end of six hours. Smears were made from subcultures after ten hours. If examination of these showed no vibrios, the specimen was considered negative. If vibrios were seen in smear, the subculture was plated on agar and the plates incubated, generally over night. Vibrio colonies from the plates were fished and planted on agar slant. When sufficient growth was evident, an emulsion of the culture was made in sterile water and droplet of this placed on glass slide and tested for agglutination with specific serum of a titer of 1 to 15,000. Only the macroscopic method was used. Instantaneous agglutination in dilution of 1 to 500, evidenced by distinct curdling, was required for the determination of a positive result. Normal serum controls were always employed. It may be mentioned that while, on different occasions, the smears from originals showed but few vibrios and those only after examination of a number of fields, the smears from subcultures, at those times when specimens were positive, showed large number of vibrios in all fields observed. Subcultures were adhered to, not only in this case, but for all routine carrier examinations done at the laboratory, for several reasons. The first is to avoid useless plating. Not infrequently a smear will show a few isolated, suspicious curves, artefacts due to stain, detritus of media or distorted bacilli or even nonpathogenic vibrios that do not increase or appear in subculture. These forms prevent the discarding of the culture as negative. This applies only to smear from original culture, for however small the number of cholera or cholera-like vibrios in the specimen, and however scarce they appear in smear from original, the smear from subculture will show large number of curves in every field.

Second, subculturing facilitates isolation of cholera colonies from plates. If only a few vibrios are in original, and this may frequently be the case in carriers, they may be lost on plating, either through the dilution of culture incidental to plating, or through overcrowding by other colonies.

The method of plating from original with negative results probably explains origin of term "non-enrichment." Such a condition as latency in cholera seems incredible. That any cholera vibrio, fresh from the intestines, will not multiply in great numbers when planted in optimum medium seems most improbable.

These remarks on subculturing apply to cholera carriers, not to actual cases.

The cause of the intermittency of the vibrio in stools can be only a matter of conjecture, but, whatever the reason, the same condition might obtain in any carrier and this case emphasizes the necessity of repeated examinations before discharging any cholera carrier or case from detention.

EXPERIENCES WITH A VACCINE IN THE TREATMENT OF CHANCROIDS

A PRELIMINARY REPORT *

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AND
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CHICAGO

This work was begun in the belief that the *Bacillus chancri mollis*, or Ducrey bacillus, as it is more commonly called, was the most important etiologic factor in the production of chancroids, and that vaccines prepared from this organism might be of value in the treatment of these lesions. With this in view, attempts were made to obtain the organism in pure culture from chancroids seen in the clinic at the Rush Medical College. Up to the present time we have been unsuccessful in this attempt, although we have examined bacteriologically a considerable number of cases and have obtained some results which we believe are worthy of report.

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* From Dr. Belfield's Clinic, Rush Medical College, and the Otho S. A. Sprague Memorial Institute, Chicago.

The blood-agar medium which we have used in this work is prepared by melting plain agar, cooling it in a water-bath to 45 C., and adding fresh sterile, defibrinated human blood. The amount of blood used depends on the organisms to be grown on the medium, and varies from 10 drops per agar-slant tube to an amount equal to one-half of the amount of agar used. The tube is shaken until the blood is thoroughly mixed with the agar, and it may then be inoculated and poured into Petri dishes, as in the ordinary method of isolating organisms by plating, or it may be cooled as a blood-agar slant tube. In making the cultures the first inoculation is made directly from the surface of the chancroid, and the lesion is then washed with sterile salt solution to remove the debris and surface organisms which are usually of no etiologic importance. The floor of the ulcer is scraped with a stiff platinum loop and blood-agar plates are inoculated with the material obtained in this way. In our first work, owing to the inadequate facilities for bacteriologic work in the clinic, we made our cultures from the lesions on blood-agar slant tubes and, where more than one organism was found in smears from the lesions or from the cultures thus made, plates were inoculated from these cultures to isolate the various organisms present. The organisms, having been isolated, either by plating directly from the lesions or from slant cultures, are next identified by their staining properties and their morphologic and cultural characteristics, and vaccines are prepared from pure cultures of these organisms. Human blood-agar slants, prepared as described above, are incubated for twenty-four hours to prove their sterility. The water of condensation is then pipetted off with a sterile Pasteur pipette and the tubes are inoculated with the various organisms in about the same proportions as they occurred in the original cultures. Thus if, for example, there were forty colonies of Organism A and twenty colonies of Organism B on the original plate, we use twice as many pure cultures of Organism A as of organism B in the preparation of our vaccine. This method, it will be understood, is purely arbitrary, and has been adopted only until the time when the etiologic importance of the various organisms shall have been more completely worked out. The cultures are incubated for twenty-four hours at 37 C., and the growth is washed down with a small amount of sterile isotonic salt solution. The bacterial suspensions thus obtained are pipetted off into a sterile flask, shaken well to insure the breaking up of all of the clumps of bacteria and the thorough mixture of all of the suspensions used, and then heated to kill the bacteria.

The method recommended by Wright and generally used in vaccine laboratories is to heat the bacterial suspension to a temperature of 56 C. for a period of from thirty minutes to one hour, depending on the length of time required to kill the organisms, and our first vaccines were prepared in this way by heating in the thermostat for one hour at 56 C. By a few experiments, however, we found that the bacteria could be killed at lower temperatures, and this was believed to be very desirable. It has been shown that different proteins have different coagulation points, just as different liquids have different boiling points, and that mixtures of solutions of various proteins undergo a fractional coagulation, as the temperature of the mixture is gradually raised from 40 C. to 60 C., very much as liquids undergo fractional distillation under similar circumstances. Therefore, we believe that by using a lower temperature more of the bacterial cell proteins will remain in solution, and a more potent vaccine should be obtained. To insure the death of all of the bacteria at the lower temperature, it is necessary to heat for a longer time, and our vaccines are now prepared by heating for twelve hours at 50 C. At the end of this time a blood-agar plate is inoculated with 1 c.c. of the heated suspension, to prove that all of the organisms are dead. If any colonies develop on this plate, the suspension is heated for four hours at 52 C., and again tested, and in every case this has been sufficient to kill all of the bacteria. As soon as the suspension has been proved sterile, the number of bacteria per cubic centimeter is determined by the Wright method and by counting the bacteria with the ordinary blood-corpuscle counting apparatus. The suspension is then diluted with sterile isotonic salt solution to the desired strength, usually about 200,000,000 bacteria per cubic centimeter, and preserved with 0.5 per cent. phenol.

We are prepared at the present time to report the complete bacteriologic examination and preparation of vaccines from twenty-six typical clinical cases of chancroids. In this entire series we have only found two strains of organisms which could possibly be the so-called bacillus of Ducrey. In the first instance we found a small polar-staining, Gram-negative bacillus in a culture which also contained *Staphylococcus pyogenes albus.* This bacillus would not grow on ordinary mediums, and grew very scantily on blood agar; because of the rapid growth of the staphylococcus with which it was contaminated it could not be obtained in pure culture and very quickly died out. In so far as we were able to observe it in mixed culture, it corresponded in every way with the *Bacillus chancri mollis.* From another case we obtained in pure culture an organism which corresponded in size, appearance and staining properties with *Bacillus chancri mollis,* and grew only on blood agar, but even there its growth was very scanty, and it died out very quickly. In the plates from which this organism was obtained we also found the *Micrococcus tetragenus* and a spore-forming saprophytic bacillus.

From thirteen of our cases we isolated bacilli of the diphtheria group, the so-called pseudodiphtheria bacilli. A word of explanation may be necessary in regard to this terminology, as the text-books in common use are not very clear on the nomenclature of the organisms of this group, and describe the pseudodiphtheria bacillus as a non-pathogenic organism of the diphtheria group. The recent work on this group of bacteria, however, has shown that the morphologic differences between the true diphtheria and the pseudodiphtheria bacilli are not so constant as they were formerly believed to be, and that many of the pseudodiphtheria forms are distinctly pathogenic. According to the more recent views, the differentiation between the true diphtheria and the pseudodiphtheria organisms is based on tests of toxin formation and on the protection of experimental animals with diphtheria antitoxin against the pathogenic effects of injections of the bacteria to be tested. All of those members of the group which do not form toxin, and against which antitoxin does not protect, are placed in the class of pseudodiphtheria organisms, and this class thus contains organisms of widely different characteristics, as regards size, shape, growth on mediums, pathogenesis, etc. Some are large, while some are quite small; some grow very abundantly and some grow very scantily, while some grow only on blood mediums. As a rule, they are Gram-positive, but some strains are Gram-negative. Polar staining is fairly constant, as is also the tendency of the organisms to assume the parallel arrangement, the so-called palisade or Chinese house grouping so valuable in diagnosis. Strains of pseudodiphtheria bacillus may thus present the various characteristics of the *Bacillus chancri mollis*, and so far as we have been able to learn from our work or from the work of others, it seems probable that the *Bacillus chancri mollis* may be a member of the diphtheria group, although this point has not yet been proved because of the difficulty of obtaining the organism. We hope soon to be able to present further data on this point. Non-pathogenic strains of the pseudodiphtheria bacillus are comparatively common in the urinary tract and pathogenic forms are occasionally found, cases of cystitis due to this organism having been reported and abscesses having been produced in guinea-pigs by injections of organisms from this source. This has led us to believe that the strains of pseudodiphtheria bacillus which we have isolated from chancroids were the important etiologic factor in the production of those lesions. We are now injecting suspensions of this organism in normal salt solution into the subcutaneous tissue of the abdominal wall of normal healthy guinea-pigs, and by such injections we have produced marked local inflammatory reactions, persisting over a period of ten days from the time of the injection, and gradually subsiding. This reaction is sufficient to prove that we are dealing with pathogenic strains of the pseudodiphtheria group. In one instance we have succeeded in producing a lesion showing all the characteristics of a typical chancroid, with enlargement of the axillary glands. This lesion developed on the fourth day after the inoculation was made. We have further succeeded in recovering from this lesion, and growing in pure culture, a bacillus identical to the one used for inoculation. As far as we know, this is the first successful animal inoculation that has been made other than in the monkey.

Among the other organisms which we have found are the *Staphylococcus pyogenes albus*, occurring in thirteen cases; the *Staphylococcus pyogenes aureus*, occurring in four cases; the *Micrococcus tetragenus*, in two cases, and the *Streptococcus pyogenes*, in two cases, in one of which it occurred almost in pure culture. A spore-forming saprophytic bacillus, probably *Bacillus subtilis*, although not definitely identified, was found in four cases in cultures made from the purulent or necrotic material in the floor of the ulcer. It was non-pathogenic and of no etiologic importance, and was not used in the preparation of the vaccines because it would be impossible to kill the spores without using temperatures which would so change the composition of the bacterial cell as to render it of no value for a vaccine. In three of our cases we were unable to obtain any growth or to obtain any organisms in smears. These three cases were all of considerable duration at the time when they were first seen and the inoculations made, and it is thought probable that the organisms which gave rise to the pathologic process had become so few in number and so deeply situated that they could no longer be recovered by ordinary methods. We were unable to obtain the patients for subsequent inoculations. In another similar case the only organism found in the first inoculation was a large spore-forming saprophytic bacillus, probably *Bacillus subtilis*. Three weeks later plates were again inoculated and gave cultures of *Staphylococcus pyogenes albus* and *aureus*, whereas the saprophyte had disappeared from the lesions.

Thirty-eight patients have been treated with the vaccines. Of this number, seven patients deserted the clinic after the first or second injection, which necessarily has not given us sufficient time to draw any adequate conclusions. We also must add at this time that, in order to keep control over our patients, some local treatment was essential. We used a very weak watery solution of methylene-blue applied in the form of a small compress.

Eliminating the seven cases mentioned above, we have remaining in our present series thirty-one cases to report. These were all selected cases of clinical chancroids. In most instances bacteriologic examinations were made, a large percentage of which showed a bacillus which evidently belongs to the pseudodiphtheria group, with a contamination of staphylococci.

Differentiation from syphilis was effected by a systematic search for spirochetes in early cases. In long-standing cases a Wassermann test was made. This practically limited our cases to those of pure chancroid.

The vaccines were administered by subcutaneous injection into the abdominal wall. Little or no reaction followed these injections. In a few cases a slight redness appeared and a slight tenderness at the site of injection, both usually disappearing in twenty-four hours. We have not observed any marked constitutional disturbance following the injections.

Our dosage ranged from 50,000,000 to 400,000,000, using from 1 to 2 c.c. for each injection. In our early work we limited the injections to one a week; later on we increased this to two a week, and in one instance we even gave an injection on ten consecutive days, with no bad effects whatever, and a decided improvement in the local condition. Of the thirty-one cases cited above, we obtained an absolute cure in twelve, the time varying from five days to three weeks. In seven others we noted a decided improvement following the injections, although we cannot conscientiously ascribe the result to the vaccine, because either the time required was too long or the healing of the ulcers incomplete. Some of the latter are still under treatment.

At first blush these results may not seem in any way encouraging. We must bear in mind, however, that in the early cases a stock vaccine was used, which contained an organism, in small number, supposed to be the Ducrey bacillus, and a strong contamination of staphylococci. Later on a vaccine composed largely of a bacillus belonging to the pseudodiphtheria group, together with a small number of staphylococci, was used, with far better results. The following case serves as a good example:

Case 1.—*Patient.*—P.O., aged 28, entered the genito-urinary clinic at Rush Medical College on March 6, 1911. Previous history was negative. Five days after exposure he had noticed a small lesion on the under surface of his prepuce, near the frenum, which grew rapidly in size. On examination this lesion was found to be 3 mm. in diameter. The ulcer was treated locally for two months, without any sign of improvement.

Treatment and Result.—On May 6 he was given his first injection of vaccine, our original stock vaccine being used. This was repeated weekly for some time, during which period a new ulcer and a bubo developed, the old ulcer continually increasing in size. From these lesions we made a culture and obtained therefrom an almost pure growth of pseudodiphtheria bacillus with a slight contamination of *Staphylococcus albus*. A vaccine was prepared from this culture and administered twice a week for two weeks. At the end of this period the lesions had entirely healed and all that remained of the bubo was a small, hard gland, about the size of a bean.

Since observing this case, we have used either the pseudodiphtheria and staphylococcus as a stock vaccine, or an autogenous vaccine, and our results have been markedly better. The following case is a striking example of a rapid cure:

Case 2.—*Patient.*—R. M., aged 22, entered the clinic in the early part of June. Eight weeks before, he had noticed three ulcers on his penis, one on the glans penis and two on the under surface of the prepuce, one located near the frenum. The prepuce was edematous and partly phimosed, discharging a large quantity of foul-smelling pus. He had been treated locally for eight weeks, during which time this condition became worse.

Treatment and Result.—On June 5 he was given 30 minims of our pseudodiphtheria stock vaccine, containing 200,000,000 per c.c. He reported that the day following the injection there developed a painful area, extending from the site of the injection to the inguinal glands to that side. He also stated that this area was very red. This disappeared in twenty-four hours. On the third day after the injection was given he appeared at the clinic showing the following condition: The phimosis had entirely subsided and the three lesions were almost healed. Two days later, or the fifth day after the injection, Dr. Belfield demonstrated him before the Alumni Association of Rush Medical College, and by this time the lesions had entirely healed.

CONCLUSIONS

This being entirely in the nature of a preliminary report, we cannot draw any positive conclusions. We do feel, however, that the following points may be considered:

1. In a majority of the cases examined we have found an organism belonging to the pseudodiphtheria group, in some instance almost in pure culture.
2. A bacillus, non-pathogenic, belonging to this group, and morphologically identical to what we have found is commonly present in the urinary tract and on the genitalia.
3. Clinically, we rarely see chancroids on clean individuals, while in dispensary practice they are very common. In other words, filth seems to play an important rôle as an etiologic factor.

Taking these three points into consideration, is it not possible that the condition (so long described as Ducrey's disease, and presumably due to a specific organism called the Ducrey bacillus) is in reality in many instances an infection due to a bacillus belonging to the pseudodiphtheria group, which has been rendered pathogenic through the presence of filth?

Our results show a trifle less than 39 per cent. cures, and at first sight could hardly be considered in any way conclusive. This percentage could be made higher if we had not included in this series of thirty-one cases all our early ones, in the treatment of which we have evidently erred in using a non-potent vaccine. We trust, however, that further experimentation along these lines will insure a greater success than we have heretofore attained.

32 North State Street.

Making Cities Better.—Newark, O., is setting an example to other cities, according to *Collier's*: "On one day over 1,300 loads of rubbish were taken out of the town. On Arbor Day over 300 trees were planted by 3,500 school children. Sixty cash and merchandise prizes have been given for the most attractive flower beds. The playground problem is being handled energetically. The people have been made to feel that they want to help to prove Newark a model town of 25,000; to make it larger; and, above all, to make it every month a better place for their children to grow up in."

New and Nonofficial Remedies

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

LACTIC BACILLARY TABLETS-Fairchild.—Lactic Bacillary Tablets-Fairchild are tablets said to be made from a practically pure culture of the *Bacillus bulgaricus.*

The culture of the Bulgarian bacillus is obtained by inoculation and incubation on modified Cohendy peptone-sugar-broth medium. This culture is reduced to a pulverulent form by the addition of sterile lactose, desiccated and compressed. The tablet is friable and contains an abundance of the true Bulgarian lactic acid bacterium.

In the standardization of this product one tablet is placed, under aseptic precautions, in 100 Cc. of carefully sterilized centrifuged milk in a sterile flask and kept in the thermostat for forty-eight hours at 40° C.

After incubation for about twenty-four hours the milk should form a coagulum with some slight separation of serum; after about forty-eight hours the milk develops the acidity, about 2 per cent. actual lactic acid, characteristic of the Bulgarian sour milk; and under the microscope shows abundance of the Bulgarian bacilli. This fermented milk by vigorous agitation forms a homogeneous thick fluid, of a marked sour taste, free from bitterness, or sliminess, or objectionable physical characteristics.

Actions and Uses.—The lactic bacillary tablets are designed for internal administration in the treatment of intestinal fermentative diseases by the Bulgarian bacilli, with the design of accomplishing the acclimation of the bacilli in the alimentary tract, so as to secure their characteristic action against putrefactive fermentation by the production of lactic acid.

Dosage.—One or two tablets before or after meals. The diet should not contain an excess of proteid, but should afford sufficient sugar. The tablets should be kept in a cold place and should not be used after the date given on the label.

Manufactured by Fairchild Brothers & Foster, New York. No U. S. patents or trademarks.

SALVARSAN. — Arsenphenol-amin hydrochloride. — Arsenobenzol.—"606."—Salvarsan is 3-diamino-4-dihydroxy-1-arsenobenzene hydrochloride,

$HCl.NH_2.OH.C_6H_3.As:As.C_6H_3.OH.NH_2.HCl + 2H_2O$, corresponding to 31.57 per cent. arsenic (As).

Salvarsan is prepared by the nitration of p-oxy-phenyl-arsinic acid and subsequent reduction and condensation of the resulting nitro-phenyl-arsinic acid.

Salvarsan is a yellow, crystalline, hygroscopic powder, very unstable in air. It is readily soluble in water, yielding a solution with an acid reaction. The addition of sodium hydroxide solution to an aqueous solution of salvarsan, in the ratio of two molecules of sodium hydroxide to one of salvarsan, precipitates the free base ($NH_2.OH.C_6H_3.As:As.C_6H_3.OH.NH_2$). On the addition of an aqueous solution of sodium carbonate to an aqueous solution of salvarsan, a precipitate is produced which is insoluble in an excess of the reagent.

An aqueous solution of salvarsan is not affected by the addition of dilute hydrochloric, nitric or sulphuric acids.

When salvarsan is heated with an alkaline solution of potassium permanganate the permanganate solution is reduced and ammonia given off.

The addition of ferric chloride solution to an aqueous solution of salvarsan produces a brownish-violet color, which gradually changes to a dark red; finally the liquid becomes turbid.

Silver nitrate solution added to an aqueous solution of salvarsan acidified with dilute nitric acid, yields a dark yellow precipitate which rapidly becomes black.

The addition of concentrated nitric acid to an aqueous solution of salvarsan produces a yellowish-white precipitate. On further addition of the acid the precipitate redissolves and the solution becomes dark red.

The arsenic content of salvarsan may be estimated according to the method described in "Reports of the Chemical Laboratory of the American Medical Association," vol. iii, p. 97.

Actions and Uses.—Salvarsan is asserted to be useful as a specific remedy for syphilis in all stages except in parasyphilitic affections, such as tabes and general paralysis. It is asserted to give especially favorable results in those cases which prove rebellious to mercury and iodides. According to available data, the remedy can be employed with the prospect of cure in incipient tabes, early paralysis, and epilepsy due to syphilis, only in those cases in which its use is begun immediately after the first symptoms of the secondary disease have appeared.

It is stated that the remedy is useful in all spirillum affections, such as malaria, relapsing fever and frambesia, and it is asserted to be an available substitute for arsenic in the treatment of diseases of the skin, nerves and blood.

The remedy is contra-indicated in severe disturbances of the circulatory organs, advanced degenerations of the central nervous system, fetid-bronchitis, as well as cachexias, unless these are a direct result of syphilis; also in those patients who have pronounced idiosyncrasy against arsenic. According to Leisser, Michaelis, Spiethoff and others, diabetes, nephritis and tuberculosis do not constitute contra-indications for the remedy.

It should be employed with the greatest caution, if at all, in the presence of eye disease even when caused by syphilis.

Dosage.—0.3 to 0.6 Gm. (5 to 10 grains).

For children from 0.2 to 0.3 Gm. (3 to 5 grains). In infants doses of from 0.02 to 0.1 Gm. (⅓ to 1½ grains) may be used. The dose should be varied according to the strength and condition of the patient. Salvarsan can be administered subcutaneously, intramuscularly or intravenously. For a subcutaneous and intramuscular injection a suspension in a neutral fluid is commonly employed. This suspension is prepared as follows: The weighed amount of salvarsan is triturated with 0.35 Cc. normal sodium hydroxide solution to each 0.1 Gm. of salvarsan. To this liquid a solution of 0.1 Cc. of normal sodium hydroxide solution for each 0.1 Gm. of salvarsan in 8 Cc. of sterile water is added drop by drop until the liquid is exactly neutral to litmus paper. If the neutral point is passed the excess of alkali must be carefully neutralized by a weak solution of hydrochloric or acetic acid. Subcutaneously, salvarsan may also be administered in form of oily suspensions.

These suspensions should be injected at once, using a syringe with a very thick platinum needle.

For intravenous injection a clear alkaline solution is prepared as follows: The weighed quantity of salvarsan is triturated with 0.7 Cc. normal sodium hydroxide solution for each 0.1 Gm. of salvarsan and then more of the alkaline solution is cautiously added until complete solution occurs.

This solution is diluted with from 100 to 250 Cc. (3 to 8 ounces) of sterile physiologic salt solution (0.9 per cent.) and filtered through a sterile filter.

The contents of a tube should be used at once after opening and under no circumstances should the contents of a tube damaged in transportation or any remnants of the powder from previously opened tubes be used.

Manufactured by Farbwerke vorm. Meister, Lucius and Bruening, Hoechst, a. M., Germany (Victor Koechl & Co., New York). U. S. patent No. 986,148 (March 7, 1911; expires 1928). U. S. trademark No. 40,734.

Salvarsan 0.6 Gm. Tubes.—Each hermetically sealed tube contains salvarsan 0.6 Gm. (10 grains).

Therapeutics

VOMITING OF PREGNANCY

The most common complication of pregnancy is nausea and vomiting. This may commence four or five weeks after conception takes place and continue for a few weeks or months and then cease, or it may continue during the greater part of the pregnancy. It may be slight, consisting of a transient nausea most often occurring in the morning before breakfast, or so severe that the patient vomits all the food taken and nutrition is seriously impaired. This latter condition is commonly spoken of as the pernicious vomiting of pregnancy.

A trouble which is so common, and which is often very obstinate, has naturally been the subject of much study, and countless remedies and plans of treatment have been suggested for its relief. The attempt has been to ascertain the underlying cause of the trouble, and to classify cases according to the underlying condition.

J. Whitridge Williams, of Baltimore (*Amer. Jour. Med. Sc.*, Sept., 1906, p. 343), has offered such a classification under three heads: (1) reflex, (2) neurotic, and (3) toxic. Most of the severe cases of vomiting of pregnancy, he believes, are of toxic origin and may be detected by an examination of the urine, in which there will be found "a decided decrease in the amount of nitrogen excreted as urea, and a marked increase in the amount put out as ammonia." When he finds this change present Williams believes that the condition of the patient is serious, and feels warranted in terminating the pregnancy at once. This condition of disturbed metabolism, as indicated by the increase of ammonia nitrogen in the urine, he believes to be frequently associated with a disturbance in the liver consisting of a destruction of the central part of the lobule, the cells of which become necrotic, with fatty degeneration of the cells of the peripheral parts.

Other observers disagree with Williams in regard to the significance of this excess of ammonia nitrogen in the urine. F. P. Underhill and R. F. Rand, of New Haven (*Arch. Int. Med.*, January, 1910, p. 61), produce evidence to substantiate their view that this excess of ammonia nitrogen in the urine of patients suffering from pernicious vomiting of pregnancy is not due to any degenerative change in the liver, and is not especially characteristic of the vomiting of pregnancy, but is characteristic of a condition of inanition such as is observed in starvation, and such as takes place in the human subject when food is not taken at all, or is persistently rejected.

In treating the nausea or vomiting of pregnancy, naturally one endeavors to find some cause which may produce it or which may aggravate it. The various excretory organs should be carefully observed to learn if they are doing their proper work, and especially the bowels should be regulated, an easy copious movement each day being secured, if necessary by the employment of some medicine, such as a pill containing a small quantity of aloes with nux vomica or strychnin to be taken at night, or a saline, such as the phosphate of soda or the tartrate of potassium and sodium, in the morning.

A very good laxative combination, made into tablets, pills, or capsules, and one that does not tend to necessitate an increase of the dose, is as follows:

℞	Gm. or c.c.		
Strychninæ sulphatis	0015		gr. 1/40
Aloini	02	or	gr. 1/3
Pulveris ipecacuanhæ	03		gr. 1/2
Extracti belladonnæ foliorum	006		gr. 1/10

M. et fac tales capsulas 30.

Sig.: A capsule after supper.

While phenolphthalein is many times a very good laxative, it should not be given for a long time, as it is likely to cause intestinal irritation.

Such patients are often troubled not only by nausea and vomiting, but also by sour stomach, which is frequently relieved by the use of the milk of magnesia.

It might naturally be supposed that the food taken would have considerable influence on the occurrence of nausea and vomiting. Some, assuming an analogy between the nausea and vomiting of pregnancy and the same condition occurring in gastritis, have believed that similar foods should be employed in the two conditions, and have made an effort to treat these patients by giving liquid and easily digestible food, such as milk, or broths, or milk toast. This sort of feeding sometimes proves efficacious, but often fails. Noting this, Dr. Louis Kolopinski of Washington (*New York Med. Jour.*, June 9, 1906, p. 1173) advocated a different sort of diet. He suggested that what the mucous membrane of the stomach needed in these patients was something which should stimulate the natural functions of the stomach. He therefore recommended for breakfast, in this condition, fried ham or bacon, without coffee or other liquid with the meal, and frequently observed favorable effects.

The distinction should certainly be made from a real gastritis, i. e., inflammation of the mucous membrane of the stomach and a purely reflex vomiting and reflex nausea. If the vomiting is excessive, of course the stomach will become more or less congested. If there is not much vomiting and a good deal of reflex nausea the circulation in the stomach is likely to be poor and the activity of the stomach depressed, similar to the depression of all other parts of the body from nausea. In this condition something that would stimulate the stomach, whether the stimulant action is caused by a small dose of ipecac, or by a teaspoonful of very slightly diluted whiskey or brandy, or by stimulation of a more or less irritant food, would act for good. This is doubtless the condition of the stomach in which Kolopinski's suggestions are valuable.

Underhill and Rand, judging from the results of urinary analyses that these patients were suffering from inanition, proposed to feed them largely on carbohydrate foods, so as to furnish sufficient energy-producing food to maintain a nutritive equilibrium. They administered broths made from cereals and containing lactose, and where the patient was unable to take food by the stomach even in small quantities, they employed a nutritive enema consisting of saline solution and dextrose or peptonized milk, or saline solution and dextrose, administered by the drop method into the colon, as described last week in this department, under the title of "Rectal Alimentation." Indeed, rectal alimentation is sometimes a necessary and often a very important factor in the treatment in severe cases. Patients requiring such treatment should of course be kept in bed, and the various details of the rest-cure should be carried out.

In some instances vaginal examination will reveal some local trouble which has an influence in keeping up the irritability of the stomach by reflex action. Among such local pathologic conditions are displacements of the uterus, tumors of the ovary, congestion and inflammation of the pelvic connective tissue, and erosion or ulceration of the cervix uteri. Correction of uterine displacement, treatment of congestion or inflammation by hot douches and application of glycerin tampons, and treatment by astringents of any erosion of the cervix which may exist, will often prove of great benefit to the patient.

An innumerable variety of medicines has been proposed for the relief of this condition, but only a few need to be kept in mind. The subcarbonate of bismuth, in 0.50 to 1 gram (7½ to 15 grain) doses, given on an empty stomach, is perhaps one of the best.

Oxalate of cerium is of no value, except as its crystals may irritate an anemic stomach and cause hyperemia and more gastric secretion, and therefore stop a depressant nausea. The doses recommended are too small. Cerium oxalate never can have the sedative action of bismuth, and if used in place of bismuth should be given in large doses; but the drug is obsolete, and should be dropped from the Pharmacopeia and from use.

The value of drop doses of wine of ipecac, given in a teaspoonful of water every half hour, in stopping this kind of nausea, has long been proved. This is not a *similia similibus curantur*, because it is a stimulant to a stomach that requires stimulation and not an irritant to a stomach that is inflamed. If ipecac is given in gastritis it will increase the nausea and vomiting. When the stomach is anemic and the circulation in it depressed, it will improve the condition.

The value of any digestive ferments, as pepsin, is very slight. If an essence of pepsin is of value, it is probably due to the stimulant action of the wine with which it is often combined, or to the action of the hydrochloric acid which is in the preparation.

But more useful than any of these drugs, in many instances, are various remedies which have a sedative action on the nervous system. Of these none is more useful than the bromid of sodium. Given in 15-grain doses at four-hour intervals, it will frequently, for a time at least, stop the vomiting. It is in cases in which the neurotic element is predominant that sedatives are especially useful. Patients of this character often are greatly benefited by the judicious application of suggestive treatment, combined, in the severest cases, with isolation and rest.

Finally, when the vomiting resists all other forms of treatment and when inanition is progressing to a probable fatal termination, the question of producing abortion arises. Occasionally this must be performed, but with a thorough study of the patient and careful consideration of all the factors concerned in the production of the vomiting, it will be found that such a radical course is rarely required. It should not be lightly undertaken, and should be decided on only after consultation with men of experience in the care of pregnant women.

Treatment of Leprosy in the Kalihi Hospital.—Superintendent Wayson of the Kalihi Hospital, Territory of Hawaii, in his annual report to the president of the board of health of that territory, says that he believes the majority of the lepers taken in the incipient stage can be cured as in the case of incipient tuberculosis. He reports a number of apparent cures and gives the method of treatment. Among the agents used internally is chaulmoogra oil, which he believes still has a prominent place in the treatment of leprosy. Sodium cacodylate and hexamethylenamin are also used. Elixir of iron, quinin and strychnin as a general tonic has done much to keep the patients in a healthy condition. Among the agents used for treating the local lesions, Wayson has found carbon-dioxid snow to be effective. He believes that the slow method of using carbon-dioxid snow pencils in incipient cases in which the lesions are circumscribed undoubtedly causes the death of the lepra bacilli and their absorption into the tissues produces a self-immunization or vaccine effect, affecting not only the local lesions in evidence but all other foci present. This is shown in the so-called abortive cases in which the ulnar nerves alone are affected, it being a purely local condition. Wayson reports a number of cases. In one case in which the lesion was on the foot, in addition to the constitutional treatment, the foot was amputated, thus removing all clinical evidence of the disease and the patient was enabled to return to work. In another case with the initial lesion on the right cheek about 1½ inches in diameter containing the bacillus, tuberculin was given, but this increased the trouble. Chaulmoogra oil and elixir of iron, quinin and strychnin were given and the local lesion treated with carbon-dioxid snow. This method was continued cautiously until the lesions entirely disappeared and the bacilli could no longer be found. An examination six months later still failed to reveal any clinical or bacteriologic evidence of the disease.

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[*For other information see second page following reading matter*]

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IS UNIVERSAL VEGETARIANISM FEASIBLE?

The psychology of the vegetarian propaganda would furnish the chapters for an entertaining story. The flame of enthusiasm for its doctrines has been fanned by the most diverse motives. At one time it has been ethical considerations, at another, economic, sociologic or physiologic arguments which have been advanced in support of what is essentially a system of diet.

Considered from purely physiologic aspects, the exclusive use of food of plant origin has been objected to principally on three grounds: (1) a tendency toward poorer utilization of the nutrients contained in the vegetarian diet; (2) the "blandness" of such a dietetic regimen and its lack of desirable stimulating qualities; (3) the necessity of consuming a larger volume of food to furnish the requisite nutriment, i. e., its bulky character.[1] But none of these factors furnishes serious obstacles to nutritive success and at times each presents certain advantages. Modern vegetarianism has recognized some of the more objectionable features and has met the situation by a diversity of improvements which represent a real advance in modern food preparation. To-day no one can deny the possibility of adequate nutrition and the prolonged maintenance of health and vigor on a vegetarian diet.

To grant the safety of the vegetarian regimen, however, it is by no means necessary to admit its superiority. Herein the enthusiasts have often been led too far afield. The controversy now centers largely around the possible dangers of excesses in meat-eating; so that a convert has written that "for all practical intents and purposes a vegetarian is one who does not habitually make use of flesh foods in contradistinction to the habitual user."[2] In our judgment the relative merits of an *exclusive* animal or vegetable dietary give little occasion to assume a physiologic superiority of either.

In an interesting essay just published, Professor A. E. Taylor[3] of the University of Pennsylvania considers and dismisses three groups of motives for vegetarianism, those of gustatory taste, esthetic taste and physiologic opinion. At the present time, he says, "ethical vegetarianism alone remains to be considered. This is in its tenets and conclusions a logical system." "Is it susceptible of consistent, world-wide application?" he asks. "Is the production of plant albumin on the earth sufficient to meet the albumin needs of the earth's inhabitants? What transformations would result in the customs, industry and commerce of the world, in the sociology and economics of the nations?" The question, to be sure, is a purely academic one; there is no danger that the population of the world will ever become universally consistent on vegetarianism or any other subject. The academic logic of the situation is squarely met by Professor Taylor. Consistent ethical vegetarianism would not permit the killing of animals either for food or for the products of their bodies. Mankind would have to face the problem of clothing without the aid of leather and fur.

To dispense with these protective devices would be a task trivial in comparison with that of the food problem. Taylor's conclusions may be given in his own words: "Unhesitatingly it may be stated that the area of the earth's surface now under cultivation could not, with the present methods of agriculture, dependably produce enough plant albumin to meet the needs of the present population. . . . To meet these needs with plant albumin and dairy products the world's production of grains and legumins would need to be doubled at the least. It is quite certain that this could not, with the uttermost efforts of the world's population, be dependably accomplished at present. . . . The difficulties would not be technical, but human. To accomplish them the present intelligence of the human race, the dependable intelligence of the working race of mankind, would be wholly insufficient; the race has not attained to-day the scientific stature necessary to reach and pluck these fruits of knowledge. For the present, therefore, it is certain and beyond speculation that to place the human race on the basis of ethical vegetarianism would be to expose the race to the mercy of Nature, just as the vegetarian population of India is yearly at the mercy of the yield of grain." The ever-present conservation problem will not be downed in these days!

THE REPORTING OF CASES OF SICKNESS

Success in the prevention of communicable diseases depends primarily on knowledge of the occurrence of these diseases and their geographic distribution. In fact, without prompt reports of such cases, health authorities are powerless to institute rational measures for the protection of the health of communities. In addition, a complete system of sickness registration would be an invaluable aid in determining the relation of climate to disease, the influence of overcrowding, occupation and predominant diets on health, and the liability to sickness with the consequent economic losses occasioned thereby.

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[1] Cf. Caspari: Physiol. Studien über Vegetarismus; Bonn, 1905.

[2] Buttner: A Fleshless Diet. F. A. Stokes Co., New York, 1910, p. 2.

[3] Taylor: Is Vegetarianism Capable of World-Wide Application? Pop. Sc. Monthly, December, 1911, p. 587.

While of fundamental importance, the collection of morbidity reports of all preventable diseases has not been complete or entirely satisfactory in any country. Three methods of collecting sickness statistics have been proposed: enumeration, estimation and registration. The last is the only feasible one, and is made use of to collect those statistics that are now available in the United States.

In accordance with present provisions of law, the United States Public Health Service endeavors to collect and disseminate accurate information regarding the prevalence and geographic distribution throughout the world of plague, cholera, yellow fever, small-pox and certain other communicable diseases. The data from abroad are received through the Consular Service, those from the United States, through state and territorial health authorities. These latter are in turn dependent on local authorities, physicians and householders where the sickness occurs. On account of the numerous avenues from which such reports must come, and because of the dissimilarity in the laws under which they are collected in the several states, they have been neither complete nor uniform. In order to bring about greater uniformity, cooperation of all the agencies responsible for the collection of sickness reports is necessary. A first step in this direction is the assembling and comparison of the laws and regulations relating to the reporting of cases of sickness.

In a recent bulletin[1] Trask has presented a digest of these laws and regulations, and a copy of this publication should be in the hands of every health officer—city, county and state. In a work of this character, naturally, comparison is made of the requirements contained in the statutes and regulations rather than of the extent of their enforcement. Trask outlines briefly the health organization for the collection of morbidity reports in each state and the counties, cities and towns in the respective states. A list of the notifiable diseases in each state and territory is given in tabular form. Great variation appears to exist as to the number of diseases required to be reported. In some states, as Arkansas, no diseases appear to be reportable under state law or regulations, while in Pennsylvania, reports are required to be made of thirty-three diseases.

Since health authorities are responsible for the collection of these reports, there is contained in tabular form a statement of the provisions made for such authorities by state and territorial laws and regulations, and in a separate table, there is presented information as to who shall make reports, to whom they shall be made, and the time of making them.

Finally, special mention is made of certain features peculiar to the various state and territorial laws relating to the reporting of cases of sickness, and a complete compilation of all the laws on the subject is contained in an appendix.

In bringing together the above-mentioned laws and analyzing them and the regulations issued thereunder, Trask has performed an important service. It is made apparent that there should be greater uniformity in respect to the reporting of cases of sickness, and it would seem desirable for this purpose to adopt a model act that would be capable of enforcement in the different states and territories and thus to develop and enlarge a registration area for morbidity.

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[1] Pub. Health Bull. 45, U. S. Public Health and Marine-Hospital Service.

THE SEWAGE PROBLEM IN CHICAGO

There is truly no end to the making of sewerage systems. The Chicago Main Drainage Canal has been in operation only about eleven years and the authorities responsible for its successful maintenance are already facing a serious situation. It is well known that the present drainage channel protects but a part of the Chicago water-supply from sewage contamination and that the water intake opposite Sixty-Eighth Street and supplying the old Hyde Park district is exposed to pollution from the sewage of the rapidly growing Calumet region. To remedy this condition a second drainage canal to discharge into the main canal at Sag is now planned. Pending the construction of this canal the residents of the southeast section of Chicago are receiving at times a sewage-contaminated drinking-water. The recent recommendation of the chief engineer, Mr. George M. Wisner,[1] that calcium hypochlorite should be used to sterilize the water at the Sixty-Eighth Street crib deserves consideration.

It is further evident from the chief engineer's report that the completion of the Sag channel will by no means solve all the sewage disposal problems of Chicago. The increasing volume of sewage poured into the main channel has diminished the degree of dilution to a critical point. In the summer months it is found that practically all the dissolved oxygen in the canal water is exhausted, and a nuisance is imminent. The branches of the Chicago River are already overloaded and an offensive condition exists. Industrial wastes are being discharged into the river and its branches to an unprecedented extent and add to the burden of the canal. Extensive deposits of silt are taking place in the main channel. "At present there is a large deposit of sludge in the forebay of the power house [at Lockport], extending over two miles north to the controlling works and into the rock section."[1]

A feasible remedy proposed for this silting-up of the channel and the overloading of the canal water with sewage and manufacturing waste is the construction of settling basins of the Emscher type at various points and perhaps the installation of roughing filters. It seems highly desirable that the experiments now in progress in this direction by the sanitary district should be continued and amplified. The chief sources of contamination with industrial wastes should be discovered and controlled. As much water as is allowable should be kept flowing through the canal at all times.

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[1] Wisner, George M.: Report, Oct. 12, 1911.

One measure of great importance, since it would not only relieve the sewerage system but would reduce municipal expenditure as well, is the restriction of water waste. At least one-half the water pumped into the water-mains in Chicago is wasted. Proper inspection of plumbing and increased use of meters are simple but effective remedies for this condition. It is a remarkable instance of municipal inefficiency that this well-known and easily preventable waste should be allowed to continue unchecked.

There is no doubt that the whole situation of water-supply and sewage disposal in Chicago needs careful and far-sighted planning. The state of Indiana as well as Illinois is concerned in the Calumet situation and the national government is likewise an interested party so far as the abstraction of water from the Great Lakes is concerned. There is no doubt that any solution of the problem will prove a costly one for the citizens of Chicago, and it is to be hoped that they will be committed to no project without careful preliminary experimentation and consultation with leading experts. Sixty-five million dollars have already been expended for sewage disposal in Chicago.

VERONAL POISONING

Since 1903, when Fischer and von Mering introduced diethyl-barbituric acid (veronal) as a promising example of a new type of hypnotic, it has become one of the most widely used drugs of its class. It is singular that there should until recently have been a paucity of reliable data regarding the pharmacologic action of a substance which unfortunately has already begun to find its way into the hands of the untutored layman. As in several other conspicuous instances in toxicology, so here the fatal outcome of the use of the drug has given the impetus to a more adequate study of the effects of veronal and its more soluble sodium salt (medinal, veronal sodium) on the organism.[1]

Although the response of veronal in permissible amounts is ordinarily quite satisfactory, the slow excretion of the drug[2] suggests an element of danger in a repetition of the dose within too brief intervals. In view of this circumstance and the added fact that its toxicity is, according to Gröber, greater than is commonly assumed, it seems advisable to guard most carefully against the indiscriminate sale of veronal and related derivatives and to sound a warning against unauthorized "repeat" prescriptions.

The conspicuous action of veronal which serves to elucidate its physiologic as well as its toxicologic effects is the lowering of blood-pressure through a peripheral paralysis of the blood-vessels. This change in the circulation and distribution of the blood is not due to any direct effect on the heart or the vasomotor center. According to Jacobj the relaxation of the capillary walls in the extreme cases is somewhat comparable to the vascular effects induced by arsenic, and serves to explain the syndrome of events attending the overdosage of veronal. These include a fall of temperature, altered irritability of the respiratory center consequent on the deficient blood-supply to the medulla, congestion of the abdominal viscera, along with the fall of pressure and the hypnotic phenomena. Plainly the use of liberal doses of veronal is contra-indicated, because of this depression of the circulation, in those cases in which existing conditions impede the return of blood to the heart and in which an insufficiency of the pulmonary circulation is at hand. Bearing in mind that veronal does not affect the heart musculature itself, the clinician must decide whether, in the face of hemorrhages, cardiac defects, peritoneal processes, and delicate abdominal vascular conditions such as may arise in typhoid, a dangerous impairment of the circulation is threatened by the use of a drug exhibiting the pharmacologic properties outlined.

The appropriate management of intoxications due to veronal is likewise indicated. The average lethal dose, 8 to 10 grams, demands treatment to counteract the inevitable venous congestion, especially in the abdominal area. Stimulation of the vasomotor center, the use of camphor and drugs of related vasomotor action, compression of the abdominal vessels, conservation of body temperature, and perhaps oxygen inhalation, are called for.

Finally, it is interesting to note that the very reactions which, in extreme form, determine the toxic symptoms may serve to explain the valued property exhibited by veronal in permitting a refreshing awakening akin to that following normal sleep. One may imagine a satisfactory restoration of the tissues attendant on a mild degree of vascular relaxation. In any event, a better understanding of the point of attack of a drug like veronal is certain to lead to more efficient therapy.

PASTEURIZATION OF MILK IN BOTTLES

While the opinions of physicians and health officers as to the value of the pasteurization of milk are not unanimous, yet it would seem that when properly carried out, it is an additional method of securing safety which cannot be disregarded; and it cannot be denied that it does have the effect of reducing infant mortality. According to Straus, who has published data regarding this matter, in Karlsruhe, in 1909, the death-rate among infants fed on raw milk was 17 per cent., while among babies supplied with pasteurized milk the mortality for the same year was 6.3 per cent. In New York City, in 1892, the death-rate of children under 5 years of age was

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[1] Gröber: Ueber Veronal, Biochem. Ztschr., 1911, xxxi, 1. Jacobj: Untersuchungen zur Pharmakologie des Veronals (three papers), Arch. f. exper. Path. u. Pharmakol., 1911, lxvi, 241.

[2] Hoffmann, A.: Inaug. Diss., Giessen, 1906.

96.5 per thousand; in 1910, 45.8 per thousand. This reduction was coincident with the increase of the number of stations for the distribution of pasteurized milk and increase in the output of those stations. It is probable, however, that the general improvement of the milk-supply aside from pasteurization was to some extent responsible for this improvement.

The germs of typhoid fever, diphtheria, scarlet fever and other diseases are destroyed at pasteurization temperature. Much depends on the method of pasteurization, however, as it cannot be denied that even after pasteurization contamination is possible. A method, more effective than those hitherto employed, of pasteurizing the milk in bulk, has been recommended recently by North.[1] According to this plan milk is bottled and then pasteurized in the same manner as beer has been pasteurized for some time past. The bottles are placed in baskets and then carried by an endless chain through tanks of water, each tank having a higher temperature than the previous one. Gradually a temperature of 142 F. is reached. Here the bottles remain for from twenty to thirty minutes and after that are cooled. The bottles are now ready for delivery, further handling by which recontamination might occur being unnecessary.

Three years ago, Heinemann[2] recommended the use of bottles with narrow necks and caps fitting tightly over the outside of the neck. This type of bottle is the same as used for bottling beer. The objection raised to this style of bottles is chiefly the alleged difficulty in cleaning them. In breweries they are cleaned in machines in a perfectly satisfactory manner. North reports a series of experiments made with milk bottled in this style of bottles and carried through a pasteurization process in a brewery. Tests of the milk were made and compared with the results obtained by pasteurization in a holding machine and with the initial content in the raw milk with the following results: The average number of bacteria in six samples of raw milk was 3,426,000 per cubic centimeter. The number in the milk after having been pasteurized in a holding machine was 73,800, showing that 97.9 per cent of all bacteria had been destroyed. The number of bacteria in the milk pasteurized in bottles was 13,980, showing that 99.6 per cent. of all bacteria had been destroyed.

Pasteurizing milk in closed bottles offers two distinct advantages over methods in vogue at present. There is, in the first place, a material reduction in numbers of bacteria, this reduction being greater than the reduction obtained by the holding process. With a greater reduction of numbers of bacteria follows a greater reduction of the chances of pathogenic germs surviving. The second advantage—and this cannot be overestimated—is the assurance that recontamination cannot take place, as no handling of the milk is necessary after pasteurization, and protection against pathogenic bacteria is assured.

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[1] North, C. E.: Med. Rec., New York, July 15, 1911, p. 111.
[2] Heinemann, P. G.: Sanitary Milk, Arch. Pediat., June, 1908.

MILK OF THYROIDECTOMIZED ANIMALS IN HYPERTHYROIDISM

Many attempts have been made in recent years to alleviate the symptoms of hyperthyroidism by the administration of the milk, serum or dried blood of animals deprived of the thyroid gland. The theory[1] underlying these attempts was that, after removal of the thyroid, toxic substances accumulate in the blood, or antibodies are formed, some of which pass into the milk, and which neutralize in some way the excess of thyroid secretion which is believed to be present in the blood in hyperthyroidism. The reports from the use of such preparations have not been very uniform, some being favorable, others negative. Perhaps the most favorable results reported followed the use of comparatively large amounts (a pint to two quarts daily) of the fresh milk of thyroidless goats.[2]

Hunt,[3] who had concluded from his experimental work that a milk diet had an effect antagonistic to the thyroid, suggested that in these cases it was the milk *per se* rather than the presence in it of antibodies which was responsible for the improvement noted. Recent experiments by Edmunds[4] and also by Trendelenburg[5] tend to show that after removal of the thyroid, toxic substances accumulate in the blood and milk, and that these have an action not antagonistic to thyroid, but one similar to that of thyroid itself. Thus Trendelenburg found the blood of thyroidectomized animals to give the acetonitril test (increased resistance to acetonitril of mice receiving thyroid). Hunt (whose observations have been confirmed by Ghedini and Wilson) had found that the blood in certain cases of hyperthyroidism gave this reaction; he attributed it to the presence in the blood of an excessive amount of thyroid secretion. Trendelenburg, on the other hand, attributed Hunt's results (the increased resistance to acetonitril of mice to which thyroid had been administered) to the thyroid having taken up some of the toxic substances which accumulate in larger amounts when the thyroid is removed. Hunt[6] suggested that Trendelenburg's results (acetonitril reaction with the blood of thyroidectomized animals) might be due to the presence in the blood of substances which aroused the thyroid of animals to which it was administered to increased activity. This suggestion is in harmony with the experimental results of Edmunds: Edmunds found that the administration of the milk of thyroidless goats to rats receiving thyroid hastened the death of the animals; an opposite result would be expected if such milk contained antithyroid bodies.

The practical outcome of the work of Trendelenburg and Edmunds is to show that the treatment of hyperthyroidism with "antithyroid" milk or blood does not rest on a satisfactory experimental basis. It also indicates that Hunt's suggestion that the favorable results obtained with the milk of thyroidless animals is due to the milk itself, and not to the presence in it of antibodies, may be the correct explanation. Further clinical observations on this subject are much to be desired.

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[1] See New and Nonofficial Remedies, 1911, p. 30.
[2] Edmunds: Lancet, London, Dec. 9, 1911, p. 1618.
[3] Hunt, Reid: Bull. 69, Hyg. Lab., p. 75.
[4] Edmunds: Lancet, London, March 4, 1911, p. 583.
[5] Trendelenburg: Biochem. Ztschr., 1910, 29, p. 396.
[6] Hunt, Reid: Experiments on the Relation of the Thyroid to Diet, THE JOURNAL A. M. A., Sept. 23, 1911, p. 1032.

Current Comment

THE AUTOMOBILE NUMBER

The Automobile Number of The Journal is a distinct annual feature, and we are pleased to find that physicians look forward to it with so much interest. The automobile has indeed become a regular part of the equipment of the physician. Every physician wants an automobile of some kind, if his practice requires any travel. The physician is very rare who does not either own a motor-car or look forward to owning one at some time in the future. It is no longer necessary, therefore, to discuss whether or not a physician should have an automobile. The question has changed its form: What sort of a machine should he have? How can he get the most out of it? How can he best care for it? Physicians also are interested in the experiences of their colleagues in business and in pleasure, while making tours as well as in the daily calls. They will be interested to know of new and clever devices for taking care of the automobile, for equipping it, for making it serve the physician's needs more acceptably. On all these points we shall be interested to receive communications. April 6 has been selected as the date of the Automobile Number, and we should like to have an early response from all who have something to contribute. We shall be glad to hear from contributors by February 5, that we may save space for them; and the articles should follow along during the month of February. As usual, pictures are in high demand; not ordinary pictures of the machine, but photographs with some character to them, showing an interesting incident, a good road or a bad road, the physician's house and family, his garage or repair outfit—in short, anything that will be of interest and help to the many who are eagerly awaiting the next Automobile Number. We should also like to receive suggestions from our readers with reference to any special points or features that they would like to see brought out.

THE PROFESSION MUST APPLY THE PENALTY

A law that provides no penalties for its violation is worthless; in fact, it is worse than worthless, for not only is the law itself inefficacious, but the impunity with which it may be violated creates disrespect for all law. The federal and various state food and drugs acts would be dead letters, if no punishment were prescribed for their violation. It is true that sometimes a law may become a dead letter because it is not enforced rather than because it carries with it no adequate penalty for being broken. Here, however, the fault lies not with the legislative, but with the executive department of the government. The various pure food laws of the country have accomplished good because drug adulterators and food sophisticators have found it either inconvenient or expensive to violate these laws. The efforts of the Council on Pharmacy and Chemistry to protect the medical profession against frauds and misrepresentation in proprietary medicines are rendered largely abortive because the Council is purely an advisory body and its findings do not result in the penalizing of the concern found guilty of fraud or misrepresentation. While the Council on Pharmacy and Chemistry has no power to punish those whom it shows to be guilty of deceit or dishonesty toward physicians, the medical profession itself has the power of inflicting the most severe penalty on such manufacturers. All that the Council can do is to exclude such products from New and Nonofficial Remedies and to expose their shortcomings through the pages of The Journal. This, in itself, means little to the manufacturers. It would mean a great deal, however, if physicians would confine their proprietary prescribing to such preparations as had been admitted to New and Nonofficial Remedies; it would mean a great deal if physicians would write to those medical journals that advertise the very preparations the Council has shown to be worthless, fraudulent, or both, urging—nay, even demanding—that the publishers purge their advertising pages of these products. Only in this way can the work of the Council be made effective; and it is for this reason that we have again taken up this propaganda for reform as it relates to so-called "ethical" proprietaries. We have decided to continue pounding away on this matter until we learn whether or not the profession is sufficiently interested to make some sacrifices—if sacrifices be necessary, as they may be in some instances. It is useless to go on with this propaganda unless the medical profession is backing it, and backing it in earnest. So long as nearly all medical journals, without protest from physicians, help to humbug the profession by admitting frauds to their advertising pages, so long will frauds and misrepresentations connected with the exploitation of proprietary medicines continue.

MEDICAL JOURNALS AND NOSTRUM EXPLOITATION

The 250 or 300 so-called independent medical journals published in the United States may be broadly divided into two classes: first, those whose subscription price is sufficient to warrant physicians to expect them to be run in the interest of the profession, and second, those whose subscription price is merely nominal and whose real support comes from the advertisers rather than from the subscribers. Of the first class there are not many and we shall discuss them at some length in the future. The name of the second class is legion. The term "independent," as applied to medical journals of the latter class, is misleading. Such journals, it is true, are independent of the medical profession, but they are subserviently dependent on the manufacturers of proprietary remedies whose advertising appropriations support them. The result is that such journals are commercial publications. They are published with one object in view, that of making money for their publishers — a perfectly legitimate object, but one that is prone to result in relegating purely professional questions to the background. It is natural and even inevitable that under such conditions professional responsibility should bow to commercial expediency. It cannot easily be otherwise. It is therefore useless and absurd to expect that there should be any scientific discussion either of the proprietary remedies that are advertised in such journals or of the proprietary remedies of which such journals may hope to obtain advertisements. The editors of such journals will not kill the geese that lay their golden eggs. And why should physicians who encourage such journals expect things to be otherwise? They—the physicians—are not supporting these journals (be it remembered we are referring to the second class)—the proprietary manufacturers are doing so; all of which is merely another way of saying what we have stated repeatedly—that the perpetuation of the proprietary evil rests primarily on the shoulders of the profession. So long as physicians will shirk their responsibilities in the matter, so long will the evil flourish.

BENZOATE OF SODA—A CORRECTION

Two months ago[1] an editorial appeared in THE JOURNAL discussing the "Expert Opinion of the Royal Scientific Deputation for Medical Affairs Regarding the Use of Benzoic Acid and Its Salts for the Preservation of Food," a translation of which was sent to Washington by the American Consulate General of Berlin. From a reading of the report, we were led to make the following statement:

> "Of the decision of the United States referee board these German scientists say:
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> "'The series of experiments in this connection made by the American scientists are of too short a duration and the results coupled with certain limitations so that they cannot be regarded as demonstrating the unconditional non-injurious nature.'"

Soon after this statement appeared, we received protests to the effect that the "series of experiments" referred to in the report was not the whole series conducted by the referee board, but only that series carried out to determine the effect of *large* doses of sodium benzoate. We called editorial attention[2] to this protest and published the entire paragraph so that our readers could determine for themselves whether or not we were justified in making our statements. At the same time, we wrote to the members of the Royal Scientific Deputation for Medical Affairs asking for further information on the point raised. The following letter is the answer to our inquiry:

"Auf Ihre Anfrage vom 21. November teile ich Ihnen zugleich im Namen und Auftrag von Herrn Dr. Abel folgendes mit. 'Unsere Bemerkung: 'Die in dieser Beziehung vorliegenden Versuchsreihen der amerikanischen Gelehrten sind von zu kurzer Ausdehnung und die Ergebnisse mit gewissen Einschränkungen versehen pp.' bezieht sich *ausschliesslich* auf die Versuche mit *grossen* Mengen von Natriumbenzoat. Die Ergebnisse der Versuche des 'referee Board' haben wir im übrigen als beweisend für die Unschädlichkeit *kleiner* Mengen von Natriumbenzoat anerkannt. Das zeigt deutlich der folgende Satz des Gutachtens: 'Man darf—aus den Versuchen der amerikanischen Kommission wohl den Schluss ziehen, dass Mengen bis zu etwa 0. 5 g. Benzoesäure in kleinen Mengen tagsüber genossen, für den menschlichen Körper als harmlos zu bezeichnen sind.'

"Gestatten Sie mir zum Schluss, Sie auf einen kleinen Irrtum in Ihrem Artikel aufmerksam zu machen. Das Gutachten wurde erstattet auf Veranlassung des *preussischen*, nicht des deutschen Ministers der Unterrichts—und Medizinal-Angelegenheiten."

"Mit vorzüglicher Hochachtung
"DR. ARTHUR HEFFTER."

It will be seen by the above[3] that we were not justified in concluding that the criticism of the Royal Scientific Deputation for Medical Affairs referred to the whole of the work done by the referee board. THE JOURNAL has no desire to be unfair in any comments it may make on the benzoate of soda controversy and it regrets the error that was made in this particular. At the same time we believe that the attitude of the American Medical Association on the question of the use of sodium benzoate in food is the correct one, and we shall continue to protest against the use of this chemical as a food preservative. And we again call attention to the fact that while the Prussian scientists accepted, at their face value, the findings of the referee board, they reached the following conclusion in their own report:

> "The Scientific Deputation for Medical Affairs is likewise of the opinion that the use of benzoic acid and benzoic acid salts for the preservation of food should not be permitted."

And when all is said and done this, of course, is the nub of the whole question.

COUNTY MEDICAL SOCIETY LIBRARIES

In a paper read before the State Medical Society of Pennsylvania, James M. Anders[1] advocates a movement having for its aim the organization of working medical libraries for county societies. He believes that the creation of an independent library under suitable regulations for each county medical society would add materially to the higher culture and efficiency of the medical profession and would soon be counted among its most valuable educational resources. Here and there county societies have libraries, but, as a rule, except in the larger cities, they are not well kept up and not much interest is taken in them by the members. Anders believes that more interest should be stirred up in this library question and that the members should be encouraged to make use of the books and periodicals which the library should contain. A special assessment or an apportionment of the dues of the county society should be devoted to keeping the library up to date, and, as in the case of the larger medical libraries, donations of complete private

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1. THE JOURNAL A. M. A., Nov. 4, 1911.
2. THE JOURNAL A. M. A.,, Nov. 25, 1911.

3. TRANSLATION: At your request of November 21, I make the following communication in the name and at the instance of Dr. Abel: Our remark, "The series of researches in this connection of the American scientists are too slight in extent and the results subject to certain limitations," refers *exclusively* to the experiments with *large* quantities of sodium benzoate. The results of the experiments of the referee board in other respects we have recognized as evidence for the innocuousness of small quantities of sodium benzoate. This is clearly shown by the following sentence of the report: "One may draw the conclusion from the experiments of the American commission that quantities up to about 0.5 gm. of benzoic acid taken in small quantities through the day are to be regarded as harmless for the human body." Kindly permit me to call your attention to a slight error in your article. The report was furnished at the request of the *Prussian* and not of the German (imperial) minister of instruction and medical affairs.

1. Anders, J. M.: The Value of a Library to a County Medical Society, Pennsylvania Med. Jour., November, 1911; abstr. in THE JOURNAL, Dec. 23, 1911, p. 2107.

libraries or of books by the members should be encouraged. At present, the secretaries of the county societies take care of these libraries without compensation, which is not conducive to the best usefulness of the libraries. The accumulation of books and current periodicals by the county societies would give many physicians an opportunity for a much wider range of reading than they can now afford, and this would undoubtedly be an important feature which would aid in creating and maintaining a greater interest in county medical societies, which of course would be most desirable. The county library idea should by all means be fostered and the members encouraged to make use of the collection.

THE LEAVEN WORKS

For the past two years The Journal has been stating some facts regarding certain fraudulent "patent medicines", quacks and quack institutions, and the Chemical Laboratory of the Association has been doing some splendid work in exposing the nostrums which are being advertised to the public. Of course, The Journal itself does not go to the lay public, but the various exposés are reprinted in pamphlet form[1] and are circulated among the laity and are also sent out to more than two thousand newspapers. It is an encouraging fact that we are getting the cooperation of many laymen all over the country; in fact, this help has been forthcoming almost from the very beginning—our correspondence with laymen has developed to such an extent that it requires practically the time of one stenographer to attend to it. A good example of the work that is being done by the laity in fighting the "patent medicine" evil is worth calling attention to. The readers of The Journal will remember the exposé published some months ago of a consumption cure fraud called Tuberclecide.[2] This nostrum has been exploited extensively in Albuquerque, New Mexico. One of the citizens of that town—a layman—wrote to The Journal for such information on this nostrum as it could furnish, and as a result of what he learned he has made things very interesting for the Tuberclecide exploiters. This gentleman has interested others and together they are seeing to it that the people of his community shall be enlightened. Here is what the Albuquerque *Morning Herald* says in reference to it:

> "The public-spirited gentlemen who are now posting standard works endorsed by the American Medical Association in various public places in Albuquerque, to enlighten the credulous public on the nature of the various 'cures' and nostrums now in vogue, deserve the gratitude of the people. This is an educational crusade almost as important as the other one started here to teach the boys and girls about the prevention of tuberculosis. 'The Great American Fraud,' as Mr. Adams has so aptly termed it, will soon be able to see its finish and thousands of dollars now being donated by the gullible ailing to cold-blooded sharps who play on their apprehensions will be spent to better purpose. War on the fake dopes is war in the interest of the stomachs, health and lives of our people and such a crusade deserves the support of every one. At least it is worth the public's while to read these little books now being distributed about the city."

What has been done in this instance is no more than can be—and, we believe, will be—done in others. The number of intelligent laymen who are convinced of the viciousness of the "patent medicine" evil is rapidly increasing. All that is necessary is to furnish the facts and the public may be relied on to respond enthusiastically. Moreover, newspapers of the better sort will do as the Albuquerque *Morning Herald* and many other newspapers have done—cooperate in this campaign of education and help the good work along.

HENRY LABOUCHERE—THE FOE OF FRAUD

Henry Labouchere has just died in Florence, Italy, at the age of eighty. This announcement will be of no special medical interest, except to those who know what Mr. Labouchere, as editor of London *Truth,* has been doing for nearly forty years in exposing frauds in Great Britain. For years before the medical profession of England commenced its fight on nostrums, *Truth* had consistently and persistently enlightened the British public on "patent-medicine" frauds and swindling quacks. Mr. Labouchere has undoubtedly been sued for libel more than any half-dozen other men in the British Isles, and yet in practically every instance he has been upheld by the courts. This record is the more surprising in view of the limitations which the libel laws of Great Britain place on editors and publishers. It has been said that *Truth* has "unmasked all sorts of swindles with a cold-blooded precision of detail and never got indignant; it served the cause of virtue and public probity without uttering a virtuous sentiment." Undoubtedly the fight against nostrums and quackery commenced by Mr. Labouchere will be kept up by those who now conduct *Truth.*

WHICH WILL BE NEXT?

Two weeks ago, we noted in the Propaganda for Reform department that one of the high-class surgical journals of the country — *Surgery, Gynecology and Obstetrics* — had notified its subscribers that, commencing with the January, 1912, issue, it would advertise no pharmaceutical products that had not been approved by the Council on Pharmacy and Chemistry. The January issue is out and it is a credit not only to its publishers but to the surgical profession of the United States. This makes three independent medical journals—*Surgery, Gynecology and Obstetrics, Southern Medical Journal, Cleveland Medical Journal* — which have adopted the advertising standard set by the American Medical Association through its Council on Pharmacy and Chemistry. Which will be next?

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[1] See The Journal, Jan. 13, 1912, advertising page 45.

[2] The Journal, May 13, 1911; reprinted in "Nostrums and Quackery."

Trained Nurses in China.—The field of trained nursing in China is limited to the foreign population, and the situation in Shanghai is typical of the whole country. In Shanghai, girls, mostly English, enter the Victoria Nursing Home for training while those in the Shanghai General Hospital are practically all French nuns. Among the Chinese the missionaries in the majority of the cases oversee the native hospitals and look after the sick. The outlook for an American nurse, reports Consul-General A. P. Wilder in *Daily Consular and Trade Reports,* is not bright unless she has a contract for two or three years before she leaves for China.

Medical News

ALABAMA

Antituberculosis Association Formed.—At a mass meeting of the citizens of Tuscaloosa, December 14, the Tuscaloosa County Antituberculosis Association was organized and John Y. Graham was elected president and Dr. James T. Searcy a director.

Tuberculosis Hospital for Convicts.—Contracts have been let by the state convict department for the erection of a tuberculosis hospital at Wetumpka, to accommodate at least ninety patients. The buildings are to be erected within a mile of the courthouse at Wetumpka, on a high hill thickly covered by pine trees.

Personal.—Dr. Hamilton R. Coston, Birmingham, fractured his arm while cranking his automobile, December 5.——Drs. George A. Hogan, Birmingham, and John T. Kent, Ensley, have been appointed state convict physicians, vice Drs. Sidney J. Vann, Fort Payne, and Elbert T. Fields, Ensley.——Dr. Harry T. Inge, Mobile, has been appointed chief surgeon of the Mobile and Ohio Railroad Company, vice Dr. Rhett Goode, Mobile, deceased.——Dr. William G. Ward, Mobile, has been appointed acting chief surgeon of the New Orleans, Mobile and Chicago Railroad.——Dr. Herbert P. Cole, Mobile, has succeeded the late Dr. Rhett Goode as surgeon of the Mobile-Selma division of the Southern Railway.——Dr. Harry T. Lay, Montgomery, has been appointed sanitary inspector of the Alabama Brigade, with the rank of major.

CALIFORNIA

Campaign Against Rats.—At the request of Health Officer Langdon of Stockton, Inspector Kuhn, U. S. P. H. and M.-H. Service, has opened headquarters in Stockton and will conduct a campaign against rats.

Personal.—Dr. Charles E. Ide has been appointed health commissioner of Redlands, vice Dr. Hamilton Forline, resigned. ——Drs. Thomas W. Huntington and George D. Somers have been seated as members of the San Francisco Health Board. Dr. R. G. Broderick was elected president of the board, vice Dr. William F. McNutt, December 19.——Dr. Richard Fricks, Oakland, has returned from Europe.——Dr. Alden M. Gardner, Belmont, who has been seriously ill in the Lane Hospital, San Francisco, is reported to be convalescent.——Dr. Henry D. Buckman, Sacramento, has been appointed assistant superintendent of the Sacramento County Hospital.

Society Elections.—County medical societies report the following as the results of recent elections: Kern County, at Bakersfield, December 18: president, Dr. Thaddeus M. McNamara, San Francisco; vice-president, Dr. Newbern N. Brown, Bakersfield, and secretary-treasurer, Dr. Francis A. Hamlin, San Francisco.——San Bernardino County, at Redlands, December 13: president, Dr. Christopher A. Sanborn, Redlands; vice-presidents, Drs. Roy S. Gibbs, San Bernardino, and Daniel C. Stillians, Redlands; secretary, Dr. Carlos G. Hillyard, Redlands, and treasurer, Dr. William A. Taltervall, Redlands.——Butte County, at Chico, December 12: president, Dr. Charles L. Browning, Chico; vice-president, Dr. Edw. E. Baumeister, Chico, and secretary-treasurer, Dr. Ella F. Gatchell, Chico.——Riverside County, at Riverside, December 11: president, Dr. Karl R. Sleeper, Riverside; vice-president, Dr. Lewis H. Clark, Riverside, and secretary-treasurer, Dr. George E. Tucker, Riverside.

COLORADO

Personal.—Dr. Willis G. Mudd has been reelected as police surgeon of Denver.——Dr. Noah Dymenberg, Brush, has purchased the Mortensen property, and will remodel the building and move the Brush Hospital to it.——Dr. John G. Wolf has been elected city physician of Pueblo.

Sanatorium Incorporated.—The Fort Collins Sanitarium Company was incorporated, December 13. It will be under the charge of Dr. Emanuel Stuver and has the approval and cooperation of the medical profession of Fort Collins.

Elections.—At the annual meeting of the Colorado Woman's State Medical Society, Dr. N. Eugenia Barney, Sterling, was elected president, and Dr. Kate E. G. Yount, Denver, secretary-treasurer.——El Paso County Medical Society elected Dr. Burton B. Grover, president; Dr. Beverly Tucker, vice-president; Dr. James H. Brown, secretary, and Dr. George H. Grimmell, treasurer, all of Colorado Springs.——Morgan County Medical Society elected the following: president, Dr. William E. Turner, Brush; vice-presidents, Drs. John C. Law and Frederick W. Lockwood; secretary-treasurer, Dr. Ernest A. Fetherstone, all of Fort Morgan.

ILLINOIS

Medical Science Room Opened.—The medical science room of the Evanston Public Library was formally opened and presented to the library by the donors, January 3. The room was founded in honor of Dr. Edward H. Webster and contains the Walter S. Christopher library, endowed; the physicians' collection, donated; the Sarah H. Brayton collection, donated, and the Edward H. Webster library, endowed. The library contains about 600 volumes and in addition twenty-six medical periodicals. The presentation address was made by Dr. Will Walter, trustee.

Personal.—Dr. Charles H. McElfresh, Springfield, was assaulted and robbed in Chicago, January 7.——Dr. Cornelius J. Donovan, Waynesville, overcome by cold while making a call January 8, fell from his buggy and is reported to be in serious condition.——Dr. Franklin S. Davis, Peoria, fractured his right arm while cranking his automobile, January 4.——Dr. Paschall N. Bowman, Gillespie, is reported to be seriously ill with typhoid fever.——Dr. William H. C. Smith, Godfrey, started on a trip to Panama, January 16.——Dr. Clarence E. Pierce, O'Fallon, suffered severe bruises in a runaway accident December 29.

Elections.—The following officers of medical societies have recently been elected: Aurora Medical Association, December 27, president, Dr. Darwin D. Culver; vice-president, Adam E. Diller, and secretary and treasurer, Dr. G. B. Schwatgen.——Perry County Medical Association, at Tamaroa, in December, president, Dr. Max Adles, Duquoin; vice-presidents, Drs. James T. Leigh, Duquoin; James S. Cleland, Swanick; James W. Smith, Cutler, and Thomas A. Holeman, Rice, and secretary-treasurer, Dr. Frank P. Gillis, Duquoin.——Morgan County Medical Society, at Jacksonville, president, Dr. Edward Bowe; vice-president, Dr. George H. Stacy; secretary, Dr. Walter L. Treadway, Concord, and treasurer, Dr. Albyn L. Adams, all of Jacksonville.——Alexander County Medical Society, at Cairo, December 21, president, Dr. Josiah B. Hibbetts; vice-president, Dr. Flint Bondurant, and secretary and treasurer, Dr. James W. Dunn (reelected), all of Cairo.——Marion County Medical Society, at Centralia, December 21, president, Dr. Joshua T. Jones, Salem; vice-president, Dr. Samuel E. Peden, Centralia, and secretary and treasurer, Dr. Warren W. Murfin, Patoka. ——Adams County Medical Society, recently, president, Dr. James H. Pittman, Camp Point; vice-presidents, Drs. Ray Mercer, Loraine, and Kirk S. Shawgo, Quincy; secretary, Dr. Elizabeth B. Ball, Quincy, and treasurer, Dr. Robert J. Christie, Quincy.——Whiteside County Medical Association, at Morrison, president, Dr. William K. Farley, Fulton; vice-president, Dr. Edward W. Wahl, Tampico, and secretary-treasurer, Dr. William H. Perry, Sterling.

INDIANA

Sanatorium to Be Enlarged.—A tract of land, 170 by 301 feet, adjoining the Norways Sanitarium, Indianapolis, has been purchased by Dr. Albert E. Sterne and others, for $10,200.

Kendallville Needs Hospital.—A meeting of physicians of Kendallville was held December 21 to discuss the needs of a hospital in the city. A free site, 105 by 480 feet, has been offered for the hospital and on this it is planned to erect a twelve-room building, at an approximate cost of $10,000.

New Dispensary Opened.—A dispensary for the worthy poor of the state has been opened at the Indiana University School of Medicine, Indianapolis. It will be in charge of Dr. Charles P. Emerson. Patients from Indianapolis will be cared for in the city dispensary, but those outside of the city will be sent to the state dispensary. A new laboratory for the teaching of operative surgery, experimental physiology, pathology and pharmacology, has been fitted up at the School of Medicine.

Diphtheria Cultures.—From a compilation made by Dr. J. P Simonds, superintendent of the Laboratory of Hygiene of the State Board of Health, 2,452 cultures were made from diphtheria districts during the past year; 791 or 32 per cent. being found positive; more than one-half of the cases were in children of grammar school age and two-thirds of the total number were found in children old enough to attend grammar school or high school. The attendance at school was shown to materially affect the spread of the disease during the epidemic.

Medical Society Elections.—The following officers have recently been elected by the county medical societies: Daviess County, at Washington, December 9—president, Dr. George W. Williford; vice-president, Dr. Jacob W. Clark, and secretary-treasurer, Dr. Thomas F. Spink, all of Washington.——

Cass County, at Logansport, December 15—president, Dr. Joseph Rubsam; vice-president, Dr. John H. Reed, and secretary-treasurer, Dr. George D. Miller, all of Logansport.——Hamilton County, at Noblesville, December 13—president, Dr. Everett Rainey, Jolietville; vice-president, Dr. Albert R. Tucker, Noblesville, and secretary-treasurer, Dr. Julian E. Hanna, Noblesville.——Lake County, at Hammond, December 14—president, Dr. Edward E. Evans, Gary (reelected), and Dr. Eldridge M. Shanklin, Hammond, secretary.——Knox County, at Vincennes, December 12—president, Dr. Emory F. Small, Decker; vice-president, Dr. Henry W. Held, Vincennes, and secretary-treasurer, Dr. Hubert D. McCormick, Vincennes.——Shelby County, at Shelbyville—president, Dr. James E. Keeling, Waldron; vice-president, Dr. Franklin E. Ray, Shelbyville, and secretary-treasurer, Dr. Morris Drake, Shelbyville.——Tippecanoe County, at Lafayette, December 11—president, Dr. George F. Keiper; vice-president, Dr. William Marven Reser; secretary, Dr. Earl Van Reed, and treasurer, Dr. Charles Hupe, all of Lafayette.——Wayne County, at Richmond, December 6—president, Dr. William M. Helms, Williamsburg; vice-president, Dr. Robert R. Hopkins, Richmond; secretary, Dr. David W. Stevenson, Richmond (reelected), and treasurer, Dr. Frederick W. Krueger, Richmond (reelected).——Jay County, at Portland—president, Dr. Henry W. Markley, Pennville; vice-president, Dr. Clement Bockoven, Bryant, and secretary-treasurer, Dr. Milton T. Jay, Portland (reelected for the tenth term.——Adams County, at Decatur, December 8—president, Dr. Philip B. Thomas, Decatur; vice-president, Dr. Marion F. Parrish, Monroe, and secretary-treasurer, Dr. Claudius C. Rayl, Monroe (reelected).——Fort Wayne Medical Society, at its annual meeting, December 5, elected Dr. Ben Perley Weaver, president; Dr. Budd Van Sweringen, vice-president, and Dr. Garrett Van Sweringen, secretary.——Vanderburg County, at Evansville, December 28, president, Dr. Porter H. Linthicum; vice-president, Dr. Benoni S. Rose, and secretary-treasurer, Dr. William Ehrich, all of Evansville.——Johnson County, at Franklin, December 28, president, Dr. Daniel W. Sheek, Greenwood; vice-president, Dr. John N. Records, Franklin, and secretary and treasurer, Dr. Rufus W. Terhune, Whiteland.——Madison County, at Anderson, December 26, president, Dr. Franklin F. Mendenhall, Elmwood; vice-president, Dr. Doris Meister, Anderson, and secretary-treasurer, Dr. Stanley C. Newlin, Anderson.——Steuben County, at Angola, December 22, president, Dr. Robert L. Wade, Fremont (reelected), and secretary-treasurer, Dr. Thomas J. Creel, Angola (reelected).——Dubois County, at Huntingburg, December 19, president, Dr. James P. Salb, Jasper; vice-president, Dr. Louis C. Lukemeyer, Huntingburg, and secretary and treasurer, Dr. Christian R. Ramsbrok, Huntingburg.——Jackson County, at Seymour, December 22, president, Dr. James H. Carter, Seymour; vice-president, Dr. Nelson G. Harrod, Tampioca, and secretary and treasurer, Dr. L. Butler Hill, Seymour.——Clay County, at Brazil, December 21, president, Dr. Felix G. Thornton, Knightsville; vice-president, Dr. William Palm, Harmony; and secretary-treasurer, Dr. Harry Elliott, Brazil.——Hancock County, at Greenfield, December 14, president, Dr. Milo Gibbs, Greenfield; vice-president, Dr. Stuart Slocum, Fortville; secretary and treasurer, Dr. Carl W. McGaughey, Greenfield.——Montgomery County, at Crawfordsville, December 19, president, Dr. Paul J. Barcus, Crawfordsville; vice-president, Dr. Kent K. Straughan, Waveland; and secretary-treasurer, Dr. James L. Beatty, Crawfordsville.——Wells County at Bluffton, December 19, president, Dr. Roy E. DeWeese, Keystone; vice-presidents, Drs. Clarence H. Mead, Bluffton, and Edwin W. Dyer, Ossian; secretary, Dr. Samuel A. Shoemaker, Poneto (reelected), and treasurer, Dr. Leonidas Mason, Bluffton (reelected).——Bartholomew County, at Columbus, recently, president, Dr. Alva M. Kirkpatrick; vice-president, Dr. Samuel M. Voris; secretary and treasurer, Dr. Paul C. Graham, all of Columbus.

IOWA

Personal.—Drs. Nicholas Schilling, New Hampton, and Thomas B. Charlton, Clinton, have returned from Europe.——Dr. B. Luther Stevens, Des Moines, is about to leave that city and will establish a sanatorium for tuberculosis in Florida.——Dr. E. Warren Doolittle, Garden Grove, who has been in ill health for several years, has resumed medical practice at Weldon.

New Society Organized.—At a meeting held at Calmar, the Northeastern Iowa Medical Society was organized, its membership being taken from the physicians of Allamakee, Winneshiek, Howard, Chickasaw, Fayette, Clayton and adjoining counties. The following officers were elected: president, Dr. Philo M. Jewell, Decorah; vice-president, Dr. Edwin N. Johnston, Fredericksburg; secretary-treasurer, Dr. William C. Hess, Cresco. The next meeting of the society will be held at Calmar, June 4.

New Officers for Societies.—The following new officers are reported by county societies: Pottawattamie County—president, Dr. N. Jasper Jones, Shelby; vice-president, Dr. Andrew A. Robertson, Crescent, and secretary-treasurer, Dr. Grant Augustine, Minden. Dubuque County—at Dubuque, January 9: President, Dr. William L. Becker, Dubuque; first vice-president, Dr. Thomas H. Hefferman, Dubuque; second vice-president, Dr. James E. Reeder, Dyersville; secretary, Dr. Mathias J. Moes, Dubuque, and treasurer, Dr. Anthony M. Loes, Dubuque. Hardin County—at Eldora, January 3: President, Dr. Charles C. Gethman, Eldora; vice-president, Dr. Bessie Garver, Iowa Falls; secretary, Dr. William E. Marsh, Eldora; treasurer, Dr. James W. Thornton, Ackley. Scott County—at Davenport, January 2: President, Dr. William L. Allen; vice-president, Dr. Peter H. Schroeder, and secretary-treasurer, Dr. John V. Littig, all of Davenport. Marion County—at Knoxville, December 14: President, Dr. Cornelius N. Bos, Pella; vice-president, Dr. Harry L. Bridgman, Columbia; secretary, Dr. Corwin W. Cornell, Knoxville. Page County—at Clarinda, December 21: President, Dr. Robert H. Sutton, Shenandoah; vice-president, Dr. Robert J. Mathews, Clarinda, and secretary-treasurer, Dr. Benjamin S. Barnes, Shenandoah. Lee County—at Fort Madison, December 27: President, Dr. William C. Kasten, Fort Madison; vice-president, Dr. Joseph M. Casey, Fort Madison, and secretary-treasurer, Dr. Ernest G. Wollenweber, Keokuk. Adams County—at Corning, December 19: President, Dr. Frank P. Amdor, Carbon; vice-president, Dr. Jay H. Wallahan, Corning, and secretary-treasurer, Dr. Charles H. Bryant, Corning. Taylor County—at Bedford, December 19: President, Dr. Henry F. Dunlavy, Bedford; vice-president, Dr. Theophilus W. Bennett, Lenox, and secretary, Dr. Clayton M. Paschal, Bedford. Polk County—at Des Moines, December 19: President, Dr. Walter L. Bierring; vice-president, Dr. James W. Osborne; secretary, Dr. Nellie S. Noble, all of Des Moines. Muscatine County—at Muscatine, December 15: President, Dr. Frederick H. Little, Muscatine; vice-presidents, Drs. Gustave A. Heidel, Muscatine, and Harry H. English, Conesville, and secretary-treasurer, Dr. William H. Johnston, Muscatine. Clay County—at Greenville, December 13: President, Dr. John B. Wertz, Spencer; vice-president, Dr. Porter-Wertz, Spencer, and secretary, Dr. Greeley B. Snyder, Everly. Mills County—at Malvern, December 14: President, Dr. Edgar Christy, Hastings; vice-president, Dr. James R. Scott, Malvern; secretary-treasurer, Dr. James M. Donelan, Glenwood.

KENTUCKY

New State Board Members.—The governor has appointed three new members of the state board of health: Dr. Isaac H. Shirley, Winchester, succeeding Dr. Joseph M. Mathews, Louisville; Dr. William W. Richmond, Clinton, succeeding Dr. William A. Quinn, Henderson, and Dr. George T. Fuller, Mayfield, succeeding Dr. James C. Mitchell, Louisville. The appointments have subsequently been confirmed by the senate.

Personal.—Dr. William B. McClure, Lexington, while crossing the railway tracks in his automobile, was struck by a train and his automobile demolished, but he, fortunately, was uninjured.——Dr. J. L. Goll has been elected city physician, and Dr. Gustavus D. Lillard, health officer of Lawrenceburg.——Dr. John W. Harned has been elected health officer of Hopkinsville.——Dr. Dunning S. Wilson, Louisville, has been elected medical director of the Waverly Hills and Hazelwood Antituberculosis Hospitals.——Dr. Benjamin Carlos Frazier, Louisville, has been elected physician to the Kentucky Institute for the Blind, vice Dr. William Bailey, deceased.

County Board Report.—The annual report of the Jefferson County Board of Health prepared by Dr. Benjamin W. Smock, Louisville, contains some interesting statistics. Enforcement of the vital statistics law has made possible a more complete report than usual. There are thirty-two registrars serving in the county outside of Louisville. There were 695 births and 464 deaths in the county outside of Louisville. Three hundred and seventy-one cases of tuberculosis were reported with seventy-seven deaths. Since the installation of the new filter plant, typhoid among those using the water has decreased 50 per cent. A number of public wells found to contain typhoid bacilli have been closed by the health officer. The decrease in the number of cases of contagious diseases is believed to be due to the efficiency of the fumigation of schools.

Three cases of pellagra, all fatal, occurred. In each instance the victim was a resident of the southeastern section of the county and an inmate of Central Hospital for the Insane, Lakeland. The State Board of Health and the representatives of the Marine Hospital staff are working in that section to determine the cause if possible. Dr. Smock severely criticizes the slaughter houses in the county and urges the enactment of laws making necessary the establishment of a public abattoir. The board has been unusually active in the investigation of milk and dairies, and fifty dairymen have been fined on various charges brought by the board. It was shown that nearly $77,000,000 had been spent to improve the sewerage system in the county and the system is now nearing completion.

MARYLAND

Hospital to be Abolished.—The old government hospital at West Annapolis, which was erected by the federal government shortly after the Civil War, at a cost of more than $200,000, has been condemned and is to be razed.

Urges Prohibition of Marriage of Defectives.—Dr. Frank W. Keating, superintendent of the Maryland Asylum and Training School for Feeble-Minded, Owings Mills, in his annual report emphasizes the necessity of enacting laws prohibiting the marriage of mental defectives. Restrictions, together with segregation and permanent custody in proper institutions of existing cases would, he believes, in a few years, check considerably the number of feeble-minded persons, which is at present increasing.

Sanatorium Completed.—The new building of the Maryland Tuberculosis Sanatorium, Sabillasville, which has been built and equipped at a cost of $200,000, is nearly completed and will be opened this month. The completion of this new building will more than double the capacity of the institution, which is at present 210. Since the opening of the sanatorium 600 patients have been treated, and there has always been a large waiting list, but this, it is believed, will be abolished on account of the increased capacity of the new building.

Elections.—The following results of elections of county medical societies are reported: Caroline County Medical Society, at Denton, December 21: president, Dr. Frederick R. Malone, Greensboro; vice-president, Dr. Humphrey W. B. Rowe, Hillsboro, and secretary-treasurer, Dr. John R. Downes, Preston.——Calvert County Medical Society, at Prince Frederick, December 12: president, Dr. Isaac N. King, Bartown; vice-president, Dr. Oliver D. Simmons, Bowens, and secretary-treasurer, Dr. John W. Leitch, Huntingtown.——Dorchester County Medical Society, at Cambridge, December 12: president, Dr. Edward L. Jones, East Newmarket; vice-president, Dr. G. Roger Myers, Hurlock, and secretary, Dr. William H. Houston, Fishing Creek.

Baltimore

Work on Cancer Hospital Begins.—Work was begun January 4 on the new cancer hospit[illegible] which is to be established on the site of the old Atla[illegible]l College.

Personal.—Dr. Ro[illegible] Warner has been appointed superintendent of the Sydenham Hospital for Infectious Diseases, vice Dr. Warren P. Morrill, resigned.——Dr. James G. Wiltshire has been elected surgeon and Drs. Alexander T. Bell, Louis W. Knight and William L. Morgan have been elected assistant surgeons of the Isaac R. Trimble Camp, United Confederate Veterans.

MICHIGAN

Anniversary Meeting of County Society.—At the eighty-fourth anniversary exercises of the Washtenaw County Medical Society held at Ann Arbor, December 13, Dr. William Allen Pusey, Chicago, was the guest of honor and was given a dinner at the Michigan University Club House. He also gave a clinic in dermatology at the University Hospital and a lantern slide demonstration of some manifestations of skin disease.

Academy Holds Annual Meeting.—The annual meeting of the Kalamazoo Academy of Medicine was held December 14 and the following officers were elected: Dr. Orton H. Clark, Kalamazoo, president; Drs. Della P. Pierce, Kalamazoo; A. L. Robinson, Allegan; La Verne Rogers, Galesburg, vice-presidents, and Dr. Charles E. Boys, Kalamazoo, secretary and treasurer.

New Officers.—The following recent elections are reported: Menominee County Medical Society, at Menominee, December 14; president, Dr. Edward Sawbridge, Stephenson; vice-president, Dr. Benjamin T. Phillips, Menominee; secretary-treasurer, Dr. Henry T. Sethney, Menominee.——Kent County Medical Society, at Grand Rapids, December 13; president, Dr. Burton R. Corbus, Grand Rapids; vice-president, Dr. Otto C. McDannell, Lowell; secretary and treasurer, Dr. Frederick C. Warnshuis, Grand Rapids, and assistant secretary-treasurer, Dr. Ernest W. Dales, Grand Rapids.——Delta County Medical Society, at Escanaba, December 14; president, Dr. Michael P. Fenelon; vice-president, Dr. D. Arthur S. Kitchen, and secretary-treasurer, Dr. W. B. Boyce, all of Escanaba.——St. Clair County Medical Society, at Port Huron, December 14; president, Dr. Albert E. Thompson, St. Clair; vice-president, Dr. Albert L. Callery, Port Huron, and secretary-treasurer, Dr. Richard K. Wheeler, Port Huron.——Emmet County Medical Society, at Petoskey, December 13; president, Dr. Levi W. Gardner, Harbor Springs; vice-president, Dr. John J. Reycraft, Petoskey, and secretary-treasurer, Dr. George W. Nihart, Petoskey.——Lenawee County Medical Society, at Adrian, December 13; president, Dr. William B. Sprague, Palmyra; vice-president, Dr. Artemus W. Chase, Adrian, and secretary-treasurer, Dr. Isaac L. Spaulding, Hudson.——Bay County Medical Society, at Bay City, December 11; president, Dr. J. William Gustin; vice-president, Dr. Floyd H. Randall, and secretary-treasurer, Dr. Hubbard N. Bradley, all of Bay City.——Oakland County Medical Society, at Pontiac, December 7; president, Dr. Edmund A. Christian; vice-president, Dr. William McCarroll, and secretary and treasurer, Dr. Harvey S. Chapman, all of Pontiac.——Jackson County Medical Society, at Jackson, December 7; president, Dr. Peter Hyndman, Jackson; vice-president, Dr. Colin D. Munro; secretary, Dr. George Arthur Seybold, Jackson, and treasurer, Dr. Presca Isaac Edwards, Jackson.——Eaton County Medical Society, at Olivet; president, Dr. James B. Bradley, Eaton Rapids; vice-president, Dr. Flavius J. Knight, Charlotte, and secretary and treasurer, Dr. Arthur H. Burleson, Olivet.——Ingham County Medical Society, at Mason; president, Dr. Bret Nottingham; vice-president, Dr. Samuel Osborn, and secretary-treasurer, Dr. Marinus L. Holm, all of Lansing.——[illegible]ee County Medical Society, at Flint; president, Dr. N[illegible]ates; vice-president, Dr. Mark S. Knapp; secretary, Dr. [illegible]ord P. Clarke, and treasurer, Dr. Frederick B. Miner, al[illegible]lint.

MINNESOTA

Reappointments to State Board.—The governor has announced the following reappointments to the State Board of Health: Drs. Charles W. More, Eveleth; William A. Jones, Minneapolis, and Burton J. Merrill, Stillwater.

Branch Laboratory to Be Established.—At a meeting of the State Board of Health in St. Paul, January 9, the proposition to establish a branch laboratory in Mankato received favorable consideration. The laboratory is to be in charge of Dr. C. Pratt.

Appropriation for Sanatorium.—The commissioners of Fergus County, at their meeting in Fergus Falls, January 7, appropriated $8,000 for the erection of a county tuberculosis sanatorium and appointed a sanatorium committee to select a site and erect the first building. Dr. Otto M. Haugan, Fergus Falls, is chairman.

Personal.—Dr. Charles H. Mayo, Rochester, who was operated on twice for appendicitis in New York City, is convalescent and has returned to his home.——Dr. Ignatius G. Murphy has been appointed health officer of Duluth and Dr. Floyd F. Clark, Duluth, has been reappointed jail physician of St. Louis County.——Dr. Charles L. Scofield, Benson, has been appointed a member of the advisory commission on sanatorium for consumptives.

County Society Meetings.—Blue Earth County Medical Society held its annual meeting in Mankato, December 26, and elected Dr. Carl J. Holman, Mankato, president; Dr. Charles E. Bigelow, Madison Lake, vice-president; Dr. Jane C. Hughes, Mankato, secretary; Dr. Lida Osborn, Mankato, treasurer; Dr. Franklin J. Bomberger, Mapleton, censor; Dr. Adolph G. Liedloff, Mankato, delegate to the state association, and Dr. Jesse L. McBeth, St. Clair, alternate.——Goodhue County Medical Association, at its annual meeting January 2, elected Dr. John V. Anderson, president; Dr. Howard L. McKinstry, vice-president; Dr. Myron W. Smith, secretary-treasurer, and Dr. George C. Wellner, censor, all of Red Wing.

MISSISSIPPI

State Laboratory Report.—During the first year of the state bacteriologic laboratory at Jackson, 4186 examinations were made with positive findings, including seventy-three cases of diphtheria, 300 cases of tuberculosis, 266 cases of typhoid fever and 550 cases of hookworm disease.

State Board and State Association Petition Legislature.—Petitions are being sent to members of the legislature urging a more adequate appropriation to carry on the campaign of education on sanitation and hygiene and the dissemination of literature relative to preventable diseases; the creation of a bureau of vital statistics and a more adequate allowance to carry on the work of the state bacteriologic laboratory; recommending the passage of a bill advocated by the Mississippi State Medical Association providing for the registration of the vital statistics of the state, and the passage of a bill making a larger appropriation for the use of the State Board of Health.

Elections.—The Lauderdale County Medical Society met at Meridian, December 28, and elected Dr. Thomas J. Houston, president; Dr. Robert H. Foster, vice-president, and Dr. Thomas E. Royals, secretary and treasurer, all of Meridian.——Adams County Medical Association, at its annual meeting in Natchez, December 21, elected Dr. James C. French, president; Dr. M. C. Reeves, vice-president, and Dr. Jacob S. Ullman, secretary and treasurer, all of Natchez.——Scott County Medical Society met at Forest, recently, and elected Dr. Ellis J. Rowe, Hillsboro, president; Dr. Junius M. Townsend, Harperville, vice-president, and Dr. Wade H. Pevy, Forest, secretary-treasurer.——Physicians of Hinds and Warren counties met in Jackson, January 9 and organized the Central Mississippi Medical Society, which it is proposed will eventually include in its membership the physicians of Hinds, Warren, Yazoo and Rankin counties. The following officers were elected: president, Dr. Benjamin L. Cully, Jackson; vice-presidents, Drs. Walter B. Dobson, Jackson, for Hinds County, and Ewing F. Howard, Vicksburg, for Warren County, and secretary, Dr. John C. Cully, Jackson.—Clay-Lowndes-Oktibbeha County Medical Association at its annual meeting in Columbus, January 3, elected Dr. Walter R. McKinley, Columbus, president, and Dr. Charles E. Lehmberg, Artesia, secretary and treasurer.

MISSOURI

Hospital Day Fund Divided.—The Hospital Day Association of Kansas City raised $6,430 by the sale of tags, and divided it among eight hospitals.

Personal.—Dr. Louis J. Dandurant, St. Joseph, was thrown from his buggy and painfully injured, January 8.——Dr. Jacob Geiger, St. Joseph, was the guest of honor at the annual banquet of the St. Joseph-Buchanan-Andrews County Medical Society and was presented by Dr. Wallace B. Deffenbaugh, on behalf of the society, with a silver loving-cup.

Elections.—Officers have recently been elected in the following medical societies: Webster County, at Fordland, December 20, president, Dr. C. H. McHaffie, Rogersville; vice-president, Dr. David A. Williams, Niangua; secretary-treasurer, Dr. John R. Bruce, Marshfield; censor, Dr. William A. Atkins, Rogersville; delegate to the state association, Dr. Messer Highfill, Marshfield, and alternate, Dr. William J. Rabenau, Fordland.——Jasper County, president, Dr. Robert M. James, Joplin; vice-president, Dr. Jackson B. Taulbee, Joplin; secretary, Dr. A. Mitchell Gregg, Joplin, and treasurer, Dr. Mitchell C. Shelton, Joplin.——Pettis County, at Sedalia, president, Dr. Charles A. McNeil; vice-president, Dr. Albert J. Campbell, and secretary, Dr. W. A. Beckemeyer, all of Sedalia.——Carroll County, at Carrollton, December 18, president, Dr. Richard F. Cook, Carrollton; vice-president, Dr. Oliver R. Edmonds, Tina, and secretary-treasurer, Dr. Ethan E. Brunner, Carrollton.——St. Louis County, at Clayton, December 13, president, Dr. Claude L. Armstrong, Webster Groves; vice-president, Dr. Nicholas Jensen, Florissant, and secretary, Dr. John Armstrong, Kirkwood.——Nodaway County, at Maryville, December 12, president, Dr. Joel H. Todd, Maryville; vice-president, Dr. Frank M. Ryan, Quitman, and secretary-treasurer, Dr. Leslie E. Dean, Maryville.——Greene County, at Springfield, December 8, president, Dr. David U. Sherman; vice-president, Dr. Solomon W. Tickle; secretary, Dr. Thomas O. Klinger, and treasurer, Dr. Dexter B. Farnsworth, all of Springfield.

St. Louis

New Dispensary Opened.—The Sisters of St. Mary's Infirmary opened a free dispensary at 1507 Chouteau Avenue. Daily clinics will be held and the visiting staff is drawn from the faculty of the St. Louis University School of Medicine.

Funds to Hospitals.—The Hospital Saturday and Sunday Association mailed checks to fourteen hospitals December 24 for sums aggregating $43,142.20.——Adolphus Busch has given $1,000 to the St. Louis Society for the Relief and Prevention of Tuberculosis.

Personal.—Dr. Enno Sander is under treatment for cancer of the ear in St. Luke's Hospital.——Dr. Anselm C. Robinson, police surgeon, resigned January 5 and Dr. Harry M. Moore was appointed his successor.——Dr. Wayne Smith has been appointed superintendent of the St. Louis City Hospital and Dr. Charles E. Bauer, the former superintendent, has succeeded Dr. Smith as superintendent of the Washington University Hospital.——Dr. Emmett P. North has resigned as chief surgeon for the United Railways Company and has gone to Europe. Dr. Walter R. Hewitt is Dr. North's successor.

Endorse Crusade Against Quacks.—The St. Louis Medical Society has adopted resolutions upholding Health Commissioner Max C. Starkloff in his crusade against fake medical practitioners. The resolutions set forth that the Committee on Public Health and Legislation of the St. Louis Medical Society, recognizing the grave evils arising from the activity, in the community, of irregular practitioners, not only to individuals suffering from infectious diseases, but to others to whom these diseases may spread from their failure to report them to the proper authorities, recommends to the St. Louis Medical Society a strong endorsement and pledge of support to the health commissioner in his effort to control these practitioners.

NEW JERSEY

Donation Toward Preventorium.—John D. Rockefeller has subscribed $10,000 toward the new buildings of the tuberculosis preventorium for children, Farmingdale, contingent on $140,000 being collected from other sources. Of this sum $114,000 has been subscribed.

Sanatorium Nearing Completion.—The Belle Mead Farm Colony and Sanatorium is nearing completion and will be ready to receive patients about March 1. The institution is situated on a tract of land of more than 300 acres and has five buildings of modern construction and up-to-date equipment. The sanatorium is intended for mental and nervous patients, including alcohol and drug habitues. Dr. J. Joseph Kindred, Astoria, N. Y., is owner of the sanatorium and Dr. Edward Everett is physician in charge.

Sterilization of Criminals.—Governor Wilson has appointed a commission consisting of George O. Osborn, superintendent of the state prison; Dr. Frank Moore, superintendent of the Rahway Reformatory; George B. Wright, commissioner of charities and correction; Dr. Henry B. Costill, Trenton, and Dr. Alexander Marcy, Jr., Riverton, to assume charge of the sterilization of insane criminals, idiots and other defectives, both male and female, who are at present in the state institutions, in accordance with the provisions of the act passed by the legislature at its last session authorizing the appointment of such a commission.

Medical Society Meetings.—Camden City and County Medical Society, at its annual meeting, January 2, elected the following officers: president, Dr. Levy B. Hirst; vice-president, Dr. Grant E. Kirk; secretary, Dr. William I. Kelchner, and treasurer, Dr. Emma Richardson, all of Camden.——The Clinical Society of Mountainside Hospital, Montclair, was organized December 4 and the following officers were elected: president, Dr. Richard P. Francis, Montclair; vice-president, Dr. William H. Areson, Upper Montclair, and secretary-treasurer, Dr. Stella S. Bradford, Montclair.——The Practitioners' Society of Eastern Monmouth held its annual meeting in Monmouth, December 19, and elected Dr. Joseph T. Welch, Long Branch, president; Dr. Walter S. Whitmore, Oceanic, vice-president; Dr. Edwin Field, Red Bank, secretary, and Dr. William A. Robinson, Ocean Grove, treasurer.

Personal.—Dr. Henry B. Diverty has been appointed city physician of Woodbury and has been elected president of the municipal board of health.——Dr. G. Howard McFadden, Hackensack, physician of Bergen County, is suffering from septicemia due to a wound of the left hand.——Dr. Charles F. Adams, Hackensack, fractured his left arm in a fall on the ice, January 6.——Dr. Joseph B. Harrison has been reelected president of the Westfield Board of Health, and Dr. George S. Laird, city physician.——Dr. Hermann C. H. Herold, Newark, has been reelected president of the Newark Board of Health for the sixteenth consecutive term.——Dr. G. Herbert Richards has been reelected president of the Orange Board of Health for the eighth consecutive term.——Dr. George R. Moore has been elected president and Dr. Alvan W. Atkinson, secretary of the recently appointed staff of the City Tuberculosis Hospital, Trenton.

NEW YORK

New Isolation Pavilion.—The Buffalo Children's Hospital has opened a new isolation pavilion, which will, it is expected, meet all demands for the care of communicable diseases of children. The building will accommodate twenty patients and contains both wards and private rooms, together with the necessary bath rooms and sun parlors.

Personal.—Dr. Elbert M. Somers, Ogdensburg, has been appointed medical superintendent of the Long Island State Hospital, Flatbush, vice Dr. Robert E. Doran, Willard, deceased.——Dr. Nelson C. Scudder, ward physician of Rome, has resigned.——Dr. Kent E. Williams has been elected president of the Rome Board of Health and Dr. Charles R. Mahady has been reappointed health officer.——The physicians of Oneida were entertained at an informal banquet by Dr. Amos P. Dodge, January 4.——Dr. Ward B. Whitcomb has been reappointed town health officer of Batavia.——Dr. George S. Allen, Clyde, has been appointed postmaster.——Dr. Henry A. McGruer, Syracuse, is ill with diphtheria at the Syracuse City Hospital.

New York City

Health Board Staff Cut.—On December 30 thirty-four physicians were dropped from the medical staff of the health department of New York City. This reduction of officers was required on account of the reduction in the budget for 1912.

Memorial to William Rice Pryor.—Dr. Joseph B. Rolater of Oklahoma City, Okla., has donated $500 toward the erection of a memorial tablet in the new building of the New York Polyclinic Medical School and Hospital to the memory of the late Dr. William Rice Pryor.

Annual Gift to Hospitals Small.—The Saturday and Sunday Association has announced that the annual collection for hospitals taken in 100 churches of the city amounted to only $15,000 thus far, whereas it was $30,000 last year. The association asked for $200,000.

Local Elections.—At the December meeting of the Williamsburg Medical Society, the following officers were elected: Dr. Simon R. Blatteis, president; Drs. Adolph Bonner and George I. Miller, vice-presidents; Dr. William K. Jacobs, secretary, and Dr. Marcus J. Levitt, financial secretary, all of Brooklyn.——The Associated Physicians' Club of the Second Ward of Brooklyn has elected Dr. Abbott C. Combes, Flushing, president; Dr. Herbert L. Barker, Flushing, vice-president, and Dr. Franklin Booth, Flushing, secretary and treasurer.

Hospitals Need Money.—The Hospital for Ruptured and Crippled at Lexington Avenue and Forty-Second Street, which has treated 379,999 crippled persons during the past fifty years, and 12,604 new patients during the year ended Sept. 30, 1911, has a deficit of over $4,000 for the year and has appealed to the public for funds.——The Hospital for Deformities and Joint Diseases, which was founded in 1907 and which treated 2,400 cases during the past year has a deficit of $6,000 in its running expenses for the past year and needs help.——The Manhattan Eye, Ear and Throat Hospital also makes an appeal for funds to meet its increased expenditures arising from its work among the poor.

Model Tenement Opened.—The East River Homes, made possible through the generosity of Mrs. W. K. Vanderbilt, who invested $1,300,000 in the project, were opened on December 5. These model apartment buildings are located on East Seventy-Seventh Street and along East River. They occupy eighteen city lots and provide 383 apartments of from two to five rooms, 225 of which have already been rented. They were built in order to provide homes for those having incipient tuberculosis or other delicate persons who might be liable to the disease, and are so constructed as to provide practically all the advantages offered by sanatoriums. They are designed after the *Durchhäuser* of the German and Austrian cities. There are ample courts for air and light, outside staircases with many resting places, a roof equipped for out-door life and fresh-air treatment. Bathrooms, electric light, heat and hot water are included in the rents which range from $1.25 to $2 per room per week. Dr. Henry L. Shively is president of the board of trustees and Dr. Walter B. James is vice-president. It is believed that, on account of the economy of space in construction, the buildings will carry themselves and pay a fair return on the investment.

Academy and Public Health Work.—The Academy of Medicine has appointed a committee on Public Health, Hospitals and Budget, consisting of Drs. Charles L. Dana, Lindsley Williams, W. Gilman Thompson, John H. Huddlestone, Sigismund S. Goldwater, L. Emmett Holt, Abraham Jacobi, James A. Miller and Theodore C. Janeway. The duties of the committee are to organize a bureau to collect facts in regard to public health, sanitation and hygiene; to endeavor to establish active coöperation with all public health activities in the city; to keep the medical profession advised of current public health conditions; to render to the health, school and other public authorities and to the community at large an authoritative medical opinion on public health matters; to hold frequent conferences with city officials; to hold public meetings, and to give adequate publicity to the results of the committee's researches. The committee will assist in the preparation of the budgets of the various departments and will make a close and constant scrutiny of hospital conditions. The efforts of the committee have already obtained appropriations for new contagious hospitals in the Bronx and in Queens. Mrs. E. H. Harriman has agreed to pay the expense of employing a trained statistician to assist the committee. The academy has also adopted resolutions urging the legislature to pass the Clearwater bill providing that medical experts be paid through the courts and not by parties in whose behalf they testify. The academy asks that the bill be amended so that a physician shall not be considered a medical, surgical or special expert unless he is a graduate of a reputable medical college; has paid special attention for at least six years to the particular branch as to which he claims to be an expert; has had opportunities for laboratory or clinical study in that branch for at least four years, and is a member of a general and a special medical society in good standing. Another resolution was passed declaring that the acceptance of a fee by a physician contingent on the result of a medicolegal case is not in accordance with sound medical ethics.

PENNSYLVANIA

New Officers for County Society.—The new officers of the Columbia County Medical Society for the year 1912 are: president, Dr. Ralph E. Miller, Bloomsburg; vice-presidents, Drs. J. Sidney Hoffa, Benton, and John T. McDonald, Bloomsburg, and secretary, treasurer and reporter, Dr. John W. Bruner, Bloomsburg.

Gift to County Society.—At the December meeting of the Berks County Medical Society, the president read a communication from a generous citizen, in which the benefactor offered to purchase any suitable property not costing over $12,000 the society to have the free use of the same for three years. At the end of this time the donor proposes to give one-third of the purchase price to the society.

Philadelphia

Sailor Dies of Beri-beri.—On January 11, four Malay sailors suffering with beri-beri were taken from the steamship *Karema* by state quarantine officers and one died in the station hospital at Marcus Hook, January 12.

Personal.—Drs. W. Joseph Hearn, W. M. Late Coplin and E. Tillson Ward were elected managers at the annual meeting of the members of the corporation of the Southern Dispensary for the Medical Relief of the Poor, January 12.

Hospital Tablet Proposed.—At the meeting of the Forty-Ninth Street Association, January 12, a movement was begun to have erected a tablet in the Clarence Clark Park to commemorate the semi-centennial anniversary of the opening of the Satterlee Hospital in West Philadelphia during the Civil War. Dr. Seneca Egbert was appointed president of the association.

Hospital Gets Charter.—A charter was taken out on January 12, in the common pleas court for the Babies' Hospital of Philadelphia, at Wynnefield, in Fairmount Park. This hospital, which was maintained last summer as a volunteer charity by public spirited physicians, will be conducted along the same lines next year and obtaining a charter will secure its permanency.

Medical Inspection for Schools.—At the meeting of the Board of Education, January 9, Dr. Walter S. Cornell was selected as director of public school medical inspection (with a salary of $3,000 a year). The board has authorized the employment of 55 assistant medical inspectors at $600 per year each. Dr. Joseph S. Neff, Director of Public Health and Charities will proceed to hold examinations and make appointments so that Dr. Cornell may organize his staff and begin active work.

Douglas Hospital Fund.—Not only the required sum of $15,000 necessary for the liquidation of the builder's mortgage on the Douglas Hospital, has been contributed by public spirited citizens, but the subscription of the Philadelphia *Public Ledger* has a surplus of $507. The *Ledger* says: "While the purpose for which the *Public Ledger* opened the subscription has been achieved, use in plenty can be found in connection with the work of the institution for additional gifts. In each case, however, the *Public Ledger* will explain the situation and leave open the question whether any sums that may be contributed shall be applied to general uses of the institution or be returned.

Southern Dispensary Needs More Room.—The Southern Dispensary for the Medical Relief of the Poor, 318 Bainbridge Street, was founded in 1816 and has had an uninterrupted career for nearly a century. During the past year, 10,601 patients were treated and furnished with medicines, bandages free and 1,569 prescriptions were compounded. Since the opening in 1816, nearly 400,000 patients have been treated and 550,000 prescriptions compounded and furnished without charge. The facilities for treating the increasing numbers that visit the dispensary have become inadequate and efforts are now being made to obtain funds to enlarge the old building and install modern appliances. The dispensary owns sufficient ground adjacent to the present building and the work on the new adition will be begun as soon as sufficient funds are available. This institution has never received any state or city aid. It treats people without regard to race, age, sex, religious belief or nationality. There is connected with the institution a staff of twelve physicians all serving without pay, conducting six clinics daily.

SOUTH DAKOTA

Society Meetings.—At the annual meeting of the Sixth (Mitchell) District Medical Society held in Mitchell, December 11, the following officers were elected: president, Dr. Elwin F. Reamer, Mitchell; vice-president, Dr. Frederick W. Freyberg, Mitchell; secretary, Dr. Clyde S. Bobb, Mitchell; treasurer, Dr. Floyd S. Kidd, Woonsocket; delegates to the state association, Drs. E. W. Jones, Mount Vernon, and William B. Ball, Mitchell; alternates, Drs. Charles V. Templeton, Woonsocket, and E. N. Wager, Bijou Hills; and censors, Drs. A. H. Hayne and George A. Clauser, Bridgewater.——The Fourth District Medical Society held its annual meeting in Highmore, December 27, and elected Dr. Napoleon B. Gearhart, Pierre, president; Dr. Joseph M. Walsh, Fort Pierre, vice-president, and Dr. Harry T. Kenney, Pierre, secretary-treasurer. The society adopted resolutions condemning contract practice and agreeing to render professional services only at the rates provided for in the fee bill. A schedule of fees was prepared and adopted by the society.

TEXAS

Epidemic of Meningitis.—An epidemic of meningitis has been prevalent for several weeks chiefly in northern and eastern Texas, some cases being reported as far south as Houston and Austin, the disease centering chiefly in the neighborhood of Dallas, where up to January 10, 160 patients with sixty-five deaths had been reported; Waco also reported at that time eighty-three cases with twenty deaths. Fort Worth and many other cities and towns in northern Texas also report cases. Secretary of the State Board of Health, Dr. Ralph Steiner, called a meeting of the state board at Dallas to discuss the situation and take up such measures as were deemed necessary. The board passed resolutions advising communities in which the disease appeared to close schools, theaters and other places of amusement and establish quarantine, and the local authorities in the various cities and towns have instituted a clean-up campaign. Dr. Abraham Sophian of the Rockefeller Institute has been in northern Texas delivering addresses and advising with the local authorities in regard to the management of the epidemic. A sufficient quantity of the antimeningitis serum approved by the New York Board of Health has been rushed to Texas and is being employed. The situation while serious is now improving and will not, it is believed, under the energetic measures adopted, spread widely.

GENERAL

Physiologists Elect.—At the annual meeting of the American Physiological Society held in Baltimore, December 29, Dr. Samuel J. Meltzer of the Rockefeller Institute for Medical Research, New York City, was reelected president, and Dr. A. J. Carlson of the University of Chicago was reelected secretary.

Edinburgh Graduates Dine.—The first annual dinner of the Edinburgh University Club of North America was held at the University Club, New York City, December 7, with Dr. J. Clarence Webster, Chicago, in the chair. The Hon. Joseph H. Choate, Ambassador James Bryce, Sir James A. Grant, M.D., Ottawa, and Dr. Horatio R. Storer, Newport, R. I., were elected honorary presidents of the club, which will hold its next annual meeting in Ottawa. Dr. William F. Maloney is secretary of the club.

Expenditures in War on Tuberculosis.—The figures of the third annual statement of expenditures issued by the National Association for the Study and Prevention of Tuberculosis show that during 1911, $14,500,000 was expended in the campaign against tuberculosis. Of this $11,800,000 was spent for the treatment of patients in sanatoriums and hospitals and for the erection of sanatoriums; $850,000 for examination and treatment of cases of tuberculosis in dispensaries and $500,000 for educational campaigns, and the remainder, $1,300,000 for the treatment of patients in open-air schools, prisons, and insane hospitals, and for local boards of health.

Bill to Relieve Technical Violations of Law.—On account of the recent levying of fines ranging from $1 to $20,000 each on a large number of hospitals throughout the country because of certain technical violations of the law governing the use of denatured alcohol, a bill has been introduced in Congress by Hon. J. Charles Linthicum of Maryland at the instance of Dr. Alexius McGlannan of Baltimore. This bill is called "A Bill for the Relief of Scientific Institutions or Colleges of Learning Having Violated Sections 3297 and 3297a of the Revised Statutes and the Regulations Thereunder." The bill authorizes the Commissioner of Internal Revenue on appeal to abate, remit and refund all taxes or assessments for taxes the liability for which is asserted against any scientific institution or college of learning, on account of any alcohol withdrawn from bond free of tax in accordance with the provisions of the statutes above quoted, and not used as authorized by the above-mentioned law and regulations thereunder; provided, that no assessment made of tax imposed shall be abated or refunded as to any alcohol so withdrawn and used for beverage purposes, and provided further, that all applications for relief under this act shall be filed on or before July 1; and that no liability incurred on or after January 1 shall be so relieved.

FOREIGN

Centennial of the Medical School at Lima, Peru.—The first centennial of the Escuela de Medicina at Lima was recently celebrated, with much ceremony, and our exchange, the *Cronica Medica*, of Lima, devotes a special number to the occasion, with reproduction of the act of incorporation and of the various historical and other addresses made by the dean and other officers of the medical faculty and the president of the republic.

International Congress for Gynecology and Obstetrics.—The date for the approaching sixth international congress has been appointed as May 31 to June 2, 1912, to meet at Berlin as previously announced. Prof. E. Bumm is to preside, and the secretary general is Prof. E. Martin, Artilleriestr. 18, Berlin N. 24, Germany. The main subject for discussion is to be "The Treatment of Peritoneal Wounds in Relation to Obstetrics and Gynceology." The committee of organization includes Professors Döderlein and A. Martin of Germany, von Ott of Russia, and Mangiagalli of Italy.

Recent Deaths in the Profession Abroad.—Besides those mentioned by our correspondents, the following deaths have been reported: Dr. E. Wang of Christiania, editor of the *Norsk Magazin for Lægevidenskaben*, aged 44. His writings were mostly connected with medical chemistry.——Dr. Sophia Jex-Blake, formerly dean of the Edinburgh School of Medicine for Women, aged 71. She came to America and began the study of medicine in Boston in 1866, completing her course at Berne. In 1874 she founded the London School of Medicine for Women, and the Edinburgh School of Medicine for Women in 1886. She retired from practice in 1899, and died recently at her home near London.

International Epilepsy Congress.—The next meeting of the Liga Internationale contra Epilepsie is to be held at Zurich, Switzerland, opening Sept. 7, 1912, just preceding the International Congress of Psychology and Psycho-therapeutics. Forel will probably preside at the meeting. The subjects proposed for discussion are "Alcoholic Epilepsy" and "Salt-Free Diet in Epilepsy." These topics have been proposed by Italian and Swiss members of the league, and American members are requested to suggest some other subject for discussion; they can communicate by direct correspondence with Dr. L. J. J. Muskens, 365 Overtoom, Amsterdam, Netherlands, or through Dr. J. F. Munson, Craig Colony for Epileptics, Sonyea, N. Y.

Excursion of German Physicians to America.—For some years the Germans have been organizing annual medical educational trips to health resorts in and near their country, but next fall they propose to make the trip an excursion to the United States on the occasion of the International Congress of Hygiene, to open at Washington in September. Dr. A. Oliven of Berlin, Potsdamerstrasse 134, is the moving spirit of these personally conducted educational trips, and arrangements have been made with the Hamburg-American Line to leave Hamburg Sept. 7, 1912, and after visits of some days in New York, Philadelphia, Baltimore, Atlantic City and Washington, to go west to Chicago for a three-day visit and to return by way of Montreal and Boston, leaving New York October 10. The total expense for the trip is stated by the circular to be from 1,700 to 2,500 marks, about $425 to $625, for the six weeks' trip, but the physicians in the party can make a longer stay if they wish, returning on any of the Hamburg Line steamers up to the end of March, 1913. The Journal joins with the promoters of the trip in hoping that a large number of physicians may take part, and wishes them a cordial welcome to America.

CANADA

Personal.—Dr. Hermann M. Robertson has returned to Victoria, B. C., after a year abroad in graduate work.——Dr. James N. Hutchison, Winnipeg, has returned from a visit to Europe.——Dr. John H. Leeming, bacteriologist to the city of Winnipeg, has returned from Europe.——Dr. James A. Ashbaugh, medical health officer of Windsor, has recommended that an isolation hospital be provided for the treatment of communicable diseases.——Lieutenant-Colonel C. W. Belton, surgeon of the Royal Canadian Regiment, London, will succeed Lieutenant-Colonel Hero R. Duff as chief administrative officer of the Third Division of Kingston, and Lieutenant-Colonel Duff is transferred to Toronto.

Vital Statistics.—The Registrar-General of Ontario is sending to the publishers copy for a blue book relative to the vital statistics of the province for 1910. In that year, this report will state, there were 55,871 births, 24,036 marriages and 33,539 deaths. Of the deaths cancer caused 1,077, tuberculosis 2,287, as against 2,380 in 1909, pneumonia 1,458. Women lost their lives in childbirth in 284 cases. Ninety-one persons took their lives by various means, 26.3 per cent. employing hanging. Two hundred and nine were killed by motor cars. Regarding mortality among infants the number of deaths were 6,649 under the age of 5 years. Of the births 28,644 were males and 27,207 females. There were 350 pairs of twins, 264 boys and 376 girls. There were five cases of triplets.

Ontario Health Matters.—The chief medical health officer of Ontario, Dr. John W. S. McCullough, Alliston, is in the United States inquiring into the most recent advances in public health matters. On his return to Toronto he will take up the question of dividing the province into seven or eight health districts, in charge of competent medical men who will devote all their time to public health work, be appointed by the provincial government and receive remuneration commensurate with this work. The government will be prepared with a scheme before the meeting of the legislature early in February. At the present time there are some 800 boards of health in the province outside the large cities, with as many health officers who receive little more than $50 per annum for their work. These will all be abolished; and the new seven or eight districts will be directly under the control of the government instead of under municipalities as formerly. It is not intended to interfere with the boards of health of the larger cities, where competent health officers already devote their entire time to their work.

Division of Fees in Toronto.—The Toronto Academy of Medicine discussed the following resolution at its regular monthly meeting on the evening of January 2:

(a) That the secret division of a fee, or fees, with any person or persons, who may be instrumental in influencing a patient, or patients, to apply for operative care or professional advice, is unworthy of any member of the medical profession.

(b) That if such division of fee is made by a member of the Academy of Medicine, Toronto, it should be counted as sufficient ground for the expulsion of the member.

(c) That it shall be the duty of the Council of the Academy to investigate charges against members made on the basis of such division of fee; and on proof of offense the Council may either permit the resignation of the person or expel him from the Academy.

Although the fee-splitting system is not to any extent in vogue in Toronto, there are said to be a few sporadic cases, sufficient to call for action by the Academy of Medicine. After considerable discussion, which showed a feeling of unrest, the matter was placed in the hands of a special committee to investigate, and report at a future meeting.

Hospital News.—Toronto Western Hospital needs $200,000 for the equipment of new wings now under course of construction. When completed the Western Hospital will be one of the best in the province of Ontario.——The annual report of the Mental Hospital, New Westminster, B. C., by Dr. Charles E. Doherty, medical superintendent, shows that at the beginning of September last there were 650 patients in that institution. At the close of the month 658 patients were in residence and 95 out on probation, making a total under treatment of 753. In the hospitals for the insane in the province of Ontario, there are 6,803 insane persons, about one in every 367 of the population. In 1890 the number of the insane was 4,210, an increase of 61 per cent. The population of the province increased in that time 24 per cent. Owing to the fact that the hospitals for the insane are now considered in the same class as modern hospitals, with up-to-date equipment, that may be set down as the cause of this apparent increase in insanity. It is said that fully 50 per cent. of the patients under treatment are there from avoidable causes. It cost the province in the last hospital year $1,043,145.57 to maintain these provincial hospitals. During the past ten years the total amount expended has been $9,351,094.07, about one-eighth of the total revenue of the province. At the present time there are 648 patients who have been a charge on the province for twenty years continuously, costing about $2,500,000. About 80 per cent. of the one-fourth cured recover in the first year of their admission. In the Toronto Hospital for the Insane for the year ending Sept. 30, 1911, thirty-two men, or 22 per cent. of all men admitted were entered through paresis. Fully 30 per cent. of the men and 10 per cent. of the women admitted to all these hospitals in the province are suffering from conditions due directly or indirectly to alcohol.——Toronto is to have a new and modern isolation hospital.

LONDON LETTER

(From Our Regular Correspondent)

London, Dec. 30, 1911.

Typhoid Fever Due to Fried Fish.

As a result of an exhaustive inquiry, Dr. Hamer, health officer of the London County Council, has traced an outbreak of typhoid fever to the consumption of fried fish. The evidence points to the delivery of a consignment of infected fish on August 17 or 18 last. The deliveries in London on these dates were in some instances from unusual sources, owing to dislocation of the traffic caused by the strike. In concluding, Dr. Hamer states: "This outbreak adds another instance to the now growing list of outbreaks in which inquiry failed to show any other explanation than the consumption of fried fish."

The Final Report of the Royal Commission on Tuberculosis

After ten years of experimental work, embodied in many bulky reports and appendices, the royal commission appointed to inquire into the relation between human and animal tuberculosis following Koch's statement, at the International Congress on Tuberculosis in London, that human and bovine tuberculosis are distinct diseases, has issued a final report. It contains important general conclusions by Dr. Arthur Eastwood, who has investigated both culturally and microscopically thirty viruses obtained from bovines, 130 from man, fifty-three from swine and eight from other animals affected with spontaneously contracted tuberculosis. He also investigated the cultural characters on different media of bacilli recovered after residence in experimental animals: 447 strains in all, of which 108 were ultimately derived from bovines, fifty-eight from swine and thirty from other animals. The histologic part of the investigation deals with the tissues of 777 animals experimentally infected, including bovines, rabbits, rhesus monkeys, chimpanzees, baboons, lemurs, swine, guinea-pigs, goats, dogs, cats, rats, mice, horses, fowls and parrots. The bacteriologic character of various strains of avian tubercle bacilli were also investigated and the histologic changes produced by them on the tissues of birds and various mammals.

1. Comparing tubercle bacilli of known human origin with bacilli from spontaneous tuberculosis in other mammals, in every instance the bacilli obtained from animals were identical culturally and microscopically with bacilli from certain cases of human tuberculosis. 2. In all parts of the human body and in human sputum collected tubercle bacilli were found both culturally and histologically identical in every respect with the tubercle bacillus commonly present in the bodies of tuberculous cattle and swine. 3. Many of the

viruses of human origin grew with great cultural luxuriance and produced less histologic damage, experimentally, in the organs of certain animals than the bacilli commonly obtained from cattle and swine. 4. In the majority of cases cultures from the same virus used through a protracted series of experiments remained comparatively stable in their characteristics. 5. This suggests that changes in the character of a virus do not readily or rapidly take place in the human body. 6. Certain viruses were obtained which hold an intermediate position between the viruses obtained from man and from animals. It was, therefore, impossible to class all the strains of mammalian tubercle bacilli as belonging to two stable types. These intermediate viruses bridged the apparent gap between the viruses, on the one hand, which produce acute tissue destruction in the bovine and the rabbit, and are of relatively scanty growth on culture media and those viruses, on the other hand, which produce less tissue damage in the bovine and the rabbit and grow more luxuriantly on artificial media.

Unity of Characteristics.—7. Underlying all the mammalian viruses was an essential unity of characteristics, the differences observed being of degree, but not of kind. On artificial culture media they all grew in the same way, though they differed in the amount of growth. In the tissues of experimental animals they produced lesions histologically characteristic of mammalian tuberculosis, though the intensity of the changes produced differed. 8. Comparing the mammalian with the avian viruses, there were differences not merely of degree, but of kind. 9. On media the growth of the avian bacillus could be distinguished without hesitation from the growth of the mammalian bacillus. 10. On experimental animals infections due to the avian bacillus could be unmistakably distinguished from those due to the mammalian bacillus. 11. It was not possible, however, in the tissues of all animals, under experimental conditions, to distinguish with certainty under the microscope lesions due to avian bacilli from lesions due to mammalian bacilli. Sometimes, in the tissues of mammals, the avian bacillus produced tubercles of a chronic type indistinguishable from tubercles produced by mammalian bacilli.

The Royal Society of Medicine

The Royal Society of Medicine, which recently was formed by the coalition of many medical societies which flourished in London, is building at considerable cost new premises, to meet the needs of its large and growing membership. Toward the cost subscriptions have been made by the members, but as the amount required is much greater than that subscribed, an appeal is being made to the public. The Lord Mayor of London, Sir Thomas Crosby, the first doctor who has ever held that distinction, in supporting the appeal has pointed out that an impression prevails that the new building is designed mainly for the comfort and advantage of the fellows. On the contrary, from the foundation of the parent society (the Royal Medical and Chirurgical Society) in 1805, without any help from the public, work of the greatest importance to the public welfare has been done and large sums have been spent for this purpose. In its well-known *Transactions*, the most representative publication of scientific medicine in the empire, almost every discovery or development in the last century has been published. It is estimated that the society has spent $500,000 in investigations and the publication of results. One investigation, the value of which it is impossible to overestimate, was carried on for nearly thirty years—the best method for restoring the apparently drowned. The final method, devised by Schäfer (see The Journal, Sept. 5, 1908, p. 801), was so clearly an advance that it has been adopted by the army and navy and several life-saving societies, and also in America, Japan and other countries. Another most important work was a "Report on the Climates and Baths of Great Britain and Ireland," which was issued in two large volumes illustrated with maps, etc. The publication of this report marked an epoch in the development of British watering-places. Among other subjects either originated or developed by the society are the hypodermic method of administering drugs, the open-air treatment of consumption, the influence of heredity on cancer, consumption and diseases of the nervous system and vaccine therapy. The society has one of the largest medical libraries in the world, numbering 100,000 volumes, and in it has been originated a new departure. A physician working on any subject almost anywhere in the world can, if a member, have an abstract sent to him of the most recent literature. Army doctors in the Chitral Valley, Assam, the Sudan and South Africa have thus been assisted in their investigations.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Dec. 29, 1911.

Death of Professor Lannelongue

Dr. Odilon-Marc Lannelongue, professor of surgical pathology at the Faculté de médecine de Paris, died of pulmonary congestion, aged 71, the day after he left the presidency of the Académie de médecine.

He was born at Castera-Verduzan, Department of Gers, and at the age of 16 came to Paris to study medicine. He was appointed intern of the hospitals in 1862 and physician in 1867. Two years later he was appointed surgeon of the hospitals and *agrégé* professor of the Faculté de médecine. In 1884 he obtained the chair of surgical pathology at the Faculté de médecine de Paris. He had been a member of the Académie de médecine since 1883 and in 1885 was elected a member of the Académie des Sciences for the section of medicine and surgery to replace Professor Verneuil. In 1900 he presided over the thirteenth International Congress of Medical Sciences. As I mentioned in one of my previous letters (The Journal, April 23, 1910, p. 1387), he founded a very important prize (the Lannelongue prize), which the Société de chirurgie de Paris distributes every five years.

For a long time Dr. Lannelongue had given most of his time to politics. He was elected first a deputy and in 1906 a senator. In the senate he introduced a bill to combat depopulation, and presided over the commission formed for that purpose.

Being absorbed by politics, Dr. Lannelongue had, in his later years, somewhat neglected his scientific work, which, however, is important. He especially contributed to clearing up the confused questions relating to tuberculous alterations of the bones and syphilitic affections of the skeleton. The anatomic and experimental proof of the tuberculous nature of cold abscesses and fungous arthritis is due to him. This indicated that to cure these various lesions a complete destruction of tuberculous products was absolutely necessary, which suggested the use in white tumors of the "sclerogenic" method (injections of zinc chlorid), devised by Lannelongue. He was the first in France to practice craniectomy, to decompress the brain in backward children.

Infant Mortality in the Country

Dr. Louis Cruveilhier has just published in the *Revue philanthropique* an interesting study on infant mortality in the country. In seven essentially agricultural departments, during three years, there has been observed an average of more than twenty-one deaths per hundred under the age of one year, while only two of the twenty-seven departments in which more than 30 per cent. of the population is industrial, those of the Seine and the Bouches-du-Rhône, have an equal percentage of deaths of infants under one year. Generally speaking, it appears from the statistics gathered by Cruveilhier that for infants under one year, mortality is very often as great and sometimes greater in the country than in urban and industrial centers.

The Budget of the Public Charities

The municipal authorities have just received the report on the budget of the public charities in 1912. The expenses amount to $13,400,000 (67 million francs). The public charities having about $8,000,000 revenue of its own, the contributions of the city of Paris for this year will be about $5,400,000. In view of this large sum the suggestion is made in the report that it would be well to municipalize the service of the public charities which at present is an autonomous service.

It is interesting to note that more than one-fourth of the budget of public charities is absorbed by the personnel. Since 1904, more than $1,200,000 have been devoted to improvements in pay for the hospital employees besides the expenses of improvement of food and lodgings which represented about one million dollars. Now the municipal council has before it new claims which represent an annual expense of eight million.

Patients in Comfortable Circumstances in Hospitals

In the report to the municipal council on the budget of the public charities, M. Henri Rousselle mentions the protests of the Syndicat des médecins de la Seine against the admission of non-indigent patients into the hospital. The Syndicat complains that the hospitals are not reserved exclusively for the very poor. The administration replies that well-to-do patients are received in the hospitals only in the pay-wards. As for patients who are neither well-to-do nor indigent and from whom the administration requires the reimbursement of the expense of treatment, these are either victims of accidents carried in case of emergency to the nearest hospital, or persons whose circumstances (isolation, contagious diseases, etc.) require hospital treatment, or—and these are the most numerous cases—persons whose conditions demand surgical treatment and who cannot because of the slenderness of their resources meet the expense of an operation at home or in a *maison de santé*. The administration declares that the number of such patients does not exceed 2 per cent. of the total. Moreover, the administration maintains that it uses careful means of verification. Except in urgent cases requiring immediate admission, every consultant is obliged to present all proofs of identity, rent receipts and certificates of employment, permitting exact appreciation of the situation. The belief is expressed that it is impracticable to go further. "We cannot," says the report, "apply to the population of Paris a vexatious regulation in order to protect the medical profession, whose crisis is particularly due to the excessive number of physicians, elevation of their fees and the increasing cost of living."

The Classical Studies and Medicine

The question of classical studies continues to be one which arouses keen interest. The partisans of these studies among other arguments invoke the example of the University of Michigan which has published a series of memoirs intended to establish the importance of the study of Greek and Latin in secondary education. The Société de l'internat des hôpitaux de Paris has just started a movement in favor of classical studies. In a vote taken on the subject of the desirability of Latin and Greek in secondary education as a requirement of studies for admission to the medical school, 121 responses were received, of which eight were against classical studies, three in favor of Latin and against Greek and 110 in favor of Latin and Greek.

Antityphoid Vaccination

On December 19 Professor Chantemesse read a paper before the Académie de médecine on the results which Professor Vincent and himself had obtained by antityphoid vaccination in Algeria last summer. Four vaccines, prepared by various methods, were used. The vaccine prepared by the method of Sir A. E. Wright was employed the most frequently (for 129 soldiers). The three others were injected each into about seventy-five soldiers. The preventive efficiency of each of the four vaccines seemed to be about alike for all.

According to Chantemesse, there are two requisites in antityphoid vaccine: the first is that it shall contain no living bacilli; the second, that it shall demand only an easy mode of preparation, which is certain in its results independently of the skilfulness of the operator. Heating which kills the bacillus without destroying the toxin appears to be the only operative procedure which admits of no surprises.

In emphasizing the necessity of the extended use of antityphoid vaccination, Chantemesse cites the excellent results obtained in the United States Army.

These facts added to the data obtained from the colonial troops of Germany and Great Britain and a few hundred French soldiers in Morocco permit the statement that the benefits of antityphoid vaccination which have already been accorded to 200,000 soldiers ought not to be refused to the civil population. Professor Chantemesse accordingly believes that a campaign in favor of this method of prophylaxis should be inaugurated among the French population under the age of 35.

Dr. Netter, *agrégé* professor at the Faculté de médecine de Paris, also laid stress on the results of antityphoid vaccination in foreign armies, especially that of the United States. He said that the campaign against typhoid in America had been carried on with the same decision, energy and success as that against yellow fever and malaria.

Moreover, documents sent to the Dresden Exposition by the Japanese minister of war showed that 2,977 were vaccinated in 1908 and 24,795 in 1909. There were in the same garrisons 12,915 vaccinated soldiers and 20,245 not vaccinated. There were among the former thirteen cases of typhoid fever with one death; among the latter 294 cases and twenty-nine deaths. In other words, the proportion of cases was 1 per thousand among the former and 14.52 per thousand among the latter. The percentage of deaths among the patients was 7.7 for the inoculated and 16.6 for the non-inoculated. The spread of anti-typhoid vaccination among the European troops of India, where, however, it has been optional, is very remarkable. From 66 per thousand in 1908 it has reached the proportion of 896 per thousand in June, 1911. The number of cases of death from typhoid fever decreased with the increase of vaccination. From 1,095 cases and 224 deaths it has fallen to 350 cases and forty-seven deaths.

The results, which are in agreement with those obtained at Morocco, are such as to make it desirable that the example of the United States should be followed in France.

Pharmacists' Mistakes and the Means of Remedying Them

Lately the papers have had much to say about various errors committed by pharmacists. As a provincial pharmacist remarks, it is regrettable that in Paris pharmacists do not ask the customers for their names and addresses, which is ordinarily done in the provinces. The advantage of this plan—which, by the way, is exacted by law—is evident. If the pharmacist has the names and addresses of his customers, he has the means of remedying in many cases a mistake in filling a prescription if it is learned in time. Professional secrecy, to which the pharmacists are bound, is a sufficient guarantee of discretion so far as the patients are concerned.

The Sale of a Medical Practice

French jurisdiction considers the sale of the practices of physicians and surgeon-dentists as illegal and void, a practice being a non-commercial article since it depends on the professional quality of the practitioner and the confidence he inspires. Notwithstanding, Paris courts have just decided that such a sale, in this instance a dental practice, is valid when it is based on a lease-hold and the buyer's consequent ability to call himself the seller's successor.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Dec. 29, 1911.

Personal

Professor Ziehen, director of the psychiatric and neurologic clinic in Berlin, will resign his position at the end of the winter semester and discontinue all medical work, in order to devote himself exclusively to psychologic studies. For this purpose, he will remove to Wiesbaden, where he will erect for himself a private psychologic laboratory. Ziehen is in his fiftieth year. His separation from the teaching body of our faculty will occasion the greatest regret. Ziehen, soon after his entrance into his position in Berlin, let it be understood that he placed the greatest emphasis on his work in the clinic and in the laboratory. He could never be obtained for consultation work. Gradually he has passed from the psychiatric side more and more to the psychologic problems and activities, which secured recognition by the bestowal of the title of honorary doctor of the philosophic faculty on the occasion of the centennial of the Berlin university.

Number of Physicians in Germany

Dr. Prinzing of Ulm annually publishes in the *Deutsche medizinische Wochenschrift* a statistical article on the medical profession in Germany, based on the statements of the *Reichsmedizinalkalendar* (medical directory). From this the number of physicians in Germany at the end of 1911 amounted to 32,835 or 5.02 per 10,000 inhabitants. The increase is somewhat less than in previous years. In the last three years the number of physicians in Germany has increased approximately as rapidly as the population. The number of licenses to practice was very nearly the same as during the previous year. On the other hand, the number of medical students is constantly increasing. In the summer semester of 1911 there were about 12,000 students of medicine at the German universities. In greater Berlin, including thirty-two suburbs, there were in 1911 about 4,000 physicians or 10.9 per 10,000 inhabitants. The number of women physicians is 118. Of these thirty-four are in Berlin. The number of women medical students has increased very much; while in the winter of 1909-10, there were only 371, in the summer of 1911, there were 549. The percentage of specialists is also rising. For 10,000 inhabitants there were in the year 1911, 3.45 specialists. Among 100 physicians, there were in all the great cities together, 35.9 specialists; gynecologists are the most numerous among these. Prinzing concludes his article with the remark that a considerable increase in young physicians is to be expected from next year on.

Forfeiture of the Privat-Docent Position

The permission to lecture is forfeited by a resignation. It is equivalent to a resignation, (1) if a privat-docent, without expressed permission of the faculty, omits the notices of his lectures in the catalogue (*Vorlesungsverzeichniss*) for two successive semesters; (2) if during four successive semesters he has held no lectures without good excuse; the faculty is to judge of the circumstances; the privat-docent has the privilege of appealing from its decision to the minister; (3) if he removes his permanent residence from Berlin or its immediate neighborhood without express permission. The permission is to be sought by the privat-docent from the faculty, which shall lay it before the minister with an expert opinion for decision; (4) if he takes a position requiring his full time outside of the university unless the faculty grants his request to retain his position as privat-docent. Whether this permission shall be recalled at any time is to be decided by the faculty in doubtful cases.

International Sanitary Conference

The international sanitary conference which has been holding its sessions in Paris since November 7 at the invitation of the French government, was closed a few days ago. An editorial committee is busy with the collection of the results of the conference. In January the German delegates will go again to Paris for a final session.

Occupational Mortality in Prussia

The Prussian government has recently published some statistics in regard to the mortality in the single trade groups on the basis of the census of trades for the year 1907 and the official statements regarding the occupation of those who died in the years 1906 to 1908. While these do not furnish unobjectionable data for all professions or trades, approximate statistics have been obtained which seem to be quite valuable. If the three principal means of livelihood, agriculture, industry and commerce, are compared with each other, the most unfavorable mortality (14.25 per 1,000) of the male workers is shown by commerce. Agriculture is only a little more favorable (14.01), while industry has the extraordinary advantage of only 11.50 per 1,000. This picture is altered, however, if in place of the entire mortality, that for the various ages is considered. Looked at in this way, agriculture presents the most favorable conditions at all ages; the mortality of persons engaged in industry is about 15 to 25 per cent. higher at the ages from 15 to 40, and at older ages about 40 to 50 per cent. higher than in agriculture. Transportation and commerce show still more unfavorable figures. As for example, the relative figure for the ages of from 30 to 40 years is 7.85, while that of those engaged in industry is only 6.32 and of those in agriculture 5.14; in the same way in the age group of from 40 to 50, the relative rate is 14.02, as compared with 11.71 and 8.60. To a considerable extent, these unfavorable figures are due to the liquor trade (Beherbergung und Erquickung), which is found in this group and which is characterized by a high mortality.

Of the single industrial trades, the stone and earth industry presents the most favorable figures, probably because it is a summer trade, so that those who have died in winter are reckoned in other callings. In mining, the younger classes show a most unfavorable and the older a more favorable figure than industry in general. The cause of this is not easy to ascertain. It is possible that there is a gradual selection of the fittest. The metal trades appear to be more favorable in all age groups, and the machine industry more favorable than the total of the industrial trades in general. Quite as favorable, partly even more favorable, is the position of the chemical industry. The textile trades by no means show the high mortality that would be expected. The most unfavorable is the clothing and cleaning trades, probably because this is a field of domestic industry with insufficient remuneration. The building trades show until the age of 30 a more favorable and after that a more unfavorable rate. The foodstuffs industry has the average rate until the age of 40 and later a somewhat higher mortality.

BUDAPEST LETTER

(From Our Occasional Correspondent)

Budapest, Dec. 30, 1911.

Vital Statistics of Budapest

Budapest has for years been famous as a healthy city, and it is satisfactory to find that the death-rate in 1910—18.5 per 1,000—was, with the single exception of the previous year, the lowest on record. One obtains some idea of the meaning of this figure when it is remembered that the death-rates of New York, Moscow and Dublin are above 20 per 1,000, while the death-rate for the whole of Russia is more than 30 per 1,000. In Budapest, as might be expected, the highest mortality is found in the central crowded districts, while it is low indeed around the circumference. Comparing the mortality of particular diseases to-day with that of twenty years ago in Budapest, it is gratifying to find that in the case of all the acute infectious diseases there is marked improvement. This is noticeably so in the case of small-pox, scarlatina, diphtheria and typhoid fever, and to a less extent for measles and whooping-cough. In the case of epidemic diarrhea and of tuberculosis there is no improvement. The last-mentioned disease, followed closely by malignant disease, nervous diseases, diseases of the heart, and pneumonia, none of which show any marked improvement, contributes most largely to the death-rate. It is not a matter for congratulation, however, that the marriage-rate and birth-rate tend to move parallel with the death-rate. Last year both of them reached their lowest point since 1873. That the birth-rate is not entirely influenced by economic causes is shown by the fact that the decline is greatest in the most wealthy districts, such as the Leopoldtown (the rich quarter) and least in Köbanya, populated by the poorest people.

Damages for Drawing Teeth

A successful suit for damages against an unqualified dental surgeon has recently been settled under somewhat peculiar circumstances. It appeared that a Budapest soap-maker had suffered from excessive bleeding after tooth extraction. Other members of the family had been troubled in the same way, and one had actually died, showing clearly the hemophilic constitution. He was introduced to the defendant, an unqualified dentist, who told him his teeth could be extracted without risk by means of a new American invention. This unqualified dentist then extracted six teeth. Profuse bleeding followed, and the plaintiff was under medical treatment for some time. The operator was compelled to admit that he had never qualified as a dental surgeon, and he was fined to the extent of $560 (2,800 crowns) damages.

Suicide of Surgeon After Operation

An incident is reported in the *Adeverul* (Bucharest, Roumania) which is full of pathos and interest for medical men. It appears that a Dr. C. Lascul was driving past a farm when a poor woman ran out of a cottage and begged him to see her child, who was very ill. The doctor after examining the patient came to the conclusion that he had diphtheria, and advised that he should be removed to the town hospital. The parents refused to part with the child; and Dr. Lascul was compelled to do the best he could for him in the rude cottage. Calling next day, he found that it was necessary to perform an operation—presumably tracheotomy—and single-handed he essayed to carry it out. Something, however, went wrong during its performance, and though he gave up his engagements and remained with the child some time, he saw that it was impossible to save the child's life. This unhappy occurrence so much affected his mind, that he burst into tears and reproached himself with being a murderer. He then hastily wrote a note, and putting it under the ink-bottle, asked the mother for a drink of water. No sooner had she left the room to fetch it than the report of a revolver was heard, and on hurrying back she found Dr. Lascul dead with a bullet-wound in his temple. The note read as follows: "Pardon a young doctor his involuntary error, by which he has deprived you of your child." Soon afterward the child died also.

Death from a Wasp Sting

A tragic and interesting occurrence was investigated by the Budapest coroner last month. A laborer was drinking a glass of beer, when he felt a sudden pain in the throat in connection with a solid body that had entered his mouth in the liquid. He coughed the body out and found that it was a wasp. Beyond natural fright and some discomfort in the throat, he seemed but little the worse for his experience, and for the next few days he was comparatively well, so that medical assistance was not sought. Then he felt rather faint and ill, but continued at work, till the sixth day after the sting, when he was so unwell as to have to call in a doctor. The medical man found little evidence of serious illness and was inclined to regard the condition as not being of much consequence. But the symptoms rapidly increased and took on a grave character. Cellulitis of the throat and nasal passages developed, and death from septicemia followed in two days. When the illness assumed a severe form, the malady showed the characteristics of a spreading cellulitis, and not those of toxemia. Hungary is fortunately free from the more virulent wasps that are to be found in the Balkan states, but this case shows that the indigenous insects are capable of producing dangerous injury.

Marriages

Robert S. Reimers, M.D., Keokuk, Ia., to Miss Clara Hoffman of Muscatine, Ia., at New London, Ia., January 3.

Reginald Myron Wildish, M.D., Blunt, S. Dak., to Miss Nell Emilo Sylvester of Surprise, Neb., December 27.

Barzilla Milton Hutchinson, M.D., Chicago, to Miss Marie Nelson of Portland, Me., in Chicago, recently.

Anna G. Sedan, M.D., Mount Auburn, Cincinnati, and Thomas H. Benner of Columbia, Tenn., January 3.

Captain Joseph F. Siler, M. C., U. S. Army, to Miss Kate D. McNeil of Charlottesville, Va., December 28.

I. Tyler Fugate, M.D., Anawalt, W. Va., to Miss Anna Laura Mitchell of Louisville, Ky., December 27.

Ridgaway R. Merryman, M.D., Baltimore, to Miss Gertrude R. Myers, at Wilmington, Del., September 23.

John Henry Von Dreele, Jr., M.D., Baltimore, to Miss Marvel E. Scarff, at Baltimore, December 27.

Francis P. O'Neil, M.D., Midland, Md., to Miss Elizabeth Barrett, at Cumberland, Md., December 27.

Lewis Wine Bremerman, M.D., to Miss Margaret Thomas Alexander, both of Chicago, January 11.

Charles A. Moriarity, M.D., to Miss Mary B. Minnick, both of Philadelphia, January 9.

Darwin Delap, M.D., to Miss Elizabeth B. Pierce, both of Kansas City, Mo., December 30.

Ralph E. Porter, M.D., Milwaukee, to Miss Marjorie Hunt of Phillips, Wis., January 4.

Bernard Mann, M.D., to Miss Stella R. Kahn, both of Philadelphia, December 31.

Edward A. Van Fleet, M.D., to Miss Oleva M. Kuehn, both of Omaha, December 27.

Howard C. McMillin, M.D., to Miss Lena Beyer, both of Morton, Ill., January 3.

Deaths

Morris Franklin Cawley, M.D. University of Pennsylvania, Philadelphia, 1888; a member of the Medical Society of the State of Pennsylvania and Association of Military Surgeons of the United States; medical inspector of the State Department of Health for Lehigh County and the chief of the State Tuberculosis Dispensary of the county; from 1889 to 1896 secretary and once president of the Lehigh County Medical Association; for three years health officer of Allentown and since 1900 health officer of Lehigh County; for thirty-three years a member of the National Guard, appointed assistant surgeon in 1888 and major medical corps eleven years later and assigned to the Fourth Infantry; during the Spanish-American War surgeon of the Fourth Pennsylvania Infantry, U. S. V.; died at his home in Allentown, January 6, from cerebral hemorrhage, aged 54.

John Dale Bedford, M.D. Missouri Medical College, St. Louis, 1883; of Amarillo, Tex.; a member of the American Medical Association; for many years a practitioner of Honey Grove, and surgeon for sixteen years of the Sherman-Honey Grove division of the Sante Fe System; health officer of Honey Grove for many years, and a member of the school board; for the last six years physician to the Bedford Sanitarium at Amarillo; died in St. Paul's Sanitarium, Dallas, January 1, from pneumonia, aged 54.

Hugh Patrick Roden, M.D. Missouri Medical College, St. Louis, 1870; a member of the American Medical Association and a veteran of the Civil War; for several terms a member of the board of education of Newark, N. J., and a member of the staff of St. James' Hospital; died at his home in that city, December 31, from pneumonia, aged 65.

Silas D. Black, M.D. Medical College of Indiana, Indianapolis, 1875; formerly of Brazil, Ind.; for several years a member of the city council and secretary of the board of health; died at his home in Los Angeles, December 31, from heart disease, aged 60.

William Henry Wirt, M.D. Rush Medical College, 1869; a member of the American Medical Association; formerly president of the Ashland County (O.) Medical Society and vice-president of the Sixth District Medical Society; for eighteen years a member of the Loudonville Board of Health and board of education and president of the latter body, recently elected a member of the board of public affairs of Loudonville; died at his home in that city, December 27, from pleuropneumonia, aged 70.

Amos J. Harris, M.D. New York University, New York City, 1861; a member of the American Medical Association; land agent for North Central Kansas, with headquarters at Kirwin, during the administration of President Cleveland; representative in the Pennsylvania legislature from Northampton County in 1877 and 1878; for one term chief burgess of Hellertown and for seven years school director; died at his home in that place, December 25, aged 75.

William Constantine Pise Boone, M.D. University of Maryland, Baltimore, 1872; of Plainfield, N. J.; a member of the Medical Society of New Jersey and a Confederate veteran; formerly city physician of Plainfield and coroner of Union County; a member of the attending and consulting staff of Muhlenberg Hospital since 1880; died in Johns Hopkins Hospital, Baltimore, December 30, from pneumonia, twenty-four days after a surgical operation, aged 67.

Arthur Vincent Meigs, M.D. University of Pennsylvania, Philadelphia, 1871; a member of the Medical Society of the State of Pennsylvania, and Association of American Physicians; for several years chief of the Medical staff of the Pennsylvania Hospital; president of the Philadelphia College of Physicians from 1904 to 1906; widely known as a writer on medical subjects; died at his home in Philadelphia, January 1, aged 61.

Charles Martin Steele, M.D. University of Michigan Homeopathic Medical College, 1897; of Reno, Nev.; a member of the American Medical Association, and secretary of the Washoe County (Nev.) Medical Society; a member of the staff of the People's Hospital, Reno, Nev.; oculist and aurist to the Southern Pacific, Oregon Short Line and Nevada Central railroads; died January 6 after an operation for appendicitis, aged 48.

Richard Runyan Rogers, Jr., M.D. University of Pennsylvania, Philadelphia, 1882; for fifteen years physician of Mercer County, N. J.; major and surgeon of the National Guard of New Jersey and assigned to the Second Infantry; for two years a member of the staff of the New Jersey State Hospital, Trenton; died at his home in that city, January 2, aged 49.

Arthur Reitman, M.D. Wisconsin College of Physicians and Surgeons, Milwaukee, 1905; of Milwaukee; a member of the State Medical Society of Wisconsin; deputy coroner of Milwaukee County, who had been ill in St. Joseph's Hospital with typhoid fever; died in that institution, January 6, four hours after an operation for gangrene of the bladder, aged 33.

Thacher S. Hanchett, M.D. Bellevue Hospital Medical College, 1864; a member of the Connecticut State Medical Society; for forty-five years a practitioner of Torrington; first health officer of that city and later medical examiner until 1908; surgeon's mate in the Navy during the Civil War; died in the Norwich State Hospital, December 31, aged 73.

Edwin O. Thornhill, M.D. Medical College of Virginia, Richmond, 1903; a member of the American Medical Association; of Maben, W. Va.; aged 33; while attending an injured person in a drug store in Mullens, January 1, was shot and killed by one of the notorious Hatfields of Logan County, because he refused to issue a prescription for whiskey.

James X. Allen, M.D. Washington University, St. Louis, 1867; a member of the Utah State Medical Association; surgeon of Missouri Volunteers during the Civil War; medical director of the Grand Army of the Republic, Department of Utah, for several years; died at his home in Ogden, December 27, from angina pectoris, aged 81.

Frederick C. Heath, M.D. Queen's University, Kingston, Ont., 1886; aged 50; was found dead in his office in Chicago, January 9, from the effects of asphyxiation by gas. The case is reported to be one of suicide during despondency.

Levi H. Nichols (license, Vermont); for thirty-two years a practitioner of Stamford; died at his home, December 30, from cerebral hemorrhage, aged 68.

Joseph J. Hoffman, M.D. Medical College of Ohio, Cincinnati, 1903; of Orchard Park, N. Mex.; formerly of Cincinnati; resident physician to the Central Indiana State Hospital of Indianapolis, and assistant surgeon to the National Military Home, Dayton, O.; died in St. Mary's Hospital, Roswell, N. Mex., December 26, aged 31.

Charles Rice, M.D. University of Iowa, Iowa City, 1878; a member of the American Medical Association and National Association of Railway Surgeons; local surgeon at Smithland, Ia., of the Illinois Central System; health officer of Smithland and Little Sioux; died at his home in Smithland, January 1, aged 60.

William Clay Cardwell, M.D. University of Nashville, Tenn., 1894; Marion-Sims Medical College, St. Louis, 1898; a member of the American Medical Association, and a trustee of the Washington State Medical Association; of Colfax, Wash.; died in the Colfax Hospital, January 2, from lymphatic leukemia, aged 36.

Robert Fischer, M.D. Cleveland (O.) College of Physicians and Surgeons, 1897; a member of the Indiana State Medical Association; for five years supervisor of physical training and director of school hygiene in the Indianapolis Public Schools; died in the Norways Sanitarium, Indianapolis, January 6, aged 38.

Algernon Coolidge, M.D. Harvard Medical School, 1853; a member of the Massachusetts Medical Society; surgeon of volunteers during the Civil War; from 1868 to 1873 surgeon and laryngologist to the Massachusetts General Hospital; died at his home in Boston, January 5, from acute bronchitis, aged 81.

John Franklin Davis, M.D. Bellevue Hospital Medical College, 1874; a member of the Medical Society of the State of New York; for thirty-three years a customhouse official of New York City and appraiser of surgical goods; died at his home in Brooklyn, December 31, from cerebral hemorrhage, aged 59.

Marion Adell Howe Pugh, M.D. State University of Iowa, College of Homeopathic Medicine, Iowa City, 1900; formerly instructor of Drake University, Des Moines, and a teacher in the science department of the public schools in that city; died in a sanatorium in Colfax, Ia., December 30, aged 44.

Madison A. Ashley, M.D. Kentucky School of Medicine, Louisville, 1895; a member of the American Medical Association; a member of the board of health of Excelsior Springs, Mo.; died in a hospital in that city, December 31, six days after an operation for appendicitis, aged 44.

Francis M. Baker, M.D. Northwestern University Medical School, Chicago, 1893; of Fond du Lac; a member of the State Medical Society of Wisconsin; at one time lecturer in the Milwaukee Medical College; died in a hospital in Milwaukee, December 30, from leukemia, aged 44.

Andrew Hamil Read, M.D. Oglethorpe Medical College, Savannah, Ga., 1858; formerly an official of Fulton County, Ga.; a member of the Medical Association of the State of Alabama; died at the home of his daughter in Opelika, December 27, from cerebral hemorrhage, aged 75.

Alvin Rodney Smith, M.D. Ohio Medical Institute, Cincinnati, 1853; of Girard, Pa.; burgess of Girard for two terms; a member of the town council, board of education and health officer; died in St. Vincent's Hospital, Erie, December 19, after a surgical operation, aged 81.

Thomas F. McKey, M.D. University of Iowa, Iowa City, 1882; a member of the Minnesota State Medical Association; chief physician of the Wisconsin State Penitentiary, Waupun, for two years; died at his home in Albert Lea, December 31, from arteriosclerosis, aged 49.

Edward Hubbard Welch, M.D. Yale University, New Haven, Conn., 1876; a member of the American Medical Association; for many years surgeon in the National Guard of Connecticut; died at his home in Winsted, Conn., December 28, from cerebral hemorrhage, aged 59.

William Droien Collins, M.D. Harvard Medical School, 1866; a surgeon of volunteers during the Civil War; for twenty-eight years a practitioner of Haverhill, Mass.; died at his home in Cambridge, Mass., December 16, from senile debility, aged 71.

William H. Senderling, M.D. Jefferson Medical College, 1869; a member of the staff of St. Luke's Hospital, Philadelphia; died at his home, December 30, from heart disease, aged 64.

Joseph Sandy Dickinson, M.D. University of Louisville, Ky., 1849; formerly a member of the American Medical Association; for more than fifty years a practitioner of Trenton, Ky.; died at his home in that city, December 25, from nephritis, aged 84.

Henry P. Wherritt (license, Missouri); for twenty-three years a practitioner of Independence, Mo.; a member of the American Medical Association and a Confederate veteran; died at his home, December 29, from heart disease, aged 69.

William Thomas Whiting, Jr., M.D. Northwestern University Medical School, Chicago, 1910; of Lafayette, Colo.; aged 25; was instantly killed in a collision between his automobile and an interurban car near Louisville, Colo., January 2.

Garland Somers Wiley, M.D. University of Virginia, Charlottesville, 1903; formerly of Roanoke; who went to Brazil, South America, a year ago as a physician for a railway and mining company; died in Brazil, December 5, aged 32.

Gilbert Board Lawrence, M.D. New York University, New York City, 1852; a retired practitioner of Williamsburg, Brooklyn; died in the Home for Aged Men and Couples, New York City, January 5, from senile debility, aged 87.

Chauncey Cater Turner, M.D. Jefferson Medical College, 1909; a member of the visiting staff of the Wilkes-Barre City Hospital; died at the home of his brother in Wilkes-Barre, December 29, from cerebral hemorrhage, aged 32.

James Stephen McLaughlin, M.D. Dartmouth Medical School, Hanover, N. H., 1893; for several years a member of the staff of Noble Hospital, Westfield; died at his home in that city, January 2, from cerebral hemorrhage, aged 46.

William E. Gaver, M.D. University of Maryland, Baltimore, 1888; a member of the American Medical Association; of Mount Airy, Md.; died December 31, from heart disease, while making a professional call, aged 48.

Joseph F. Scott, M.D. Western Reserve University, Cleveland, 1887; a member of the West Virginia State Medical Association; died at his home in Medley, December 22, from cerebral hemorrhage, aged 54.

John A. Henning, M.D. Bennett Medical College, Chicago, 1880; for fifty-five years a practitioner; died at his home in Garnett, Kan.; December 30, from cerebral hemorrhage, aged 81.

Moses Louis Weil, M.D. Bellevue Hospital Medical College, 1889; a medical examiner of the New York Health Department; died at his home in New York City, January 3, aged 53.

Samuel Green Sewall, M.D. Boston University School of Medicine, 1880; a veteran of the Civil War; died at his home in New York City, December 29, from heart disease, aged 88.

Charles Hobart Pague, M.D. McGill University, Montreal, 1867; a surgeon of volunteers during the Civil War; died at his home in Chicago, January 10, from pneumonia, aged 69.

James Lovel Muncey, M.D. University of Maryland, Baltimore, 1892; of Pearisburg, Va.; was thrown from his buggy at Pembroke, December 29, and died an hour later, aged 45.

Quintus Cincinnatus Smith, M.D. University of Nashville, Tenn., 1868; a member of the American Medical Association; died at his home in San Diego, Cal., October 27, aged 69.

Eugene M. Draper, M.D. Albany (N. Y.) Medical College, 1873; for many years a practitioner of Ilion, N. Y.; died at his home in Pasadena, Cal., December 28, aged 58.

Edwin E. Campbell, Jr., M.D. Syracuse (N. Y.) University, 1909; died at his home in Alexandria Bay, N. Y., December 29, from typhoid fever, aged 28.

G. W. Jones, M.D. Columbus (O.) Medical College, 1879; of Quaker City, O.; was found dead in his stable, December 27, from heart disease, aged 61.

Charles M. Galloway, M.D. Memphis Hospital Medical College, 1898; died at his home in Fort Worth, Tex., January 1, from pneumonia, aged 40.

John L. Blair, M.D. University of Maryland, Baltimore, 1868; died at his home in Mercersburg, Pa., December 31, aged 66.

John P. Bruce, M.D. Rush Medical College, 1902; died at his home in Chicago, December 24, from pneumonia, aged 37.

Abner Martin, M.D. Bellevue Hospital Medical College, 1864; died at his home near Ashland, Mo., January 3, aged 77.

Ralph Nevin Gordon, M.D. Seattle, Wash., noted as dead in The Journal of September 2, 1911, is not dead.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE J. B. L. CASCADE TREATMENT

A Fraudulently Exploited Device Sold by Those Who Deal in the Ideal Sight Restorer

Many inquiries have been received relative to the "J. B. L. Cascade Treatment" and its exploiter, Dr. Chas. A. Tyrrell, an eclectic physician of New York City. The J. B. L. ("Joy-Beauty-Life") Cascade is a device sold by Tyrrell for the administration of rectal enemas. Tyrrell, it seems, has improved—commercially—on the propaganda started many years ago by Wilford Hall. Hall, it will be remembered, declared that all the ills of the flesh are due to the fact that people do not make a practice of flushing their colons. Tyrrell, however, goes farther than Wilford Hall; instead of merely selling a book telling of the wonderful results to be obtained from rectal enemas, Tyrrell also sells an appliance for giving the injections.

This appliance is said to be "the only thing of the kind ever specially designed for the purpose." After advancing the proposition that apoplexy, consumption, Bright's disease, syphilis and cancers "all have their origin in the colon," Tyrrell says:

> "Typhoid fever and appendicitis may positively be cured and absolutely prevented by the 'J. B. L. Cascade' treatment."

According to Tyrrell, "there is *only one disease*" and more important still "there is *only one cause for disease*, and that is auto-intoxication." Of course, for this "only cause" Tyrrell has a "complete system of rational treatment" which consists of his syringe and stick of soap and his "celebrated 'J. B. L. Antiseptic Tonic'", which is supposed to be put in the water that is to be injected. So "complete" and so "rational" is Tyrrell's "system" that by it "anyone with ordinary intelligence" is able "to treat successfully any form of disease, that is curable, without the expense of calling a physician."

Tyrrell reaches his victims by methods usual to the medical faker—advertising and follow-up letters. With his letter, he sends out a printed leaflet in which he details "Our Phenomenal Triple Offer for This Month Only." Those not familiar with the methods of mail-order fakers might believe that such an offer was only made once. Our files disprove this as we have slips making this "phenomenal offer"—"for this month only"—for May, 1910; September, 1910; December, 1910; March, 1911; September, 1911; October, 1911; December, 1911; January, 1912, and other dates. Tyrrell also sends out the inevitable diagnosis blank with the offer of free advice to those who will fill it out and return it.

Nor is the J. B. L. Cascade the only piece of pseudomedical claptrap in which Tyrrell is financially interested. He also sells the "Ideal Sight Restorer," a piece of tubing with a bulb attached that is supposed to cure most eye ills. The Ideal Sight Restorer "cures not only the refractive errors of the eye—nearsight, farsight, oldsight and astigmatism—but also such dreaded diseases as cataract, glaucoma, cross-eye and paralytic blindness." The falseness of such claims as these is equaled only by the disasters that may result from the use of an appliance of this sort in certain diseased conditions of the eye.

As in the case of the J. B. L. Cascade—and, for that matter, that of any other medical fraud—plenty of testimonials are forthcoming to prove the efficacy of the thing exploited. On one page of the booklet sent out by the Ideal Company, which is the name under which Tyrrell sells the Ideal Sight Restorer, there appears what the company calls "an unprejudiced journalistic opinion" from the *United States Health Reports*. This publication was a fraudulent sheet that sold editorial commendation to any quack who would pay the price. Willard H. Morse, M.D., of Westfield, N. J., who calls himself a "consulting chemist" and "Director Iamatological Bureau" is quoted as testifying that the "Ideal Sight Restorer will absolutely restore sight and render spectacles useless." This testimony carries little weight to those who know that Morse is a professional testimonial writer who holds a "fellowship" in that serio-comic fraudulent organization the "Society of Science, Letters and Art," of London. The fellowships cost $5.00.

Tyrrell is also "editor-in-chief" of a monthly magazine, *Health*. The associate editor of *Health* is C. S. Carr, Peruna's advertising man and member of the advisory board of the "National League for Medical Freedom." The advertising pages of *Health* are devoted largely to the "Ideal Sight Restorer," the "J. B. L. Cascade" and C. S. Carr's "Tissue Tablets;" in addition, we find such frauds as the Thatcher Magnetic Shield, the Magic Foot Drafts, Van Vleck Pile Cure, the Osteopather, etc.

It is unnecessary to tell physicians that the claims made by Tyrrell for his "J. B. L. Cascade" are as silly as they are false; it is equally unnecessary to tell them that the indiscriminate use of rectal enemas is not only harmful but may be dangerous. Unfortunately, the public does not realize the absurdity of Tyrrell's propositions nor does it comprehend the dangers attendant on them.

Correspondence

Tolerance of Infant to Codein

To the Editor:—An abstract on tolerance of infants to morphin in The Journal, September 9, p. 935, leads me to report the following experience: Six ¼-grain codein tablets were given the nurse, to be used in case of severe afterpains. None of these were used, but six weeks later the mother gave the child one tablet while being in town shopping and the child was quiet during the rest of the day and during a 16-mile ride home. One week later the child was again cross and received another tablet. I was called because they could not wake the child. It took me eighteen hours to do it; strychnin hypodermically (1/60 grain) and artificial respiration were used. I was unable to find out at that time what had been given the child, but two weeks later, after going through the same experience, I found out. I think the fact that the mother dropped part of the first tablet saved the child's life. In the article referred to a case is mentioned in which the child received twenty times the average dose for the age. I believe the child in my case received fifty times the average dose of codein. This must have been a case of extreme tolerance (or habit).

J. B. Kinne, Aberdeen, Wash.

The Baby-Tents of Chicago

To the Editor:—I have read with interest the article of Dr. Frank W. Allin on the baby-tent in The Journal (Dec. 30, 1911, p. 2127). He states that this idea "originated in Chicago" and has since spread to a number of cities.

I am particularly interested in the success of the baby-tent, here and elsewhere, in reducing the infant mortality-rate in the hot summer months in the poor and crowded districts of the city, for which it was established. The statistics of a single tent are indisputable evidence of their good work. This is particularly gratifying to me, as I happen to be the one with whom the neighborhood baby-tent idea originated. I established the first tent with the financial help of the Chicago Relief and Aid Society.

Dr. Allin kindly recorded this in an article which he read before the Chicago Medical Society and which was published in the *Illinois Medical Journal*, April, 1910, p. 423, under the title, "The Baby-Tent Idea."

In view of the fact that the baby-tent idea has proved to be an important factor in the saving of infants' lives, in which a personal pride on my part, I think, is pardonable, I ask that you publish this letter in The Journal.

William J. Butler, A.M., M.D., Chicago.

The Army Canteen

To the Editor:—Referring to the letter of Colonel L. M. Maus, Medical Corps, in The Journal, Jan. 13, 1912, I desire to say that however widely his opinion on the subject of the canteen may differ from those of the majority of army officers or his statements from what are believed to be the facts in the case, it is only proposed here to comment on those which purport to be drawn from the vital statistics and reports of this office.

Much space would be required to point out the inaccuracies contained in his articles on the subject of "The Beerless Canteen" in the *Continent*, Dec. 7, 1911, and in The Journal of the American Medical Association, Jan. 13, 1912, so it need only be noted at this time that the total sick rates and constantly sick or non-effective rates of an army depend on a great number of more or less important factors, such as infectious diseases, skin diseases, wounds, broken legs and sore feet, which have no connection whatever with the use of alcohol or its sale on military reservations. The absurdity of comparing the total admission rate of a long past period such as 1867-1880, when sanitary science was in its infancy, with that of the last decade is obvious, especially when no mention is made of the fact that between the two came the canteen period 1890 to 1897, which had better health rates than the prohibition period, 1881-1885, or that of 1901-1910 for the Army in the United States, (the abnormal years of war and reorganization, 1898-1900, being omitted).

The statistics of alcoholism and venereal diseases, however, have a real bearing on the question and as the relation between the two vices is generally recognized by physicians and sociologists some discussion of these rates for the Army may be profitable.

The following tables give the accurate statistics for the periods referred to in Colonel Maus' article:

ADMISSION RATE PER 1,000 FOR ALCOHOLISM, UNITED STATES ONLY

From 1867-1880	48	No prohibition.
From 1881-1885	62	Prohibition period.
From 1886-1889	44	No prohibition.
From 1890-1897	34	Canteen, beer only.
From 1901-1910	28	Prohibition period.

ADMISSION RATE PER 1,000 FOR VENEREAL DISEASES, UNITED STATES ONLY

From 1867-1880	124	No prohibition.
From 1881-1885	82	Prohibition period.
From 1886-1889	78	No prohibition.
From 1890-1897	77	Canteen, beer only.
From 1901-1910 (corrected)	149	Prohibition period.

Note: Exceptional years of war and reorganization, 1898-1900, omitted.

Venereal Diseases.—The records of all the great armies of the world, except our own, show for the last three decades a steadily descending curve of incidence for these diseases. With the American Army the rate was fairly uniform for a number of years prior to the Spanish War, averaging for the decade preceding 1898, 78 per 1,000, and for the decade, 1878-1887, 84 per 1,000. The rate for the United States leaped, however, from 81 in 1898 to 138 in 1899, and 155 in 1900, and it has remained not far from 150 during the succeeding years, after correction is made for readmissions of the same case. It is now the most important of all causes of physical disability. Colonel Maus tells us that this phenomenal increase is rather apparent than real, and is due to the fact that now rigid examination of all the men is made weekly, or twice monthly, which brings the rate up to the present figures. Unfortunately, this "most intelligent explanation" has no real basis of fact. The truth is that the physical examinations followed the great increase in the venereal rates and did not produce them, both in the tropics and in the United States. In the latter the curve of incidence took its abrupt and enormous rise ten years before the physical examinations began to be held at any considerable number of posts in the United States, being only one of a series of measures recommended by the surgeon-general in his circular letter of Jan. 25, 1909, for the reduction of venereal diseases.

This office is not aware of any reports or figures to support the assertion "that less than 33 per cent. of the venereal cases before 1901 were reported", or that "the true venereal rate would have exceeded 255 per 1,000 if all the cases had been taken up;" and such a statement is apparently a mere guess without statistical foundation.

Alcoholism, which was in the early history of the Army during the first half of the last century a very important cause of morbidity and death, and the cause of much solicitude to medical officers, became in its later decades, with the growth of temperance in the Army, of minor importance in its effect on the sick report, except by its relation to the much more serious question, from a sanitary standpoint, of venereal diseases. The alcoholic rate rose from 27 in 1867 steadily to 1876 when it reached its highest point, 72 per 1,000. For the next seven years it fluctuated between 60 and 70, being at 69 in the years 1882-1883, in spite of the fact that these were prohibition years. From this point the rates fell steadily through fourteen years to the year of the Spanish War in which it was only sixteen, the lowest rate on record. This was followed by a rise during the exceptional years of 1899 and 1900 to the rate of 26 in 1901, followed by three years when it remained near this figure and then made a further rise for three years, reaching 36 in 1907. The rise in 1899-1901 was synchronous with the enormous increase in venereal rates, and it is difficult to escape the conclusion that there was some connection between the two. The probable explanation of both seems to be that in the spring of 1899 the great majority of the old disciplined professional soldiers of the army were given their discharge and were replaced by recruits. It is well known that recruits are more subject to sickness of all sorts and especially to venereal diseases than trained soldiers. The greenness of the army in 1899 must, therefore, be credited as an important factor in this rise, and it will be further observed that the fluctuations in the alcoholic rate which have occurred since have been in periods of three years, which correspond with the expiration of the three year enlistment periods.

It will be observed that the improvement in the alcoholic rate began before the establishment of the canteen and was continued during most of the canteen period. It is believed that this fall corresponds to the general progress of temperance in the United States, and that it would have been sustained but for the undoubtedly injurious effect of abolition of the beer privilege in the canteen, which destroyed to a considerable extent the attractiveness of the soldier's club, and compelled him to go outside the limits of the military post for amusement. In this way he is tempted to drink distilled liquors to excess in place of mild fermented liquors in moderation, and is at the same time brought into contact with disreputable companions of both sexes, with unfortunate consequences to his health and morals, as shown by the high venereal rates of the last prohibition period.

Statistics are like stones taken from the quarry and piled by the roadside. The contentious may use them as missiles to hurl at an adversary, or the mischievous to break windows, but the honest laborer will employ them only for the purpose for which they are intended, to pave the difficult road which leads toward the truth.

George H. Torney,
Surgeon-General, U. S. Army.

To the Editor:—Dr. W. W. Keen pleads from the physician's standpoint for the restoration of the army canteen. I submit some facts, and views which are as honestly and earnestly held, but which do not accord with Dr. Keen's position on this important question.

Dr. Keen is to be commended for his strong position on social total abstinence, and when he says that he would nail up the doors of every saloon, and put on them a placard. "To rent for some decent business", I am with him heart and soul. But then, with only a semicolon between, he says, "and yet I am in favor of allowing beer to be sold to the soldiers"!

Now I am led to believe that the canteen is simply a vicious saloon run by the government. Its results are the same as those of all saloons—drunkenness, disease and crime. It has been proved that more than one murder has occurred right in the army posts, as the direct result of drink bought over the canteen bar from the special official military bartenders. Can Dr. Keen prove that "beer" never had any part in these affairs? He pleads for beer—or the so-called Bartholdt bill does. And he defends it from his standpoint as a physician, especially because he maintains that without the canteen immorality in the ranks of the army is on the increase, with all its truly deplorable results. But as to his argument that the canteen keeps the soldiers from the worse saloons and brothels outside, we are told that those places always flourished very near to the army posts during all the canteen years, and that the results of abolishing the canteen have been good, instead of bad. The burden of proof to the contrary rests on those who petition Congress to pass the Bartholdt bill. The fact—if it is a fact—that certain diseases are on the increase in the army, is not proved to be simply and solely due to the abolishing of the canteen.

It is a well-known and established fact that selected normal, active men, especially husbands, do not seek or consort with prostitutes, unless their animal passions are first aroused by stimulating drugs and intoxicants. Therefore, as a remedy for the horrible conditions which Dr. Keen describes, and quotes authority to prove:

1. Let the United States Army clean camp, inside as well as outside. If illicit saloons, dives and speak-easies exist and thrive around Uncle Sam's police stations to that extent, in the name of God and for the honor of the army of humanity and expansion, let these evil places be put to rout. If they are illegal places of moral degradation such as pictured, it certainly is within the power, and would be much easier for the War Department to clean them up, than it would if they became legal places of moral degradation.

2. Let the War Department establish all military posts in places where the liquor traffic has been outlawed; there are plenty of them scattered at strategic points throughout the United States. Then it will be easy for General Wood to keep his camps clean.

3. Let the President spend about fifteen minutes under his well-defined authority, in transmitting an executive order to the Department of the Interior, directing the Commissioner of Internal Revenue to stop issuing permits to brewers and distillers to sell intoxicating liquors in states which have outlawed such sale, so that the general government no longer shall connive at the breaking of the solemnly enacted laws of a coordinate branch. And let the War Department cooperate with the Interior Department to put an end to this species of anarchy. Or, in other words, while the patient yet retains good vitality, let the skilled humane surgeon cut out the last tissue of cancerous growth.

It is my personal conviction that the liquor business is an evil thing and that it is wrong in principle for the government to engage in any undertaking that inevitably weakens and debases the men who are sworn to support and defend it, and it is for this reason that I reply to Dr. Keen.

John G. Wilson, Montrose, Pa.

Cook Versus Peary

To the Editor:—Dr. Cook lectured at New Kensington, Pa., Jan. 3, 1912, advertising previously in one of the local papers that "Dr. Cook himself will answer the claims of Peary and the members of the Peary party".

It is with the greatest reluctance that I am compelled to answer and perhaps question the veracity of an explorer who is a member of my profession. Dr. Cook, however, leaves me no choice in the matter, since he lectured in the Columbus Theater, across the street from my office, and gives to the press a distorted version of Rudolph Franke's reception on the *Roosevelt* at Etah. The matter is extremely distasteful, but in justice to Admiral Peary, myself and the officers of the *Roosevelt* I am compelled to deny Dr. Cook's insinuations that his companion, Rudolph Franke, afflicted with scurvy and, applying on the *Roosevelt* at Etah for medical attention and food, was refused, until Commander Peary had extorted terms discreditable to all concerned.

I have always regarded Dr. Cook with the kindliest feeling and for the honor of my profession had hoped that Dr. Cook might have vindicated his veracity. I trust that he will correct the version of Franke's reception on the *Roosevelt* written in his book, spoken from the platform and illustrated throughout the country by moving pictures.

John W. Goodsell, New Kensington, Pa.
Surgeon Peary Arctic Expedition, 1908-1909.

Mounting Pathologic Specimens

To the Editor:—I wish to give a few suggestions to those mounting gross pathologic specimens. In putting up a great many specimens in gelatin, I always had the trouble of air-bubbles forming, as well as discoloration of the gelatin and sometimes of the specimens themselves. Not only has the method these faults but it is also expensive. If one wants to freshen up gelatin-mounted specimens, it is necessary to break the seal and take off the gelatin and remount them.

The method I now use is very cheap; in fact, each specimen costs about 10 cents and no special jars or dishes are required. The specimens are first prepared by Kaiserling's method, which is as follows:

1. Fixation for one to five days in:

Formaldehyd	200 c.c.
Water	1,000 c.c.
Nitrate of potassium	15 gm.
Acetate of potassium	30 gm.

Change the position of the specimen frequently. The time of fixation varies with the tissue or organ and size of the specimen.

2. Drain and place in 80 per cent. alcohol for one to six hours, and then in 95 per cent. alcohol for one to two hours, to restore the color, which is somewhat affected in the fixing solution.

3. Preserve in:

Acetate of potassium	200 gm.
Glycerin	400 c.c.
Water	2,000 c.c.

Since exposure to light reduces the color contrasts, the specimen should be prepared and kept in the dark.—(Delafield and Prudden: Handbook of Pathologic Anatomy, page 61.)

The specimens are then mounted on celluloid. I use the kind of celluloid of which automobile curtains are made. The specimens of intestines and appendices and soft tissue may be sewed on to the celluloid and mounted in ordinary glass preserving jars. The jars are then filled with No. 3 Kaiserling.

Another advantage of this method is that it gives one an opportunity to cut out that part of the celluloid which might distort the specimens, which cannot be done if glass is used. Under the specimens white lead may be used to put on the diagnosis. The jar is filled with No. 3 Kaiserling, which has been filtered and is perfectly clear. By submerging the jar in a larger vessel of the Kaiserling solution it may be filled without any air-bubbles. This makes a very pretty mounting as the celluloid is invisible and the solution is as clear as crystal.

The specimens may be taken out at any time and refreshened in alcohol; there are no labels on the bottle to be washed off; heat or cold will not affect them and they may be mounted very quickly.

Harry M. Wegeforth, M.D., San Diego, Cal.

Condensed Milk in Nevada

To the Editor:—In the discussion of Dr. Neff's article on "Recent Experiences in the Artificial Feeding of One Hundred Infants" (The Journal, Dec. 23, 1911, p. 2068), Dr. R. B. Tubbs, of Council Bluffs, Ia., says that he "cannot see why it is any more legitimate for us to give condensed milk than it is to give proprietary medicines." I wish to ask Dr. Tubbs what he would advise using in place of condensed milk out here in the Nevada deserts, 65 miles from railroad and 60 miles from the nearest milk cow or goat. I have no startling results to record from its use, but the babies under my care are holding their own through careful attention to dilutions, time of feeding, etc.

E. N. Roberts, Wonder, Nev.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SALVARSAN—THE JARISH-HERXHEIMER REACTION—ARSACETIN

To the Editor:—1. What is meant by the Jarish-Herxheimer reaction? 2. What is arsacetin, and what is the percentage of arsenic in it? 3. Can you give me approximately the number of cases in which salvarsan has been used in this country and the number of deaths that resulted from its use? 4. Please give also the number of cases resulting in amaurosis. 5. What is the general opinion up to the present time as to the effectiveness of salvarsan in the cure of syphilis?

William R. Rogers, Bristol, Va.-Tenn.

Answer.—1. The Jarish-Herxheimer reaction is an increase of the symptoms which sometimes is found to follow too small a dose of a remedy, as for instance, the increase of a rash in syphilis after treatment with insufficient doses of mercury or salvarsan.

2. Arsacetin is sodium acetyl arsanilate (See N. N. R., Ed. 1911, p. 34). It contains approximately 21 per cent of arsenic.

3. No.

4. We have no knowledge of any case of syphilis in this country in which amaurosis has been positively shown to be due to salvarsan.

5. The remedy is believed to be of great value in the treatment of syphilis, but its use is too recent for a conclusive opinion to be formed. We suggest that our correspondent study the articles on the subject which have been published in The Journal and form his own opinion. Among these articles are the following:

Keidel, A., and Geraghty, J. T.: The Value of the Wassermann Reaction and of Salvarsan, The Journal, Nov. 18, 1911, p. 1659.

Montgomery, D. W.: The Disadvantages Incident to the Administration of Salvarsan, The Journal, Nov. 18, 1911, p. 1661.

Hirschfelder, J. O.: The Use of Salvarsan, The Journal, Nov. 18, 1911, p. 1667.

Fox, H., and Trimble, W. B.: Eight Months' Experience with Salvarsan at the New York Skin and Cancer Hospital, The Journal, Nov. 18, 1911, p. 1675.

King, P. M., and Crowell, A. J.: Pellagra Treated with Salvarsan, The Journal, Nov. 18, 1911, p. 1687.

McLester, J. S.: Salvarsan, The Journal, June 24, 1911, p. 1877.

Cole, H. P., and Winthrop, G. J.: The Status of Salvarsan in Pellagra, Based on the Reports of Twenty-One Collected Cases, The Journal, June 17, 1911, p. 1794.

Reasoner, M. A.: A Simple Technic for Salvarsan Injection, The Journal, June 17, 1911, p. 1804.

Meltzer, S. J.: The Present Status of Therapeutics and the Significance of Salvarsan, The Journal, June 10, 1911, p. 1709.

Schamberg, J. F.: The Cause of Inflammation of Cranial Nerves After the Use of Salvarsan, The Journal, May 20, 1911, p. 1433.

McKenna, C. H.: A Report on the Therapeutic Efficiency of Salvarsan, The Journal, March 25, 1911, p. 801.

Fox, H., and Trimble, W. B.: Experience with Salvarsan, The Journal, March 4, 1911, p. 650.

Sutton, R. L.: Localized Edema in the Lumbar Region Following the Use of Salvarsan, The Journal, Feb. 4, 1911, p. 344.

Corbus, B. C.: Observations on Twenty-Eight Patients Treated with Salvarsan, The Journal, Feb. 25, 1911, p. 566.

Nichols, H. J.: Salvarsan and Sodium Cacodylate, The Journal, Feb. 18, 1911, p. 492.

Montgomery, D. W.: The Administration of Salvarsan, The Journal, Feb. 18, 1911, p. 501.

Ormsby, O. S.: A Group of Syphilitic Patients Treated with Salvarsan, The Journal, Feb. 18, 1911, p. 504.

Advertising Salvarsan to the Public, The Journal, Feb. 11, 1911, p. 436.

Sutton, R. L.: Localized Edema in the Lumbar Region Following the Use of Salvarsan, The Journal, Feb. 4, 1911, p. 344.

Marshall, M.: A Report of Six Cases of Syphilis Treated with Salvarsan, The Journal, Jan. 21, 1911, p. 177.

Fordyce, J. A.: The Modern Treatment of Syphilis, with Reference to the Recent Synthetic Preparations, The Journal, Jan. 21, 1911, p. 186.

Pusey, W. A.: The Situation as Regards Salvarsan, The Journal, Jan. 14, 1911, p. 118.

Puckner, W. A., and Hilpert, W. S.: The Chemical Properties of Salvarsan, The Journal, Dec. 31, 1910, p. 2314.

Elsner, H. L.: The New Treatment of Syphilis, The Journal, Dec. 10, 1910, p. 2052.

Marks, L. H.: Ehrlich's Biochemical Theory, Its Conception and Application, The Journal, Dec. 3, 1910, p. 1974.

Corbus, B. C.: The Value of Ehrlich's New Discovery, "606," The Journal, Oct. 22, 1910, p. 1470.

Nichols, J. H., and Fordyce, J. A.: The Treatment of Syphilis with Ehrlich's "606," The Journal, Oct. 1, 1910, p. 1171.

"PRESCRIPTION NONSENSE"

To the Editor:—The most timely article in The Journal (Jan. 6, 1912, p. 34), under the above title would possess additional value if it were more correct in a few details. Permit me an anticriticism. To use the author's own expression, it is the object of this to urge an analytical spirit of—criticisms.

Criticism of Matthes' Prescription.—1. An infusion of rhubarb is not "too disagreeable to administer to anyone." It is, after all, a matter of taste. Many patients do not object to powdered rhubarb, particularly when its taste is corrected by the addition of magnesia (Hufelands' *Kinderpulver*). Europeans are rather used to it and by the way, some are nauseated by the here much-favored odor and taste of gaultheria. The custom of prescribing rhubarb in superacidity (and ulcer) is very properly based on its aperient effect. Atony of the colon, colitis mucosa and constipation are the most frequent complications (if not etiologic factors) in superacidity and the benefit of treatment by enemas of oil too well known to require further proof. Rheum acts on the colon only. (Guerber, on the findings of *x*-ray observations by Magnus and Padtberg, *München. med. Wchnschr.*, 1911, p. 2250.)

2. That oil of peppermint causes the outpouring of gastric juice is still *sub judice*, and the healing power of menthol on a gastric ulcer just as well. But it has a local anesthetic action.

3. The lack of more exact directions in this and other prescriptions should not excite the ire of the critic. The authors mentioned probably write for graduates and not for freshmen, thus leaving room for individualizing.

Criticism of Ewald's Prescription.—4. There is a remarkable difference between sodium and potassium salts and between their carbonates and bicarbonates. Sodium carbonate contains 15.38 per cent. carbon dioxid and the bicarbonate 52.39 per cent., potassium carbonate 31.88 per cent. carbon dioxid and its bicarbonate 44 per cent. The production of a moderate amount of carbon dioxid in the stomach will cause the escape of other fermentation gases with the eructations from the carbon dioxid, while a very large volume of this gas may bring on the danger of a perforation. So there seems to be some little sense in this prescription after all.

5. "Any sugar . . . is better not given to a patient in whom one is attempting to reduce hyperacidity"? Look up Howell ("Text-Book of Physiology," Ed. 4, p. 744), Friedländer (in Osler's "Modern Medicine," v, 119), Anders ("Practice," Ed. 10, p. 807), Fleischer ("Magen und Darmkrankheiten," p. 932), Strauss ("Vorlesungen über Diät," etc., p. 32), Winternitz (in von Mering's "Lehrbuch der inneren Medizin," p. 440), to which may be added that Lenhartz, in his "Diet in Gastric Ulcer," recommends 20 gm. cane-sugar from the fourth day, rising to 50 gm. on the twelfth day. When Sayler (in Hare's "Modern Treatment," ii, 306) says that "excessive (sic) indulgence in sweet foods appears to be undesirable," etc., it might be mentioned that sugars in higher concentration are absorbed by the stomach (Howell).

As to the objections against belladonna in various forms, instead of the alkaloid atropin, there is still some dispute, just as opium has different virtues from morphin and digitalis from the various preparations obtained from it. I must confess, however, that I prefer the alkaloids where the weighing by the apothecary is reliable.

The objection to Cohnheim's prescription is somewhat of a surprise. There can be no question that an emulsion is meant, for it would form by itself on slight agitation, and that the medicine should be delivered with the yolk of an egg floating in the bottle sounds preposterous. But perhaps the greatest surprise is furnished by the statement that "the oil of sweet almonds certainly is not a specific treatment for ulcer of the stomach." If not a specific in the strictest sense of the word, it is certainly one of the most useful factors in treatment of superacidity (or hyperchlorhydria). That oils, emulsions (cream) and liquid fats virtually inhibit the secretion of hydrochloric acid is so widely known and this fact so very generally considered in the diet and treatment of superacidity that it would seem quite superfluous to prove it by quoting modern authors.

6. The translation of Cohnheim's prescription is given: "Tincturæ"-,"Olei"-, then "Vitellum"-, and "Aquam"-, first genitives, then accusatives. Is not this somewhat careless Latin?

Am I fault-finding? I hope not, for most of the points in the article are well taken and deserve closest attention.

George Richter, St. Louis.

Answer.—1. The Journal is primarily for the practitioners of the United States, and, even if Europeans are fond of the infusion of rhubarb, we believe that most American patients would find it very disagreeable. It seems hardly worth while for the sake of a laxative to take any chance of causing nausea and vomiting in a patient who has ulcer of the stomach. Certainly our correspondent does not believe that rhubarb is a curative treatment for ulcer of the stomach. If rhubarb is desired for action on the lower intestine, it certainly can be given in a much pleasanter manner.

2. Our correspondent should note that the article on prescription nonsense was not written to advise or discuss the treatment of gastric ulcer, but was simply to discuss the prescriptions quoted and advised to be used in this condition; hence the action of peppermint in stopping pain or healing an ulcer of the stomach, or the action of oil in inhibiting gastric acidity and furnishing nutrition was not a matter discussed.

3. We take issue with our correspondent as to the indefinite advice given both in therapeutic articles, and also as directions for a prescription, leaving so much to the reader to decide that the advice given becomes almost negligible. A prescription may be valuable enough to quote and be valuable in its proper use, yet it may become valueless or perhaps harmful by improper use. Therefore, exact directions must be given, or else the prescription should not be quoted.

4. The carbonates of sodium and potassium are distinctly more irritant than the bicarbonates, and good, definite reasons must be shown why a carbonate should be used instead of a bicarbonate. There is no difference in the action between sodium carbonate and bicarbonate, on the one hand, and a potassium carbonate and bicarbonate, on the other, except that the sodium salt is more of an antacid in the stomach. If it is thought that sodium bicarbonate would cause the formation of too much carbon-dioxid gas, certainly it should not be given, and, as suggested at the end of the article on "Prescription Nonsense," a milk of magnesia should be substituted. As a matter of fact, sodium bicarbonate in any ordinary dosage could not cause sufficient gas to produce perforation, unless an undissolved and not yet effervesced Seidlitz powder was administered. Much gastric indigestion will cause more gas formation than any one single ordinary dose of bicarbonate of sodium can.

5. There is no question of the value of sugar in any instance of starvation, and if a patient with gastric ulcer is treated by starvation methods, sugar is one of the necessary nutriments; but it had much better be given per rectum, and glucose by the drop method by watery solution into the colon seems to be the most valuable nutriment during the attempt to heal a gastric ulcer.

In spite of all the references and all the discussion concerning the value of sugar in the stomach, it is valuable simply because sugar is needed as a nutrient and is a most readily absorbed and easily utilized nutriment. It is not necessarily a treatment of gastric ulcer, and sugar will often cause more of the "dangerous gas formation" than could possibly be made by sodium bicarbonate.

6. The Latin in Cohnheim's prescription is absolutely correct. Translated it is: Take 75 grains (accusative) of tincture of belladonna (genitive), 1 fluidram (accusative) of oil of sweet almond (genitive), the yolk (accusative) of one egg, distilled water (accusative) up to 6 ounces and 5 drams. The constructions here criticized were fully explained in The Journal, Nov. 25, 1911, p. 1782. The amounts are copied as they were originally written, and for them we are not responsible. The sign "fl." for fluid should be placed before the ounce of oil and the 6 ounces of water.

THE ISLET THEORY OF DIABETES

To the Editor:—In an editorial entitled "The Islet Theory of Diabetes," in The Journal, Dec. 23, 1911, p. 2086, the statement is made that "lesions of the islands of Langerhans might exist without the presence of glycosuria." Will you kindly give me the authority for this statement, with reference? I have looked in vain for such cases.

N. B. Foster, New York.

Answer.—The number of islands in the pancreas is very great, so that it is quite possible to have many of them showing pathologic changes, yet with a sufficient number remaining to carry on any function that the islands may have. Many pathologists who have made systematic studies of the structure of the pancreas have described lesions in the islands of Langerhans in persons who have shown neither glycosuria or other evidences of diabetes, but on account of the large "factor of safety" provided by the excessive number of islands this fact has no particular significance in relation to the islet theory of diabetes. As for specific references we quote the following: Herxheimer (*Verhandl. deutsch. pathol. Gesellsch.*, 1909, xiii, 279) says: "I have observed in a large series of cases in which there was no question of diabetes, an irregular sclerosis of the connective tissue, affecting also the interacinous connective tissue, in which the islands were especially sclerotic. Some were cases of secondary cancer of the pancreas, some of liver cirrhosis with also connective tissue increase in the pancreas. Although I myself have previously described cases in which typical cirrhosis of the pancreas with cirrhosis of the islands occurred in diabetes, yet there also very frequently occurs sclerosis of the islands without diabetes, as the above-mentioned observations show." In the discussion of this article von Hansemann (*ibid.*, p. 285) says: "There is found fibrous infiltration of the islands without diabetes;" and Herxheimer again says (p. 286): "I have drawn no conclusions either for or against the island theory from the fact that I have found intralobular connective tissue increase with sclerosis of the islands." Saltykow (*Corr. Bl. f. Schweiz. Aerzte*, 1909, xxxix, 625) who supports the islet theory states, however, that in twenty-one pancreases from persons without diabetes he found seven with an interacinar sclerosis, and that "in four cases the islands were slightly (*unbedeutende*) sclerotic." In a man aged 88, with severe arteriosclerosis, he found "a marked hyaline degeneration of some groups of islands." Undoubtedly thorough search of the literature would bring to light many more such reports, but the above will perhaps satisfy our correspondent's query. Of course the occasional finding of diseased islands without diabetes does not signify anything against the islet theory of diabetes, any more than the presence of occasional fibroid glomerules in the kidney without albuminuria would refute the existence of glomerular nephritis.

ATHLETICS IN THE NAVY

To the Editor:—Under the heading "Effect of Strenuous Athletics in the Navy" (Jan. 6, 1912, p. 40), The Journal says: "The physical records of 625 former athletes of the naval academy classes from 1891 to 1911 were examined to determine the bearing of early overtraining on physical efficiency in after life." Out of 625 athletes there were twenty-one fatalities; out of the 601 remaining in the service 198 were partially disabled. Of these 198, numbers and details are given of the ways in which they were affected. You then say: "The figures quoted constitute a severe arraignment of strenuous competitive athletics as carried on in our schools and universities," etc.

For my part I cannot see that they constitute a severe arraignment at all. To do so they would have to be compared to the total number of students that did not take part in "strenuous competitive athletics." I presume that you would find among these some who were not perfect. Who is wise enough to differentiate between the two? We have so many means by which a person's vascular system may be affected; so many factors contributing to Bright's disease, tuberculosis, neurasthenia and appendicitis that it is hard to see how these troubles arising in after life could be traced back to the time of athletic activity with any satisfaction. I take for granted that the joint troubles and the hernias were caused at the time the persons were actively engaged and, of course, these can be easily understood. Taking for granted that the fifty unclassified cases were of too slight a nature to amount to anything, we find that 477 of the 625 are fit for service even after having indulged in "strenuous competitive athletics."

It seems to me only fair that we should go into the matter much more fully before we decide to cut out the games which are the most popular with the "red-blooded" type of manhood.

A. H. Sharp, Germantown, Pa.

Answer.—It seems to us that the point raised by our correspondent is not well taken. This was a study by the Navy Department of a class of men under exact observation for years, with a conclusion that strenuous competitive athletics are highly undesirable. The editorial simply stated the facts as given in this report, according to which the deaths and injuries were the direct result of strenuous athletics. The conclusions given in the editorial rest on the authority of the author of the report cited.

THE PUPIL DURING ANESTHESIA

To the Editor:—In The Journal (Nov. 4, 1911, p. 1539), under the subject of "Anesthesia and Anesthetics," you have the following paragraph under "Ether":

"*Pupillary Changes.*—The pupils are first dilated under etherization and then contracted, and should remain more or less contracted during narcosis. When the eyelid is raised, if they are slightly dilated, they should quickly contract by light. If they do not so contract, the dilatation of paralysis has occurred, which is a danger signal, indicating that, ordinarily, the anesthesia is too profound."

I do not think a beginner would get the proper understanding of the pupillary changes from reading your paragraph. Your statement that the pupils "should remain more or less contracted during narcosis," I think, is wrong; on the contrary, they should remain more or less dilated. The pupils should react to light, but not contract, to the size that is usually considered a contracted pupil.

Lastly, you say, "If they do not so contract the dilatation of paralysis has occurred, which is a danger signal, indicating that, ordinarily, the anesthesia is too profound."

Again I have to take issue with you, for during narcosis or operative anesthesia, unless the patient has had morphin sulphate to affect the pupils, they will be more or less dilated, depending on the amount of ether the patient is receiving; otherwise the patient will not be relaxed and will be apt to move about or cough.

A widely dilated pupil not reacting to light is a danger signal. My statements above refer to the average case.

The following extracts, I think, will sustain my statements. F. C. Hewitt in "Anesthetics and Their Administration," says, under chloroform anesthesia, second degree or stage (p. 333): "The pupils during this part of the administration are, as a general rule, mobile and more or less dilated."

Of the third degree or stage, he says (p. 335): "The pupil during the stage of surgical anesthesia under chloroform has given rise to much comment and is well worthy of careful study. All observers agree that it is usually contracted in deep chloroform anesthesia."

By taking measurements with a pupillometer I find that in most cases the pupil measures from 2 to 3 mm. in diameter, usually being about 2.5 mm. The average chloroform pupil is, therefore, decidedly smaller than the average ether pupil.

Hewitt (p. 288) says of the second degree or stage of ether anesthesia: "The pupils are still mobile and usually more or less dilated."

Of the third degree or stage he says (p. 291): "The pupils of deep etherization deserve special mention, as they differ from the chloroform pupils in some respects. They are usually of moderate size or slightly dilated, from 3.5 to 4.5 mm. and are active to light."

Further, he says (p. 301): "The pupil will be of little service as a guide until after about a quarter of an hour from the beginning of the administration. The anesthetist will usually observe that if he gives less ether the proper pupil of the particular case will get smaller; if he increases the depth of etherization it will grow larger."

C. N. Chipman, Washington, D. C.

Answer.—We are glad to have our correspondent call attention to apparent differences of opinion in relation to the pupil in anesthesia. Examination of the objections raised, however, would show that they consist chiefly in a difference of interpretation. In the paragraph quoted from The Journal, the word "contracted" should not have been employed. The meaning which this rather careless expression was intended to convey was that the pupils, after dilatation, contract slightly. The word "contracted" was not used in the sense of a "contracted pupil." It refers to the reaction to light, which is a contraction. Our correspondent substantially agrees that on raising the lid, if the pupil is dilated, it should quickly contract to light, as he says, "A widely dilated pupil not reacting to light is a danger signal." The statement quoted from Hewitt that if the anesthetist gives less ether the pupil will become smaller and if he increases the depth of etherization it will grow larger, is correct and may be accepted without qualification.

SUPRARENAL SECRETION IN NEPHRITIS

To the Editor:—Please inform me if there has been any experimental work done or literature on the study of nephritis along the theory (a) that secretion from the suprarenal glands controls vascular tone; (b) that the tension is increased with an increase of secretion; (c) that this increased tension causes a disturbance of renal circulation and later renal incompetency; and (d) that a diminution of suprarenal secretion, by removal of all or a part of one suprarenal gland, would remove the surplus stimulus, thereby diminishing the tension and restoring the renal circulation to about normal.

This theory refers only to chronic nephritis, without any antecedent acute nephritis (toxic) and presupposes that increased arterial tension precedes evidence of nephritis.

M. Streen, M.D., Newark, N. J.

Answer.—This view of nephritis has been advocated by H. Vaquez and other French authors. The subject is discussed by R. M. Pearce (*Arch. Int. Med.*, 1908, ii, 77), who inclines to the view that the changes in the adrenals are due to the arteriosclerosis. It is found that these changes are not confined to chronic interstitial nephritis but are found also in other forms of chronic nephritis and indeed in all conditions with advanced arteriosclerosis. The subject is also discussed by J. H. Musser in The Journal, Nov. 27, 1909, p. 1790. So far as we know, no attempt has been made to treat nephritis by the removal of the adrenals. In addition to the articles cited, the following may be referred to:

Vaquez, H.: Des effets mécaniques de l'hypertension sur le système cardio-aortique, *Semaine méd.*, 1905, xxv, No. 19.

Carpenter, G.: Interstitial Nephritis and Cirrhosis of the Suprarenal Capsules in an Infant Five Weeks Old, *Lancet*, London, Nov. 3, 1906.

Beaujard, E.: Lesions in Suprarenals in the Course of Nephritis, *Semaine méd.*, 1907, xxvii, No. 20; abstr. in The Journal, June 22, 1907, p. 2166.

MERCOLIZED WAX

To the Editor:—Will you kindly let me know the formula of "Mercolized Wax," and also of "Dr. May's Epilepticide."

C. L. Patterson, M.D., Dayton, Ohio.

Answer.—1. "Mercolized Wax" belongs to the "prescription fake" type of nostrum. It is advertised "to remove the thin veil of dead cuticle and leave the skin dry, clear and beautiful." It was analyzed recently by the chemists of the Kansas State Board of Health who reported that it contained about 10 per cent. of zinc oxid and 10 per cent. ammoniated mercury mixed with an ointment base which had a consistency midway between petrolatum and paraffin.

2. We do not know the composition of the epilepsy "cure" put out by W. H. May, New York City. Most nostrums of this type consist of bromids prescribed in dangerously large doses.

The Public Service

Medical Department, U. S. Army

Changes for the week ended Jan. 13, 1912.

Bernheim, J. R., dental surgeon, left from temporary duty at Fort Benjamin Harrison, Ind., en route to station, Fort Sheridan, Ill.

Wing, Franklin F., dental surgeon, returned to temporary duty at Fort Robinson, Neb., from leave of absence.

McIntyre, Henry B., captain, resignation accepted by the President.

Huber, Edward G., captain, ordered to the army and navy general hospital, Hot Springs, Ark., for duty

Wells, Francis M., M.R.C., leave of absence extended one month and eight days. First Lieutenant Wells is relieved from active duty in the Medical Reserve Corps, to take effect on expiration of leave of absence.

Parce, Alexander D., lieut., ordered to the Letterman General Hospital, San Francisco, for duty.

Humphreys, H. G., captain, ordered to the army and navy general hospital, Hot Springs, Ark., for observation and treatment.

Ford, Clyde S., major, on expiration of present sick leave of absence will proceed to army and navy general hospital, Hot Springs, Ark., for observation and treatment.

Mason, George L., dental surgeon, left from temporary duty at Fort Crook, Neb., en route to Fort Des Moines, Iowa, for temporary duty.

Stallings, George E., dental surgeon, left from duty at Camp Fort Bliss en route to Fort Clark, Tex., for temporary duty.

Medical Corps, U. S. Navy

Changes during the week ended Jan. 13, 1912.

Evans, S. G., surgeon, detached from the naval academy, Annapolis, Md., and will await orders.

Johnson, M. K., surgeon, ordered to the naval academy, Annapolis, Md.

Sinclair, J. A. B., asst. surgeon, detached from duty in command of the naval hospital, Sitka, Alaska, and ordered home to await orders.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended Jan. 10, 1912.

Cobb, J. O., surgeon, detailed to represent the service at the meeting of the Association of American Medical Colleges to be held at Chicago, Feb. 28, 1912.

King, W. W., P. A. surgeon, granted one month's leave of absence from Jan. 22, 1912.

McCoy, G. W., P. A. surgeon, detailed to attend the Pan-Pacific Congress to be held at Honolulu, Hawaii, Feb. 19-24, 1912.

McKeon, F. H., P. A. surgeon, relieved from duty in the examination of arriving aliens and directed to report to the medical officer in command, U. S. Marine Hospital, San Francisco, for duty and assignment to quarters.

Ashford, F. A., P. A. surgeon, granted one month's leave of absence from Dec. 27, 1912.

Schwartz, Louis, asst. surgeon, relieved from duty at the U. S. Marine Hospital, San Francisco, and directed to proceed to Manila, P. I., and report to the chief quarantine for duty.

Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

GOVERNOR McCREARY ON STATE HEALTH WORK

In the message of Governor James B. McCreary to the Kentucky General Assembly a section of the report was devoted to the work of the state board of health. The amount of space devoted to this discussion of public health matters was much greater than is usually given to health subjects in state papers. Governor McCreary's appreciation of the work done in his state by physicians is in marked contrast to the indifference with which such subjects are treated in many states. The governor's remarks follow:

"The State Board of Health of Kentucky was created by the general assembly in 1878, during an epidemic of yellow fever then devastating the whole South, which invaded Kentucky before the defences against it could be organized. It was wisely endowed with ample powers to combat pestilence without, and to study the still more important domestic and ever present endemic diseases which are constant menaces to the lives, health and happiness of our people, as well as the most wasteful expense of our time in dollars and cents. Five epidemics of yellow fever have devastated the South since the creation of the board, but the disease has not only not obtained a foothold in our commonwealth, but under wise precautions we have been able to open our doors with characteristic hospitality to thousands of refugees from our afflicted sister states of the South.

"For the first twenty-two years the total annual appropriation for the whole work of the board was only $2,500, and for the last decade has only been $5,000 annually. During this thirty years wonderful progress in the study and prevention of such diseases as tuberculosis, typhoid fever and the diseases of childhood has only been possible because of the devotion and work of the 3,600 practicing physicians who have performed their function as guardians of the public health, furnishing offices and equipment for life-saving work, with but small compensation.

"The educational work and splendid health organization built up through the various years were given a new impetus by the last general assembly, which created a new department of vital statistics, sanitary engineering and bacteriology, with ample appropriations for inaugurating these activities. These appropriations did not become available until Jan. 1, 1911, but the public and professional sentiment were so ripe for the work, that, at the end of the first eleven months, and for the first time in the history of Kentucky, the board was able to make a full, official record of 55,307 births, and 27,956 deaths, and what caused each of the latter, and to be able to state definitely that with the practice by the people of methods now well known to sanitarians, almost 40 per cent. of these deaths were preventable; to begin to map the water-supply of the entire state and to plot the sources of pollution of streams with the view to wise, far-reaching plans looking to the protection of this vital interest; and to take up in the laboratory the examination of sputum, blood and all such similar matters for physicians and citizens in such a way as to bring the benefactions of modern scientific methods for the prevention of sickness within reach of every hearthstone in Kentucky, free of cost.

"The press, teachers, physicians, women's clubs and other leaders of the public opinion are encouraging and cooperating with the board of health to an extent which promises to mark this as an era, not only in life-saving work, but in the economic history of the state.

"I believe the members of the State Board of Health merit commendation for services now being performed, and for services rendered during a third of a century with ability, energy and efficiency."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Fifth Month—Fourth Weekly Meeting

INJURIES ABOUT THE ELBOW-JOINT

Discuss diagnosis and treatment of each injury.

I. Fractures of lower end of humerus.
  a. Supracondyloid fractures.
  b. T- or Y-shaped fractures.
  c. Epiphyseal separation.
  d. Fractures of condyles and epicondyles.
II. Lesions of radius and ulna.
  a. Backward dislocation of radius and ulna.
  b. Fracture of upper third of ulna, with or without forward dislocation of radius.
  c. Forward dislocation of upper end of radius.
  d. Fracture of olecranon process of ulna.
  e. Fracture of head or neck of radius.
  f. Subluxation of head of radius.

Monthly Meeting

Indications for Operative Treatment of Fractures.[1]
Treatment of Compound Fractures.[2]
Treatment of Fracture-Dislocation of the Knee-Joint.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

IOWA: Capitol Bldg., Des Moines, February 6-8. Sec., Dr. Guilford H. Sumner, State House.

KANSAS: National Hotel, Topeka, February 13. Sec., Dr. H. A. Dykes, Lebanon.

NEBRASKA: State House, Lincoln, February 14-15. Sec., Dr. E. Arthur Carr, 141 S. 12th Street.

NEW YORK: January 30-February 2. Chief of Examinations Division, Mr. Harlan H. Horner, Albany.

Arkansas Homeopathic and Eclectic November Reports

Dr. P. C. Williams, secretary of the Arkansas Homeopathic Medical Board, reports the written examination held at Little Rock, November 14-15, 1911. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. Two candidates were examined, both of whom passed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Hahnemann Medical College of Kansas City Univ.	(1902)	82
"Clifton, England"*	(1861)	75

Dr. C. E. Laws, secretary of the Arkansas Eclectic Medical Board, reports the written examination held at Little Rock, November 14-15, 1911. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 3, all of whom passed. Two candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Chicago College of Medicine and Surgery	(1903)	82
American Medical College, St. Louis	(1910)	85
Eclectic Medical Institute, Cincinnati	(1879)	89.9

LICENSED THROUGH RECIPROCITY

College	Year Grad.		Reciprocity with
Bennett Medical College, Chicago	(1906)	(1910)	Penna.

* Name of college not given.

West Virginia Applicants Must Have Better Preliminary Education

The State Board of Health of West Virginia passed the following resolution at its meeting in November, 1911:

> WHEREAS, Many of the papers of applicants for license to practice medicine in the State of West Virginia show a lamentable ignorance of even the rudiments of elementary education, and
>
> WHEREAS, Many such applicants are from schools which, in their advertising literature, profess to require a fair preliminary education, some of them being members in good standing of the Association of American Medical Colleges, and consequently pledged to a minimum requirement of a high school certificate; therefore, be it
>
> *Resolved*, That the attention of all medical colleges considered as now acceptable by this board be called to these facts, to the end that they may enforce strictly their professed requirements, thus keeping faith with the public and with the profession; and further
>
> *Resolved*, That it is the sense of this board that after Jan. 1, 1912, the board would be justified in striking from the lists of colleges now acceptable to it all those institutions whose graduates in their examination papers evince imperfect preliminary education; and further
>
> *Resolved*, That these preambles and resolutions be published in the *West Virginia State Medical Journal* and in THE JOURNAL of the American Medical Association and that a copy of them be sent to the various colleges interested.

Foreign Physicians in Peru

A report from Consul General W. Henry Robertson of Callao, Peru, published in the *Daily Consular and Trade Reports*, Dec. 27, 1911, is as follows:

> The Peruvian regulations require that physicians who are graduates of foreign universities, and who desire to practice their profession in Peru, shall present themselves before the Faculty of Medicine of the University of Lima, bringing with them the diploma of the university from which they have graduated, with the signatures properly legalized by the Peruvian ministry of foreign affairs, and a certificate of personal identity issued by the minister or consul of the nation of the applicant resident in Lima. In the absence of these officially there must be produced a legal identification by witnesses.
>
> The fees, which are to be paid before taking the examinations, amount to $493 American currency, which is the equivalent of the dues incurred by an alumnus receiving his medical instruction in the University of Lima. The examinations are five in number, and are taken in the following order:
>
> 1. Theoretical-practical. The theoretical comprises descriptive, general, normal and pathologic anatomy, and general and human physiology. The practical consists in actual dissection of the cadaver, together with a proper description of such dissection.
> 2. Theoretical-practical: The theoretical comprises general pathology and internal and external nosography, while the practical consists in the performance of one or two surgical operations on the cadaver.
> 3. Theoretical, which comprises medical natural history, medical chemistry and medical physics.
> 4. Theoretical, which embraces therapeutics and materia medica, medical jurisprudence and toxicology and hygiene.
> 5. Practical, which comprises the clinical examination of a patient, another of surgery and another of obstetrics; also, diagnosis, treatment and clinical histories.

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[1] Lane: Brit. Med. Jour., Nov. 18, 1905. Kelley: THE JOURNAL A. M. A., xlvi, pp. 103 and 178. Martin: Surg., Gynec. and Obst., August, 1906. Lane: Surg., Gynec. and Obst., April, 1909. Stimson: THE JOURNAL A. M. A., Feb. 20, 1909.

[2] Progressive Med., December, 1905 and 1907.

Book Notices

ELEMENTS OF PHYSIOLOGICAL PSYCHOLOGY. A Treatise of the Activities and Nature of the Mind from the Physical and Experimental Points of View. By George Trumbull Ladd, LL.D., Emeritus Professor of Moral Philosophy and Metaphysics in Yale University, and Robert Sessions Woodworth, Ph.D., Professor of Psychology in Columbia University. Cloth. Price, $4 net. Pp. 704, with 153 illustrations. New York: Charles Scribner's Sons, 1911.

The second edition of this well-known text-book appears nearly a quarter of a century after the publication of the first, which edition was the first book in English and one of the first in any language treating of the relations of the brain and nervous system to the action of the mind. During the interval physiologic research and psychologic observation have been active so that a large body of new facts has been added as the basis of what was, at the time of publication of the first edition, practically a new branch of science. A considerable enlargement of the physiologic part of the work has, therefore, been necessary. Especially the investigations regarding cerebral localization and the comparative physiology of the brain have made great advances. As a result of these advances in knowledge and the more strict classification of the new science, the new edition confines itself more strictly to physiologic facts and methods, leaving analogous facts of experimental psychology to be treated in special works. Experimental psychology, however, receives due attention as far as it throws light on the operation of the nervous system.

The book is divided into three parts. Part 1 treats of the nervous mechanism, especially that involved in the operation of the special senses and in the originating of motor impulses. This part is essentially a detailed treatise on the anatomic relations of the nervous system in the animal kingdom, its development in the individual, and its structure and functions in the adult. The medical reader will find here little that is new to him, but the description is admirable. The chemical changes occurring during the action of the brain, especially in mental action, are described. The mechanism of the special senses, particularly those of sight and hearing, receive exhaustive treatment.

Part 2 treats of the correlations of nervous and mental phenomena. The methods of ordinary psychology and the results of experimental work are largely brought to bear in presenting these correlations. Part 3, comprising two chapters, discusses the nature of the mind and reaches the conclusion that the physiologic facts have really thrown little light on this question. The authors conclude that the mind is a real and unique existence with a non-material character. The authors say, "Finally, then, the assumption that the mind is a real being, which can be acted upon by the brain, and which can act on the body through the brain, is the only one compatible with all the facts of experience."

The work thoroughly covers the field which it has made so peculiarly its own. In consideration of the importance which psychotherapy has assumed in medical thought, such a work as this must appeal to medical men as well worthy of their perusal.

DENTAL DISEASE IN ITS RELATION TO GENERAL MEDICINE. By J. F. Colyer, L.R.C.P., M.R.C.S., L.D.S., Dental Surgeon to Charing Cross Hospital and the Royal Dental Hospital, England. With the Assistance of Stanley Colyer, M.D. (Lond.) M.R.C.P., D.P.H. Cloth. Price, $1.60 net. Pp. 189, with 62 illustrations. New York: Longmans, Green & Co., 1911.

This book meets a decided need in medicine at the present time. Many of the theories to which the author adheres, however, have been superseded in America by newer ones which have been proved correct. Researches along this line are still in their infancy, but it seems that a work intended to occupy this particular field should contain the latest and best-established thought. For instance, the author seems to retain the old theories of thumb and finger-sucking as a cause of deformed arches. This theory became obsolete in America years ago. Colyer also regards adenoids as a factor in the growth of the jaws, but he does not take into consideration the many malformations of the face, jaws and teeth, which are always associated with adenoids and which could in no way be caused by them. He mentions syphilis as one of the causes of defective formation of the teeth, but loses sight of the fact that any constitutional disease in which nutrition is retarded at the first period of stress will produce the same results. The chapters on "Diseases of the Gums and Adjacent Mucous Membrane," "Oral Sepsis and Its Influence on the Body," and "Diseases Arising from Reflex Irritation from the Teeth," subjects on which every physician is anxious for enlightenment, are only a compilation of a series of reports from different men in England and Europe, describing experiences coming under their observation. What is needed is research to demonstrate the relation between cause and effect.

The author advocates the extraction of decayed deciduous teeth and carious first permanent molars with exposed pulps or septic pulps. Such methods of procedure in America would be considered malpractice. In this country, it is known that the extraction of the decidous teeth and the first permanent molar, generation after generation, as performed in England, will eventually produce small jaws resulting in irregular dental arches.

The book, no doubt, will lead to further study and research.

DISEASES OF THE EAR, NOSE AND THROAT, MEDICAL AND SURGICAL. By Wendell Christopher Phillips, M.D., Professor of Otology, New York Post-Graduate Medical School and Hospital. Cloth. Price, $6 net. Pp. 847, with 545 illustrations. Philadelphia: F. A. Davis Co., 1911.

This is a further addition to the books on the ear, etc., that have appeared during the past one or two years. By this time the field for books on this subject would seem to be quite well supplied, and further additions might appear unnecessary, for a time, at least. Dr. Phillips' book, however, is a good one, and he presents the subjects in a clear and comprehensive manner. It is exceptionally well illustrated, a feature which has become indispensable for the present-day reader. There are few pictures that have appeared in other books, for which the author should be commended. The pictures on pages 72 and 73, indicating the method of performing a lumbar puncture, are exceedingly useful, and such pictures as those on pages 600, 601 and 602 describing Killian's frontal sinus operation are very illuminating. The skiagraphs, and transillumination pictures are unusually good.

A great deal of space has been devoted to the relationship existing between general diseases and those of the ear, nose and throat, and this space has not been wasted. The author has taken pains to clarify the subject of labyrinthine tests, diseases and surgery, and has performed his work well, although the necessity for reproducing the old and thoroughly puzzling pictures of Dr. Richards is not apparent. The chapters on mastoid surgery are clear and useful; nevertheless we fail to understand the apparent prejudice which has induced the author to write on this subject without making any reference to the use of the electric burr, which so many surgeons regard as indispensable to the best work. In sharp contrast to this, we note the abundant space given to the operation of ossiculectomy, which has become almost obsolete. In glancing over the chapter on furuncles of the meatus, we find no reference to the hypodermic injection of staphylococcus, which is certainly the most satisfactory method of cutting short course of this disease. The chapter on the various diagnostic tests is one of the best in the book.

HANDBUCH DER INNEREN MEDIZIN. Herausgegeben von Dr. L. Mohr, Direktor der Medizin. Poliklinik zu Halle (Saale) und Dr. R. Staehelin, Direktor der Medizin. Klinik zu Basel. Erster Band. Infektionskrankheiten. Paper. Price, 26 marks. Pp. 1077, with 288 illustrations. Berlin: Julius Springer, 1911.

Of this work, which is to appear in six volumes, the first volume is now before us. The fundamental principle on which the work is based is the reference of symptomatology, diagnosis and treatment to the principles of pathologic physiology. This volume treats of infectious diseases, and after a statement of the general facts regarding infection and immunity, the special diseases are taken up in detail. Much of this detail is made possible by the introduction of material in smaller type. The book is fully illustrated and contains somewhat extensive bibliographies for most of the articles. The present volume indicates that the work will be a useful addition to the numerous systems of medicine now before the profession.

Medicolegal

Liability for Damages for Wrongful Prevention from Getting Needed Medical Attendance—Determining Probable Effect of Treatment of Different Diseases—Cause of Death

(Glawson vs. Southern Bell Telephone and Telegraph Co. (Ga.), 71 S. E. R. 747)

The Court of Appeals of Georgia holds that damages for the death of a woman caused by the negligence of a telephone company making it impossible to secure the timely attendance of a physician are not too remote and speculative in their nature to be legally attributable to the wrong charged and to be recovered.

The court says that it is aware of the fact that courts are in wide disagreement as to whether damages which result through the failure to get a physician, so that the progress of a malady can be checked or the effects of a wound can be allayed, and injurious results prevented, are speculative and remote within the meaning of the rules with reference to the allowance of damages.

Some courts go almost to the extent of holding that it is impossible from a human standpoint to say what would be the result of a physician's services in checking almost any known disease or of relieving almost any imaginable physical hurt or injury. But to this court it seems that the difficulty which many courts assume to exist as to this question is largely factitious. To attempt to anticipate the result of almost any human act is always more or less problematical, but the fact that a thing may be problematical does not always prevent its being capable of reasonably accurate solution through the ordinary functions of the human intellect.

There are some diseases and human ills which so readily respond to the treatment of a physician, according to the general experience of mankind, as to make it merely an ordinary inference, such as we are daily accustomed to indulge and to act on, to say that if the treatment were applied the malady would be relieved. On the other hand, there are many diseases the results of which are so uncertain, even when the best treatment is had, as to make the chances of recovery always a matter of doubt. Whether any particular disease or any particular ill stands within the category of the reasonably certain or of the doubtful is a question that must be determined as the individual cases are presented.

So there are some diseases, such as cancer, tuberculosis, typhoid fever, meningitis, etc., as to which the court might say, as a matter of law (basing its conclusion on the state of common knowledge), that the chances of recovery were always speculative and doubtful. There are other diseases as to which, perhaps, the court might say, as a matter of law, that they would yield to proper treatment, basing this conclusion on the common knowledge of mankind. Between these two classes exists a wide class as to which common knowledge is not so well established; and in these cases the question as to whether the results of a physician's or a surgeon's services would or would not be doubtful or uncertain is a question of fact, and, being a question of fact, is a question for the jury. Juries are frequently called on to settle the probability of things, and to determine according to human experience whether this result or that result likely did ensue or will ensue from this or that somewhat problematic cause.

For instance, it is a common thing for a court to submit to a jury the question as to whether an injury will prove permanent, and to allow them to assess the damages with reference to their finding as to this question—a question often problematical to a high degree.

Now, if it is practically certain that a physician, by the application of known and available remedies, can stop a post-partum hemorrhage, such as the one which the decedent in this case suffered, and likewise practically certain that if the hemorrhage is not stopped the woman will die, and that if the hemorrhage is stopped she will recover; and if the decedent in the present case was suffering from a post-partum hemorrhage, and from nothing else that would likely have produced her death, and she did die, it seems perfectly plain to the court that it is merely to indulge a natural and ordinary inference to say that the failure to get the physician, so that the remedies could be applied, was the direct and natural cause of her death.

Those who hold that cases such as this are too problematic and speculative for solution by the jury seem to this court to make an unwarranted distinction between causal acts of omission and causal acts of commission. For example, suppose that a woman had been recently delivered of a child, and that the physician or midwife had applied packing or some other appliance to her organs with a view of preventing a hemorrhage, and by some wrongful act of commission these appliances were removed and the hemorrhage ensued, but few courts, if any, would hesitate to hold that it was for the jury to say whether the removal of the appliances was or was not the proximate cause of the ensuing hemorrhage, and, if death should ensue, of the homicide. Still many of these same courts would refuse to let the jury pass on the question: as to whether a negligent act which prevented this same woman from procuring the benefits of these same medical or surgical appliances was the proximate cause of her death, resulting from hemorrhages started on account of the lack of them. This court does not see the difference. In the range of criminal law we find the courts holding that parents can be convicted of murder or of manslaughter for allowing a child to die through neglecting to supply the child with food, with clothing or with medical attention.

In this case before it would be proper to award the plaintiff any damages, the jury should be able not only to trace a connection between a negligent failure of the telephone company to give the plaintiff communication with the physician and the death of his wife, but they also should be able to say with practical certainty that her death was the natural consequence of the defendant's neglect. They must be able to go further and say that the death was not merely the imaginary or possible result of the wrongful act, but that according to the course of human experience it was the direct result—that in all human probability this result would not have happened if the defendant's neglect had not happened, and that the consequence of the neglect itself, and not something else, preponderated most largely in causing her death. It was reversible error to dismiss the plaintiff's petition on the grounds that it did not appear that his wife's death was the legal and natural result of the defendant's negligence and the damages were too remote and speculative.

Law Requiring Physicians to Report too Much Without Compensation

(State vs. Boone (Ohio), 95 N. E. R. 924)

The Supreme Court of Ohio holds that Sections 14, 17 and 21 of "An act to establish a bureau of vital statistics and to provide for the prompt and permanent registration of all births and deaths occurring within the state of Ohio," so far as they relate to a physician or midwife, in attendance on a case of confinement, are unconstitutional and void, because they were enacted by an unnecessary, unreasonable and arbitrary exercise of the police power. The court says that it need not inquire whether the state may not require a physician or midwife to report to the proper authority, for registration, the fact of a birth which has come under his or her observation, first, because it was conceded that it may do so, and second, because it obviously has some relation to the public welfare, and it cannot be very burdensome to comply with such regulation. But this statute went much further.

This statute imposed on the physician or midwife the duty of investigating and certifying as to certain facts which would not necessarily or naturally come within the knowledge of the attending physician or midwife, namely, whether the birth was legitimate, and, except in case of illegitimacy, the full name, residence, color or race, birthplace, age and occupation of the father; also the maiden name in full, residence, color or race, birthplace, age and occupation of the mother; likewise the number of this child of the mother, and the number of living children of the mother. It was further provided that no certificate should be held to be complete and correct which did not supply all of the items of information called for therein, or satisfactorily account for their omission; and that the physician or midwife who should neglect or refuse to file a proper certificate of birth with the local registrar, within the time required by the act, should be deemed guilty of a misdemeanor, and, on conviction thereof, should be fined, etc. In short, a professional attendant at a birth was required to enter on an inquiry as to non-professional questions, to supply information to, it might be, a non-professional official, "clothed with a little brief authority," in relation to matters which perhaps are interesting as vital statistics, but as to which it requires more than appeared in this statute, or in the arguments in this case, to show that they are necessary or even related to the public safety, the public morals or the public welfare; and inquiry, too, which could be just as well and more appropriately conducted, reported on and certified to, by the local registrar, or a township assessor or a census taker.

The court is not prepared to yield unqualified assent to the proposition, as broadly stated in the contention made on the part of the state that statutes which impose the duty of making such reports or certificates are not unconstitutional because they do not provide for compensation to physicians; but it does not regard that point as decisive of this case. The court believes that the Great Charter of the Northwest Territory is still under, and above, and before, all laws or constitutions which have been made in the states which are parts of that territory; and that under its guaranties the state has not the right to draft a citizen into particular service without substantial compensation. At least, it is clear to the court that the provisions of this statute, which require a professional man to search out non-professional information and certify it to state authorities, are unnecessary, unreasonable and arbitrary, and are not, therefore, a valid exercise of police power.

Annatto in Milk

(City of St. Louis vs. Jud (Mo.), 139 S. W. R. 441)

The Supreme Court of Missouri in this case, one of a number of milk cases decided on the same day, affirms a conviction of violating a city ordinance by the possession, with intent to sell, of skim milk adulterated by being colored with annatto, a coloring matter declared to be used to make milk appear richer in fat than it really is. The chemist who analyzed the milk said, on cross-examination, that annatto is not harmful, and is used in coloring butter (by not being harmful he meant when prepared in a pure condition). He then described how it is made, and from what, testifying that stale urine is frequently used in its manufacture to give it stability and to keep it moist.

In 1905, this court decided, in St. Louis vs. Polinsky, 190 Mo. 516, a prosecution for carrying and exposing for sale cream adulterated by annatto, contrary to an ordinance, that adding annatto, whether harmful or not, in order to give milk the rich and golden color of milk from cows fed on green food, was a deception and a fraud on milk users, and on honest competition, and that an ordinance prohibiting it was a reasonable and valid police regulation. That pronouncement was made on a review of many authorities on full consideration, and has never since been shaken or exploded.

"Adulterate" means to corrupt, debase or make impure by an admixture of a foreign or baser substance. Adulteration is a "treatment to simulate a better article;" an "artificial concealment of defects." When the statute denounces adulterated milk without defining adulteration, the word may be allowed the meaning given it by lexicographers and understood by people using the English language accurately.

The housekeeper who buys milk for her table or children should be protected from adroit tricks, cheating her judgment by deceiving her eyes. Peradventure, golden-hued milk speaks of cows browsing in dewy meadow grasses. It harks back to bluegrass and clover, with a sprinkle of buttercups and daisies, not to annatto or any other dye. If such good woman wants annatto in her milk, the policy of the state is to let her put it in herself. Fireside lore and philosophy connect rich, yellow milk with the food of the cow, not with an artificial dye like annatto.

The court concludes that annatto in milk is not only against the policy of the state, and in contravention of a valid ordinance of St. Louis, but it is a species of petty treason to domestic philosophy and the simple verities of Nature itself. Counsel for the city said, in a flourish of rather startling rhetoric, that the city child now starts on its journey in life flanked by annatto on one side and by formaldehyd on the other. The court will not pass on the issue thus raised in the hot foot of argumentation, but content itself with affirming the judgment on the cold record.

Presumption of Continuance of Insanity

(In re Murphy's Estate (Mont.), 116 Pac. R. 1004)

The Supreme Court of Montana says that lunacy, or insanity, if of a general, habitual or permanent nature, once shown to exist, is presumed to continue until the presumption is overturned by countervailing evidence. This rule is recognized by the courts generally. Where the existence of such insanity is made to appear, the presumption referred to attaches; for we know from experience that the condition usually continues. But to cases of intermittent or occasional insanity it can have no application, because in the very nature of things the idea of continuity is excluded. So that, when this is the condition, proof of its existence at one time raises no presumption that it existed either at an antecedent or subsequent time. And where, for instance, a person was of sound mind when he executed a will his precedent and subsequent condition is immaterial.

Society Proceedings

COLLEGE OF PHYSICIANS OF PHILADELPHIA

Meeting held Jan. 3, 1912

The President, Dr. George E. de Schweinitz, in the Chair

The Anatomic Explanation of the Relatively High Pitched and Less Resonant Percussion Note Normally Found at the Right Pulmonary Apex

Dr. George W. Norris and Dr. George Fetterolf: None of the explanations hitherto offered, regarding the difference in the percussion resonance normally elicited when the apices of the lungs are percussed, is believed to be satisfactory; we therefore studied a number of frozen sections of the thorax with the lungs hardened *in situ*. We found that the varying thickness of the pectoral muscle on which much stress is laid in many text-books, plays a very unimportant rôle, and this only when very light percussion is employed. For this purpose we studied the percussion resonance in thirty-two left-handed individuals.

The percussion differences are due to a number of causes: (1) The right apex is distinctly smaller than the left and more conical, the left being dome-like. The conical shape of the right apex is due to encroachment of the right innominate vein. (2) The subclavian artery as well as the innominate vessels lie more anterior to the right apex, more mesial to the left. (3) The right apex lies in direct contact with the trachea; the left is separated by the interposition of the aorta, subclavian artery, common carotid, esophagus and areolar tissue. (4) The thickness of the pectoral muscle may in some instances play a rôle if every superficial percussion is employed.

DISCUSSION

Dr. James Tyson: Dr. Norris and Dr. Fetterolf have reached an explanation of the difference in the physical signs at the right and left apices which is up to the present time the most satisfactory yet offered. The explanation which ascribes the impaired resonance at the right apex to the pec toral cannot hold. The seat of this higher pitched and diminished resonance is above the spread of this muscle. The nearer you come to the clavicle the more striking these differences are. It would seem evident to any one giving the matter a little thought that there must be some substance interposed in that situation which raises the pitch to percussion and prolongs the expiration by facilitating conduction.

DR. HOBART A. HARE: My recollection of the research work carried on by Dr. Charles Cary of Buffalo is that his conclusions proved that the commonly accepted idea concerning the bifurcation of the right bronchus was not an adequate explanation.

DR. JAMES M. ANDERS: Judging from the pictures shown the difference in the size of the two apices is so slight that it probably has very little to do with the difference in their percussion notes. While the discovery made by Dr. Norris and Dr. Fetterolf with reference to the anatomic arrangement, especially of the blood-vessels on the right side compared with those on the left is probably the true explanation, or the major factor, still, it seems to me that we should not lose sight of the facts that the right main bronchus is the larger, that it is more superficial and somewhat higher up in the chest than the left, and gives off numerous branches all of which air-containing tubes occupy space on the right hand side which on the left is occupied by air cells.

DR. ROBERT N. WILLSON: Although I hesitate to offer still another explanation of this change of note, there is one which I think should be suggested as at least actively contributing to the condition under discussion, and it has undoubtedly occurred to many. Any one who tries to inflate his own chest will find, I think, that he inflates his left chest much more fully, easily and completely than his right. It is a well known fact that the upper part of the right lung is, as a rule, less fully inflated than that of the left lung. It is much more often involved in diseased processes for the reason that much more often there is stagnant and easily infected and infectious air present. It is also well recognized that very frequently the extreme right apex is involved with old scar tissue. The necropsy shows in a great many fairly healthy lungs old healed or latent tuberculous foci. Both these conditions must of necessity contribute toward the difference in resonance and pitch of the note on the right side, especially of that portion above the third rib. It would appear that the only difference in the percussion note that can be laid to the anatomic explanation offered by the authors would be one based on the position of the large vein placed over the anterior surface of the pulmonary apex on the right side. That this cannot and does not constitute the only causal influence in the light of clinical and post-mortem study seems a matter for almost certain common agreement.

DR. GEO. W. NORRIS: When I spoke of the right and the left apex, I did not refer only to that portion above the clavicles, but also to that portion of the lung which extends down as far as the upper border of the third rib. This statement alone will, if considered, tend to modify certain criticisms regarding our statements as to the relative size of the two apices. We have failed to find, utterly and entirely, the difference in the anatomic distribution of the bronchi to which Dr. Anders has referred and to which allusion is made in many of the text-books.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

California State Journal of Medicine, San Francisco

December, IX, No. 12, pp. 489-524

1 Significance of Pelvic Pain. R. L. Wilbur, San Francisco.
2 The "Split Proteid" Method of Artificial Feeding. W. D. Boggs, Pasadena.
3 Prostate in Chronic Gonorrhea. W. P. Willard, San Francisco.
4 Differential Diagnosis of Labyrinthine Affections. G. P. Wintermute, Oakland.
5 Eye in Its Semeiologic Aspect. W. F. Blake, San Francisco
6 Minority Report on Contract Practice. D. A. Hodghead, San Francisco.
7 Tentative Classification of Exceptional Children. M. P. E. Groszmann, Plainfield, N. J.

January, X, No. 1, pp. 1-46

8 Eye in Its Semeiologic Aspect. W. F. Blake, San Francisco.
9 Plea for Earlier Radical Surgical Treatment of Gastric Ulcer. H. B. A. Kugeler, San Francisco.
10 Case of Polycythemia. W. C. Voorsanger, San Francisco.
11 *Extraordinary Temperatures. M. B. Lennon, San Francisco.
12 Case of Malignant Edema. J. Eaves, San Francisco.
13 Multiple Papillomata of Larynx in Children. E. C. Sewall, San Francisco.
14 Speech Disturbances. H. Horn, San Francisco.
15 Mechanical Efficiency. J. T. Watkins, San Francisco.
16 Case of Brown-Séquard's Paralysis Following Stab Wound of Back. W. W. Richardson, Los Angeles.
17 Misinterpretations in Teaching of Gross Anatomy. H. O. White, Los Angeles.
18 Transfusion in Typhoid. R. Bine, San Francisco.
19 Permanent Suprapubic Drainage of Bladder Without Leakage; Report of Case. H. Meyer, San Francisco.
20 Analysis of Treatment of Sixty-Two Cases of Syphilis with Salvarsan. L. Gross and W. S. Johnson, San Francisco.

11. **Extraordinary Temperatures.**—Except for a slight systolic murmur at the base of heart no pathology was discoverable in this case. The patient had been curetted about three weeks previously because of bleeding following a miscarriage. The abortive outcome of her pregnancy was a source of chagrin and disappointment to the patient and she took it deeply to heart. Noticing a slight tinge of blood on the bed sheets, she became greatly agitated, restless and sleepless, and from that time until the end of the week refused all food save asparagus tips, for which she evinced a marked predilection. That the patient was hysterical was plain to Lennon. Her skin was cool; her pulse was but 80; the rectal temperature was 105 F. Steadily rising, the temperature reached 107 F. by 8 o'clock in the evening and at midnight 109 F. An electric pad was put on the abdomen and ice irrigations given. The temperature advanced to 111 F. An ice bath given in the afternoon was followed by a drop of 2 degrees. In the evening a sedative and a second ice bath were given and in the course of fifty minutes there was a drop of 13 degrees without the least sign of shock. During the night the patient rested well, but at 6 a. m. the following morning 110 F. was recorded and by 9 o'clock another degree had been added. A second sedative and bath were given; twenty minutes later 114 F. was recorded. During the greater part of the day the temperature was about 112 F.; during the night it dropped a little, but the next day it was again at 112 F. The patient was moved to another room, one cooler, quieter and more commodious than the one she had been in. She thought she had been brought from the operating room where the curettment had been done three weeks before and had lost all memory of the intervening time. At noon she talked clearly, was hungry, but still registered 107 F. By 5 o'clock her temperature was normal. Except at the time of the warm bath her pulse never advanced above 90 beats per minute. The patient is now well.

Bulletin of American Academy of Medicine, Easton, Pa.

December, XII, No. 6, pp. 343-400

21 Should There Be Two Degrees in Medicine? B. Reed, Los Angeles.
22 Id. R. L. Wilbur, San Francisco.
23 Postgraduate Degrees in Medicine. A. S. Lobingier, Los Angeles.
24 Two Degrees in Medicine. G. Blumer, A. J. Smith, V. C. Vaughan, C. L. Dana and S. W. Lambert.

Military Surgeon, Washington, D. C.

January, XXX, No. 1, pp. 1-124

25 Conduction of Field Maneuvers of Militia Sanitary Troops. E. L. Munson.
26 Efforts of Ohio During Past Year. J. A. Hall.
27 Adaptation of Medical Service of National Guard to that of Army. J. F. Edwards.
28 *Typhoid in Philippines. W. P. Chamberlain.

28. **Typhoid in Philippines.**—Chamberlain summarizes his exhaustive study of this subject as follows: (1) Typhoid is a widely scattered and common disease in the Philippines: its incidence in Manila is above the average rate for the United States and is exceeded by only a few of the worst American cities; the average admission rate among American soldiers in the Philippines exceeds that for the troops serving in the United States; medical officers from many regions report its frequent occurrence among the Filipinos. (2) The statistics from the Filipino (native) Scouts show a much lower typhoid rate than for white troops, possibly due to failure to diagnose the atypical cases. (3) Widal reactions performed on

the blood of 591 healthy Filipinos suggest a comparatively recent attack of typhoid in about 6 per cent. of adults, but do not indicate that the disease is prevalent in childhood. (4) Many epidemics have occurred among soldiers in the Philippines and three outbreaks among natives have been studied. Epidemics of great severity among the Filipinos are either rare or unnoticed. (5) The occurrence of the disease in the Philippines is quite evenly distributed throughout the year. The incidence is least in the second quarter. (6) The appearance of the Widal reaction in typhoid in the Philippines is not as a rule delayed. (7) Paratyphoid organisms are occasionally isolated in the Philippines. (8) The leukocyte count in typhoid remains normal for whites and is slightly increased for natives. The differential count is normal for both races. (9) The mortality for white troops in the Philippine Islands during the last five years has been no higher than at home. It appears somewhat higher for Filipinos but this may be due to failure to diagnose all the mild cases. (10) More than a third of the cases of enteric fever, whether among Americans or Filipinos, are entirely atypical and cannot be diagnosed without laboratory methods.

Denver Medical Times and Utah Medical Journal

December, XXXI, No. 6, pp. 214-256

29 Case of Ludwig's Angina. F. C. Buchtel, Denver.
30 Preventive Medicine, or Hygiene. E. Stuber, Fort Collins, Colo.
31 Fatal Case of Infantile Scurvy Following Diet Confined Almost Exclusively to "Grape Nuts." J. W. Amesse, Denver.
32 Syphilis in Relation to Obstetrics. A. Ditson, Denver.
33 Cerebral Localization. A. A. Robinson, Ogden, Utah.
34 Serum Treatment of Disease. G. C. Emery, Preston, Idaho.
35 Medical Profession and Purity. J. D. Dodge, Collinwood, Ohio.

Archives of Pediatrics, New York

December, XXVIII, No. 12, pp. 961-1032

36 *Albumin Milk as Contrasted with Other Milk Mixtures in Treatment of Diarrheas of Children. H. Heiman, New York.
37 Drainage Tube in Pleural Cavity. (Removed with Aid of Fluoroscopic Screen.) F. Huber, New York.
38 Spasmus Nutans; Report of Four Cases. H. K. Hill, Philadelphia.
39 Case of Catarrhal Laryngitis Requiring Intubation. J. T. Ullom, Germantown, Pa.
40 Summer Diarrhea in Infants and Children. M. J. Synnott, Montclair, N. J.

36. **Albumin Milk in Diarrheas of Children.**—Eiweiss milk was administered by Heiman to thirteen patients suffering from diarrhea for a length of time sufficient to determine its immediate effect on the general and local condition. For the purpose of proper classification these cases were divided into moderate and severe. The moderate cases included those with only slight fever, mild general symptoms and green stools varying from six to ten a day, containing mucus. The severe cases included those in which there was prostration, pyrexia, and very many stools, eight to ten or more a day, green in color and occasionally blood-streaked. The latter class would come under the head of alimentary intoxication of Finkelstein. There were seven cases of the moderate type. All with the exception of two had previously been breast- and bottle-fed. Two were exclusively bottle-fed. The duration of the disease previous to the admission to the hospital varied from five days to five weeks. The eiweiss milk was given for a period varying from three days to twelve days. Three gained from 2 to 5 ounces and four lost from 2 to 5 ounces. Maltose was added from the second to the tenth day and in one case at once. All but one of these recovered. There were six cases of the severe type, four were exclusively bottle-fed; of the two others one had the breast for three weeks and one for two months. The duration of the disease varied from four days to seven weeks. The eiweiss milk was administered in these cases for a period varying from two to fifteen days. Three babies gained in weight and three lost; the average loss was 5 ounces and the maximum gain was 4 ounces. Maltose was added from the second to the sixth day. Three patients died and three recovered. The ages of the patients who died were 2 months, 11 months and 13 months. For the purpose of comparing these results with those obtained by the use of other forms of diet, Heiman collected twenty-four cases of diarrhea. Of seven patients that received whey, barley and skimmed milk, two were moderate; one of these had one stool on the third day, the other remained unchanged at the end of five days, although two ultimately recovered. Four received skimmed milk, barley and milk sugar. Two were moderate and two were severe. Of the moderate cases, one on the fifth day had stools and the other was unchanged. Of the two severe cases, in both of which the patients died, there was no change within five days. The ages of the moderate patients were 5 months and 22 months. Of five patients fed on the skimmed milk, milk sugar and water, three were moderate and two severe. Of the moderate cases one showed reduction from six green stools on the fifth day, another one from five green to four yellow on the fourth day and the third was unchanged. Of the two severe there was none on the fifth day in one case and unchanged in the other. Of three patients that received barley or rice water, one was moderate and two severe. In the moderate case on the second day there was no stool and of the severe, in one, there was a reduction from four to two green stools on the fourth day, the other was unchanged. Taking these cases collectively, we find that there were twelve moderate and twelve severe cases. Of the moderate ones there was improvement within five days in six cases and of the severe ones in two cases. Of the thirteen eiweiss cases there were seven moderate and six severe cases. There was improvement in five of the seven moderate cases and of the six severe cases there was improvement in two. Only 50 per cent. of the moderate cases fed with various milk mixtures showed improvement within five days, the percentage of improvement in similar cases in which eiweiss milk was administered was 71. In the severe cases, of the ones fed on various milk mixtures the percentage of improvement was 16⅔, and in the eiweiss milk cases the percentage of improvement was 33.

Western Medical Review, Omaha, Neb.

December, XVI, No. 12, pp. 591-636

41 Drainage. H. P. Hamilton, Omaha.
42 Aids in Differential Diagnosis of Mental Disorders. J. M. Aikin, Omaha.
43 Dyspepsia Due to Myasthenia Gastrica. A. O. Peterson, Omaha.
44 Cystoscopy and Urethral Catheterization. L. A. Dermody, Omaha.
45 Epidemic Poliomyelitis. L. W. Rork, Oxford, Neb.

Vermont Medical Monthly, Burlington

December, XVII, No. 12, pp. 287-312

46 Three Hundred and Fifty Cases of Pulmonary Tuberculosis at Vermont Sanatorium. (Name of author not given.)
47 Renal Tuberculosis. W. W. Townsend, Rutland, Vt.

American Journal of Medical Sciences, Philadelphia

January, CXLIII, No. 1, pp. 1-156

48 *Causes of Ascites: Five Thousand Cases. R. C. Cabot, Boston.
49 *Infantile Hypertrophic Stenosis of Pylorus Based on Seven Operated Cases F. E. Bunts, Cleveland.
50 Leukemia in Childhood. W. F. Cheney, San Francisco.
51 *Management of Failure of Circulatory Balance in Chronic Interstitial Nephritis. E. F. Wells, Chicago.
52 *Bacillus Dysenteriæ Recovered from Peripheral Blood and Stools of Cases in Panama. S. T. Darling and L. B. Bates, Ancon, C. Z.
53 Favorable Influence of Quinin and Urea Hydrochlorid in Large Doses Under Skin in Treatment of Acute Pneumonia, Lobar and Lobular. S. S. Cohen, Philadelphia.
54 *Bronzed Diabetes. Case with Special Reference to Involvement of Pancreas in Diabetes. N. B. Potter and L. S. Milne, New York.
55 Case of Loud Venous Hum Heard Over Xiphoid Cartilage in Cirrhosis of Liver, Autopsy. J. N. Henry Philadelphia.
56 Tuberculosis Among Physicians. J. N. Hall, Denver.
57 *High Calory Diet in Typhoid: 111 Cases. W. Coleman, New York.
58 Multiple Congenital Hemangio-Endotheliomas of Liver. B. S. Veeder, St. Louis and J. H. Austin, Philadelphia.
59 *Persistence of Gonococci in Male Urethra. E. L. Keyes, New York.

48. **Causes of Ascites.**—The actual causes of ascites as found post mortem in 2,217 autopsies are tabulated by Cabot. There were 224 cases of ascites. A quart or more of fluid was present in all the cases. Cases of septic peritonitis and hemoperitoneum are omitted. The bulk of the remaining cases are due to one of five causes: Cardiac weakness (89), nephritis (26), abdominal neoplasms (44), cirrhotic liver (23), and tuberculous peritonitis (15). Adherent pericardium (9), eclampsia (3), thrombosis of vena cava, portal and mesenteric veins (3), chronic fibrous peritonitis (3), uterine fibromyoma (3), intestinal obstruction (2), pancreatitis (1),

ovarian cyst (1), acute yellow atrophy of liver (1), status lymphaticus (1). The causes of ascites in 3,086 cases observed clinically at the Massachusetts General Hospital (1870-1910), were: Total cases of cardiac weakness from all cases 1,397, renal and cardiorenal 665, cirrhosis of liver, 325, tuberculous peritonitis 263, intestinal obstruction 86, ovarian cysts and tumors, 63 cases, uterine fibroma 55, neoplasmic peritonitis 53, cancer of liver and lymph-nodes 30, cancer of intestine and lymph-nodes 56, cancer of pancreas and lymph-nodes 11, malignant lymphoma (thoracic and abdominal) 5, adherent pericardium 36, pernicious anemia 15, leukemia 12, syphilis of liver, etc., 4, thrombosis of vena cava, portal and mesenteric veins, 10 cases.

51. **Chronic Interstitial Nephritis.**—The basic plan which Wells employs is, briefly, as follows: At intervals the patient is examined in such detail as to give such information as may be required concerning his environment and habits; nutritional requirements and supply; excretory capabilities and output: circulatory burden and reserve capacity. On the facts disclosed is based the advice given. The prescribed directions for diet, regimen and medication are based on the requirements for the individual, as determined by the full examinations mentioned as preliminary to any advice. The diet should meet the calorie and other nutritional requirements of the patient; should consist of available foods and should be definitely formulated in terms comprehensible to the individual. The total amount of food taken should be the smallest which will maintain nutrition at the highest level. A fair amount of active physical exercise, as shall be specifically directed from time to time. Massage should replace active exercise should the latter be impracticable. Once in four weeks, or as directed, he gives two freshly made pills of mercurial mass, of 5 grains each, every night for three days, followed the first time by ½ ounce of castor oil in the morning and the other two mornings by a saline cathartic. Other medication to be specifically directed. Immediately on the detection of the slightest evidences of circulatory embarrassment or occult edema, or of manifest dropsy or uremia, the patient should be given active and efficient treatment. He should be put to bed, in as nearly a horizontal position as possible, where he should remain until the circulatory balance has been restored. This Wells considers the most important medical measure which can be instituted, under the circumstances described, in these cases. The venous system is thus given an opportunity to drain itself easily; and the heart to regain its tone, largely because of the lessened strain on its right-side aspiratory action and the relief given to the ventricular contractions. In various ways probably every part of the circulatory system is offered more or less positive relief.

52. **Bacillus Dysenteriæ.**—By the use of a differential medium (Endo's), the authors have been able to isolate *Bacillus dysenteriæ*, the "Y" type, from two sporadic cases of dysentery, one a white American, an inhabitant of Ancon, Canal Zone, the other an infant living in and native of the small village of La Chorrera in the Republic of Panama. They have recovered from the circulating blood of a fatal case of dysentery, in routine blood-culture work, *Bacillus dysenteriæ*, one which agglutinates with antidysenteric serum in a dilution of 1 to 2,000 and is culturally of the Shiga type.

54. **Bronzed Diabetes.**—From what they found in the literature and from the study of their own case, the authors believe themselves warranted in stating only that cirrhosis of the liver is the primary condition; that pancreatic involvement with diabetes is a sequence or coincident event to this; that the hemochromatosis, always present in slight degree in liver cirrhosis, is in some cases very excessive and causes a general pigmentation which eventually also involves the skin; and finally, that the whole process is not any definite symptom-complex, but a chain of circumstances which rarely seems to be complicated.

57. **High Calory Diet in Typhoid.**—There were 111 cases in Coleman's series. Thirty-seven of the cases were mild, forty-three were severe and thirty-one were very severe. Eleven of the 111 patients died, giving a mortality of 10 per cent. The simple statement of the mortality, however, does not convey sufficient information regarding the cases. Sixteen and five-tenths per cent. of all patients in Bellevue and Allied Hospitals in 1908, 1909 and 1910, exclusive of the patients on high calory diet, died, while 10 per cent. of the patients on this diet died. Three cases complicated by hemorrhage proved fatal from other causes; one as the result of hemorrhages. A striking fact has been observed in the cases complicated by hemorrhage. When the patient has been well nourished, the loss of blood has produced little, if any, more effect than the loss of a corresponding amount of blood would produce in a healthy man. Perforation occurred in one case, lobar pneumonia in six cases, otitis media (probably the lighting up of an old process in all instances) in nine cases, bronchopneumonia in four cases, cholecystitis in two cases, pulmonary tuberculosis in one case, pleurisy in two cases, diphtheria in two cases, phlebitis in three cases, periosteitis in one case, panophthalmitis in one case and abscess about rectum (non-tuberculous) one case. None of the older diets for typhoid furnishes the patient with sufficient energy for his metabolic exchanges. Therefore a patient taking any one of these diets is compelled to live in part on his own tissues. The amount of food which a patient requires can be determined only by his individual needs. The clinical guides to these needs are the weight of the patient and the state of his appetite. A patient who is losing weight should be given more food if he can digest and absorb it. A patient who is hungry should be given sufficient food to appease his appetite. In the early stage of severe cases it is always difficult to give more than 3,000 calories a day; in the steep-curve period and in convalescence, patients take readily from 4,000 to 6,000 calories a day. If any article of food causes persistent disturbances of digestion, the quantity given should be diminished, or the food should be stopped; otherwise the object of the high calory diet, the maintenance of the patient's nutrition, is defeated. If a patient cannot take all the food he requires, he should be given all he can digest and absorb. Carbohydrates should furnish the greater part of the energy of the diet. The daily protein ration should not be below 62 grams, nor greatly exceed 94 grams. Clinical evidence indicates that a diet rich in fat may be taken by typhoid patients with benefit. Fat has furnished in some cases from one-third to one-half of the total energy of the food. In the cases studied, the high calory diet has apparently modified the course of the disease, shortened convalescence and reduced the mortality.

59. **Gonococci in Male Urethra.**—Keyes investigated eighty-six patients clinically cured, or nearly cured, of urethral gonorrhea. Thirty-six were investigated by the complement fixation test, seventy-seven by smear and culture. In five instances the patients were believed to be still infectious and this belief was borne out by the laboratory findings; in twenty-six the patients had active urethritis, believed to be postgonorrheal yet in eight of them gonococci were found. But among fifty-one with clinical evidence of cure (only shreds or light haze in urine), only two showed gonococci, both of them brief cases temporarily controlled by repressive injections, while one was passed as clean by both clinic and laboratory, yet relapsed and gonococci were found a week later. The relapse did not appear to be a new infection. Hence Keyes estimates about 4 per cent. of clinical error in cases apparently cured. However, in ten cases the clinical presumption of cure was not fully certified by the laboratory findings. Nevertheless, with all allowances made, he feels justified in stating that in sixty-four cases gonococci disappeared in less than a year, in seven others with urethritis, examined from two to eight years after the onset, gonococci persisted from one to two years. In almost all cases these conclusions were verified by clinical examination of the patient a month or so after the cure had been pronounced. Moreover, Keyes had the opportunity of examining nine cases cured of gonorrhea from two to eighteen years previously. In none of them were gonococci found, though the misleading "degeneration" forms of staphylococci appeared in one case. Only twice were gonococci found in cases of urethritis of more than two years duration. Gonococci were found and attributed to a recent infection.

American Journal of Surgery, New York

December, XXV, No. 12, pp. 373-404

60 Conservative Treatment of Gonorrhea in Women. W. H. Cary, Brooklyn.
61 Gonococcus in Puerperium. A. A. Hussey, Brooklyn.
62 Treatment of Gonorrhea Above Internal Os Uteri. N. P. Geis, Brooklyn.
63 Surgical Treatment of Repeated "Colds in the Head." C. E. Scofield, Brooklyn.
64 Arsenionization in Inoperable Cancer. G. B. Massey, Philadelphia.
65 Surgical Essentials. F. E. Neef, New York.
66 General Care of Cases of Laparotomy for Pelvic Diseases Before and After Operation. B. H. Wells, New York.
67 Theory, Technic and Results of Psycho-Motor Reeducation in Convulsive Torticollis. R. B. Kruna, New York.
68 Granger Universal Roentgen-Ray Frame. C. Weiss, New Orleans.

Journal of Experimental Medicine, New York

January, XV, No. 1, pp. 1-105

69* Effects of Subdural Injections of Leukocytes on Development and Course of Experimental Tuberculous Meningitis. W. H. Manwaring, New York.
70 *Studies with Electrocardiograph on Action of Vagus Nerve on Human Heart. G. C. Robinson and G. Draper, New York.
71 *Auricular Tachycardia with Consideration of Certain Differences Between the Two Vagi. A. E. Cohn, New York.
72 *Effects of Splenectomy on Cell Content of Thoracic Duct Lymph in Dog; Its Relation to Action of Pilocarpin. R. L. Dixon, Ann Arbor, Mich.
73 Cultural Studies on Mouth Spirochætæ (*Treponema Microdentium* and *Macrodentium*). H. Noguchi, New York.
74 *Direct Cultivation of Treponema Pallidum Pathogenic for Monkey. H. Noguchi, New York.
75 Islands of Langerhans After Ligation of Pancreatic Ducts. M. B. Kirkbride, New York.

69. **Effects of Subdural Injections of Leukocytes.**—Subdural inoculation of tubercle bacilli of established virulence for guinea-pigs and rabbits, produces in the dog a tuberculous meningitis, followed by paralysis and death. Manwaring found that when suspensions of canine leukocytes are injected subdurally, following such inoculations there occurs uniformly a delay in the development of the paralysis and a prolongation of the life of the treated animal. In dogs inoculated with small doses of tubercle bacilli of low virulence, the development of paralysis has been prevented by this means for periods of seven months (up to the present date), while the untreated animals injected with the same cultures have all developed paralytic symptoms within a period of about four weeks.

70. **Action of Vagus Nerve On Human Heart.**—The electrocardiographic records taken by the authors during vagus stimulation by pressure from children suffering with chronic heart disease have shown that the stimulation of the vagi in these cases is strikingly effectual. In some of the cases, a definite difference was demonstrated between the action of the right and left vagi. The control of the rate of the heartbeat seemed to predominate usually in the right vagus nerve, while the control of stimulus conduction from auricles to ventricles apparently predominated usually in the left vagus. This difference in the two nerves, the authors believe, probably exists on account of the difference in their anatomic distribution, the right vagus going especially to that part of the heart which controls the rate of contraction, the sinus node above the right auricle and the left vagus going especially to that part in which the conducting mechanism is found. Each nerve, however, has to a lesser degree the function which predominates in the other. The whole heart seems to respond, as a rule, more promptly to right than to left vagus pressure and fairly constant differences have been seen in the effects which stimulation of each nerve has on the various waves of the electrocardiograms. The stimulation of each vagus may influence directly the contractions of the ventricles, causing great diminution in their force. Right vagus stimulation was followed at times by a complete dissociation of auricles and ventricles. The auricular rhythm was slowed sufficiently at this time to allow the ventricles, whose inherent rhythmicity is apparently unaffected by right vagus stimulation, to take up their own independent rhythm. The heightened ventricular rhythmicity in these cases allowed this to take place after only moderate slowing of the auricles. The independent ventricular rhythm was sometimes established in the region of the node of Tawara, for no disturbance of the ventricular portion of the electrocardiogram occurred. At another time, some other point in the ventricles inaugurated the stimuli of the independent ventricular contractions and an abnormal electrocardiogram resulted. The resemblance of the curves, showing dissociation, to those obtained during right vagus and left accelerator stimulation in dogs is definite. Analogy, the clinical picture and the form of the electrocardiograms of these cases have led the authors to the belief that an important feature in the pathologic physiology of these cases is hypertonus of the cardiac accelerator nerves.

71. **Auricular Tachycardia.**—The results of Cohn's experiments on the phenomenon of auricular tachycardia lead him to believe that it might result from one of the following lesions: (1) either the vagus (or certain of the functionally active fibers) do not reach the node; (2) or the node itself is pathologic and incapable of receiving the vagus fibers or of making effective the stimuli received from the nerve; and, in either case, an ectopic area of stimulus production has assumed the pace-making function. Absence of the sino-auricular node alone will not explain the phenomenon, however, for although the absence of vagus control is known to raise the heart rate, absence of the node is known to lower it. It is generally accepted, however, that, under pathologic conditions, other parts of the auricle may acquire a rate even faster than the pace-maker. That the electrical complex in such cases is not changed does not exclude the possibility of an abnormal site of stimulus production, for the new site may be so near to the old one that this change does not occur. Cohn holds that the fact that in Rihl's cases slowing of the ventricles occurred, following pressure on the right vagus, does not speak against this explanation, since, as previously stated, there is evidence that ordinarily some fibers from the right vagus reach the ventricles directly.

72. **Effects of Splenectomy in Dog.**—Dixon found that splenectomy in dogs results in an immediate increase of cells in the thoracic duct lymph, due to the manipulation involved in the operation. This increase is soon followed by a low cell count, attributable to the removal of an important source of the cells under consideration. Several months after the operation, a normal cell count is reestablished, due probably to a readjustment of activity on the part of other cell-forming tissues. Pilocarpin injections after splenectomy also results in an increase of cells, attributable to an increased activity of the respiratory organs and of the intestine. After the injection of pilocarpin, splenectomy may increase the cell count, but it causes a decrease sooner than in cases of pilocarpin injection not followed by splenectomy.

74. **Direct Cultivation of Treponema Pallidum.**—Noguchi has also succeeded in cultivating the *Treponema pallidum* from testicular syphilitic lesions in man. He found it advantageous to employ first a fluid medium and later, after adaptation had taken place, to substitute a solid medium. This is a satisfactory method for the testicular lesions which are nearly free from contaminating bacteria, but it is not applicable to the highly contaminated primary lesions in human cases of syphilis. Two conditions are all important in the working out of the method of direct cultivation: first the maintenance of strict anaerobiosis; and second, the property possessed by the pallida of migrating in the solid medium in which they are multiplying. To meet these conditions, Noguchi employed a high cylindrical layer of a solid medium consisting of two parts of 2 per cent. slightly alkaline agar and one part of ascitic or hydrocele fluid, at the bottom of which has been placed a fragment of sterile tissue, such as rabbit kidney or testicle. He concludes that the tissue acts chiefly by removing the traces of oxygen that exist in the lower levels of the medium, and probably also by providing a special form of nutriment. The solid medium, when inoculated with a fluid containing pallida and bacteria, seems to keep the latter fixed to the inoculation stab while permitting the pallida to migrate to a distance where they may often be found in a pure or nearly pure state. Comparisons have been made between the agar medium described and the gelatinized horse serum employed by Scheresche wsky, in favor of the former. The material to be cultivated is obtained from lesions rich in the

pallidum, such as chancre, condyloma, or skin papule, from which are snipped off, after cleaning with sterile salt solution, suitable fragments. Inoculation of the pure cultures into the skin of two species of lower monkeys was followed by the production of lesions resembling the primary syphilitic lesion occurring in man and those caused in the monkey by inoculation of spirochete-containing serum from human sources. During the course of the positive inoculation in the monkey, the blood develops the property of giving a positive Wassermann reaction. Thus the relation of *Treponema pallidum* to this reaction is supported and the identity of the cultivated strains with the species found in human syphilitic lesions established.

Journal of Minnesota State Medical Association and Northwestern Lancet, Minneapolis

December, XXXI, No. 23, pp. 562-588

76 *Visceroptosis. L. Crummer, Omaha, Neb.
77 Important Factors in Dietetic Treatment of Disease. J. E. Davis, Detroit.
78 Method of Enucleation by Which Action and Efficiency of Orbital Muscles Are Better Conserved. L. W. Meekstroth, Wahpeton, N. D.

76. Abstracted in THE JOURNAL, Nov. 18, 1911, p. 1718.

Kentucky Medical Journal, Bowling Green

December 15, IX, No. 24, pp. 947-980

79 *Nephroptosis. C. W. Suckling, Birmingham, England.
80 *Five Hundred Nephropexies. W. Billington, Birmingham, England.
81 Some Complications Following Tonsillectomy. I. A. Lederman, Louisville.
82 Superheated Air as Therapeutic Measure. I. Lindenberger, Louisville.
83 Excision of Rectum and Sphincter for Carcinoma. B. Asman, Louisville.
84 Typhoid Treated with Vaccine. B. J. O'Connor, Louisville.

79. **Nephroptosis.**—Suckling's paper is based on over 400 nephropexies performed on 303 private patients. He is firmly of the opinion that surgery offers the only cure for nephroptosis.

80. **Nephropexies.**—Billington's experience has shown him that nephroptosis is the cause of much chronic ill-health and that nephropexy is followed by cure or great improvement in a very large percentage of cases where other treatment has failed to benefit or has produced temporary benefit only. Careful investigation to exclude other possible causes is necessary, but where this has been done and where there are no surgical reasons why nephropexy should not be undertaken, the operation should be advised. Even in the few cases that failed to benefit, no harm is done and in his whole series no patient has been made worse by the operation.

Mississippi Medical Monthly, Vicksburg

December, XVI, No. 8, pp. 147-168

85 Cancrum Oris; Case Following Typhoid. J. R. Lockhart, Sherard.
86 Tubercular Peritonitis in Children, with Special Reference to Fibrous Form. J. M. Acker, Aberdeen.
87 Galvanism as Therapeutic Agent; Report of Cases. W. J. Grady, Amory.
88 Varicose Veins of Leg Complicated by Ulcer. W. I. Coleman, Aberdeen.
89 Some Medical Aspects of Uncinariasis. W. H. Rowan, Wiggins.
90 Diagnosis and Treatment of Lobar Pneumonia. S. C. Cowan, Sabino.

Boston Medical and Surgical Journal

December 28, CLXV, No. 26, pp. 975-1006

91 *Popliteal Incision for Removal of "Joint Mice" in Posterior Capsule of Knee-Joint. E. G. Brackett and R. B. Osgood, Boston.
92 Ten Years' Work in Anesthesia. F. Allen, Boston.
93 *Intravenous General Anesthesia. A. M. Dodge, Boston.
94 Parasitic Multilocular Ovarian Cyst Weighing Ninety Pounds. P. E. Truesdale, Fall River, Mass.

January 4, CLXVI, No. 1

95 Relation of Chronic Appendicitis to Colitis. M. V. Tyrode, Boston.
96 Roentgenology of Enteron. H. W. Van Allen, Springfield, Mass.
97 Memorials to Dr. Thomas Dwight. J. C. Warren, J. B. Blake and D. Cheever, Boston.
98 Case of Cesarean Section for Placenta Prævia. J. G. Hanson, Northampton, Mass.

91. **Removal of "Joint Mice" in Posterior Capsule of Knee-Joint.**—The removal of joint mice and foreign bodies in the posterior portion of the knee-joint by any of the classical, quickly repairing incisions into the knee-joint is difficult, if not impossible, owing to the very small connection between the anterior and posterior capsules of the joint. The small caliber of this opening also prevents the bodies emigrating into the anterior capsule when the bodies are of any considerable size. The authors suggest an obvious, but apparently little used, method of approach to the posterior capsule. This approach is made by the posterior route by means of a linear incision, 10 cm. long, made in the popliteal space, centering over the joint line and slightly to the inside of the median line. In the upper part of the incision are seen the two diverging heads of the gastrocnemius muscle, and the separation of these two discloses the vessels lying just below, crossing vertically over the space, with a slight oblique direction from the inside above to the outside below. A blunt dissector will suffice to carry one down to the posterior ligament, and a clear workable space may be opened up, so that by palpation one can ascertain the position of the mouse or the foreign body. The capsule is so tense while the knee is extended, and the posterior joint space so circumscribed, that there is little danger of pushing the movable body out of range. When incision through the posterior ligament and capsule is made, the bodies usually present, owing to the tension of the capsule. Four cases were all closed without drainage.

93. **Intravenous General Anesthesia.**—According to Dodge, intravenous anesthesia is indicated in operations about the head and neck, in hemorrhage, in weak cachectic patients, in diseases of the respiratory tract where inhalation anesthesia is objectionable, etc. It is contra-indicated in nephritis, extreme arteriosclerosis, severe heart lesions, plethoric patients, etc. In Dodge's opinion, its chief field of usefulness will be found in operations about the neck, where it is desirable to have the anesthetic and anesthetist removed from the surgical field, and here it would seem to be the method indicated in a majority of cases.

Journal of Oklahoma State Medical Association, Muskogee

December, IV, No. 7, pp. 275-315

99 Epidemic Poliomyelitis. A. D. Young, Oklahoma City.
100 Medical Inspection of Public Schools, Its Needs and Desirabilities. A. B. Montgomery, Muskogee.
101 Treatment of Compound Fractures and Lacerated Wounds. V. Berry, Okmulgee.
102 Chorioditis. S. M. Jenkins, Enid.
103 Chloroform. W. Fowler, Alderson.
104 University of Oklahoma, School of Medicine. R. F. Williams, Oklahoma City.

West Virginia Medical Journal, Wheeling

December, VI, No. 5, pp. 183-218

105 Physician's Work in Building the Nation. R. E. Venning, Charlestown.
106 Three Founders of Modern Medicine. C. O'Grady, Charleston.
107 What Shall We Teach the Laity? R. B. Miller, Hinton.
108 Differential Diagnosis of Affections Apt to Be Mistaken for Cerebral Tumors. T. A. Williams, Washington, D. C.
109 Quincke's Disease, or Recurrent Circumscribed Edema. G. B. Capito, Charleston.
110 Indications for and Method of Removal of Tonsils. J. A. Duff, Martinsburg.

Therapeutic Gazette, Detroit

December, XXXV, No. 12, pp. 837-924

111 *Hygienic and Dietetic Treatment of Arterial Hypertension. A. R. Elliott, Chicago.
112 Therapeutic Value of Salvarsan, with Report of Cases. E. J. Angle and J. J. Snipes, Lincoln, Neb.
113 How Tuberculosis Is Cured by Work. A. Robin, Wilmington, Del.
114 A Simple Appliance for the Relief of Residual Peroneal Paralyses Following Acute Anterior Poliomyelitis. C. O. Griffin, Bee Tree, N. C.

111. Abstracted in THE JOURNAL, Nov. 11, 1911, p. 1636.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

December 23, No. 2660, pp. 1637-1684

1 *Medical Education and Examinations. J. Griffiths.
2 Celiotomy Under Spinal Analgesia, with or Without Aid of General Anesthesia. L. McGavin.
3 Routine Use of Spinal Anesthesia. O. Richards.
4 *Case of Paroxysmal Tachycardia. R. O. Moon.
5 Leucodermia Undergoing Pigmentation on Exposure to Sunlight. K. H. Jones.

6 Ectopic Pregnancy Twice in Same Patient in Six Months, Two Separate Laparotomies. J. Oliver.
7 Epidemic Jaundice. D. O. Williams.
8 Periodical Hematemesis and Menstruation. D. Fleck.

1. **Medical Education and Examinations.**—Griffiths says that at present medical education is stereotyped, and each student is compelled to go through the stereotyped course and it alone. In order to show how absurd it is to insist on a stereotyped education for one and all, he cites an example from the University of Cambridge. A student who has taken up the study of chemistry, comparative anatomy, human anatomy and physiology and who after three years' study has obtained a first class degree in these subjects, finds that at the end of this period, he for some reason or other desires to enter the profession of medicine. Such a man, without any doubt is better trained and better educated than the majority of the medical students. But all this is of no use, for such a man must attend courses of prescribed length and must pass examinations which we know are not so good as the one in which he has already attained, perhaps, the highest distinction, before he can enter on the study of medicine.

In Griffiths' opinion the evils attendant on prescribing exact courses of study for the medical student are far greater than those that may possibly arise from insufficient knowledge and, he says, one of the first steps to take in reform is to give the medical schools complete control over all the training up to the end of anatomy and physiology and to throw on them the responsibility of certifying the pupils as fit and proper persons to enter on the work at the hospitals. The machinery for the training should be under the supervision of the general medical council in order to ensure that every facility exists for the necessary training of each student. He considers three years sufficient time to give a student training in all branches of clinical work, and to give him, in addition, all the sound knowledge concerning that work. All that is needed to carry this out is that the training shall be arranged definitely, step by step, that each pupil should undertake successively the work of each step and that he be certified as to proficiency in that portion of the work before he proceeds to another. Speaking of examinations and boards he insists that the examination should be a test in the work actually done by the student. It should be conducted where the teaching was undertaken. The test should be applied at the end of each complete course of training.

The board of examiners should consist of at least three persons, namely: (1) the teacher; (2) a representative of the corporation or university the student is attached to; and (3) a representative from the general medical council. The duties of the first two should be to conduct the examination and to award marks, the duty of the last to see that a due standard of proficiency in all the technical portions of the work is attained by each candidate. If this were done it would practically mean the establishment of a "common state qualification" having a standard in technic that must be attained by all who desire to enter on the duties of the profession of medicine.

4. **Paroxysmal Tachycardia.**—A woman, aged 35, complained of palpitation of the heart and pains in the chest for some years. The pulse-rate was 180, but examination of the heart disclosed nothing abnormal beyond the rapidity of the pulse. She was said to have been delicate from childhood, and began to be subject to these attacks of rapid heart beating and palpitation some fourteen years previously. There was no history of any other illness. The attacks used to come on about every five or six months, beginning quite suddenly and unexpectedly, very often soon after food, but also quite frequently in the night. She herself associated the attack with indigestion. The attack would last any time from four to twenty-four hours and then pass off gradually. She was not very much distressed and would go to her work as usual; she could not, however, lie down during an attack and therefore when it occurred at night she was a good deal troubled by it. On only one occasion did she complain that she had severe pain in an attack. She died during one of these attacks. The necropsy disclosed an unusually large patent foramen ovale, but an otherwise normal heart.

Medical Press and Circular, London

December 13, XCII, No. 3788, pp. 623-648

9 Medical Aspect of Gall-Stones. E. B. Leech.
10 Some Points in Heredity. R. C. Lucas.
11 Causes of Limping in Children. D. Savariaud.
12 Tarantism: An Historical Note. J. Knott.

December 20, XCII, No. 3789, pp. 649-672

13 Nervous Manifestations in Children and Their Treatment. R. O. Moon.
14 Treatment of Carcinoma of Rectum and Pelvic Colon. W. E. Miles.
15 Chloroformisation of Patients Sitting in Upright Position. J. H. Chaldecott.
16 Protective and Scientific Organization of Medical Profession. T. P. Beddoes.
17 Local Anesthesia of Region of Trigeminus. H. Braun.

British Journal of Children's Diseases, London

December, VIII, No. 96, pp. 529-598

18 *Cases of Night-Blindness with Peculiar Conjunctival Changes in Children. S. Stephenson.
19 Median Congenital Fissures, Fistulæ and Dermoid Cysts of Nose. J. H. Evans.
20 Surgery and Electro-Therapeusis in Infantile Paralysis: Attempt to Define Sphere of Each. F. Hernaman-Johnson.
21 *Aneurysm of Coronary Artery. R. S. Trevor.

18. **Night-Blindness.**—Stephenson found night-blindness to be present in 1.87 per cent. of 6,209 healthy children whose eyes he examined a few years ago. It prevails in summer and autumn, and is seldom seen during the winter months. The symptom-complex, in its fully developed form, includes, first, changes in the ocular conjunctiva, and secondly, night-blindness. This conjunction is sometimes spoken of as "Bitot's syndrome." The conjunctival changes are seldom seen except in that part of the ocular conjunctiva which is exposed when the lids are open, the so-called "interpalpebral zone." They usually affect both eyes, sometimes to an unequal extent. They occur as more or less triangular areas, which are dry, and look as if they had been bespattered with tiny particles of white foam. If the foam-like material be wiped away it is reproduced within twenty-four to thirty-six hours after complete removal. The glistening, dry-looking plaques, if once seen, can scarcely be mistaken for anything else. To the condition the name "epithelial xerosis" is commonly applied. The patches on the conjunctiva are crowded with the saprophytic organism, the xerosis bacillus. The relationship between conjunctival changes on the one hand and night-blindness on the other is not invariable. The one symptom may occur without the other, and vice versa. Among eighteen cases of xerosis, seen by Stephenson in 1895 at school, no fewer than 61 per cent. were more or less blind at night, whereas during 1896 and 1897, when nine cases of xerosis were respectively found, definite night-blindness appeared to be altogether absent. However, Stephenson believes that the connection is much closer than is generally supposed.

21. **Aneurysm of Coronary Artery.**—The history of Trevor's case was as follows: Seven days prior to admission the girl, aged 11, caught a "chill" while bathing. This was followed by a rigor, sweating and pain in the left knee. For three days prior to admission there was soreness of the throat and the legs became swollen. The only previous illness was measles six years ago. On admission the child was flushed and restless, with a temperature of 102 F., pulse 108 and respiration-rate 28. There was no pain in, or swelling of, the legs. The heart's apex beat was diffuse, in the sixth space, 1 inch external to the nipple line. The area of cardiac dulness extended 1½ inches to the left of the nipple line but not to the right of the sternum. A rough systolic mitral murmur and thrill were present. The murmur was best heard 1½ inches internal to the nipple line. The lungs and abdomen were natural. Four days after admission, a red, tender swelling appeared at the right great toe-joint. There was no reaction to salicylates. Temperature 104 to 105 F. The heart condition was as on admission. Streptococci were found in the blood on the seventh day and a vaccine was prepared. Polyvalent serum was given in the meantime. On the tenth day a to-and-fro cyclical murmur, which was very rough and scratchy, became audible, and was best heard over the tricuspid area, but was conducted over the entire precordium. The twelfth day there was evidence of rapid dilatation of the heart, temper-

ature remaining about 104 F. The patient died on the fifteenth day. The diagnosis made was infective endocarditis and pericarditis.

At the necropsy, in the cavity of the right ventricle, just to the inner side of the anterior papillary muscle, was an adherent mass of clot, guarding at its lower end a rounded or oval opening, with a maximum diameter of ¼ inch, leading into the interior of a prominence on the postero-lateral wall of the ventricle. The edges of the opening were rough and the surrounding endocardium appeared ulcerated. The prominence was caused by a thin-walled fusiform aneurysm of the descending branch of the right coronary artery, situated within the muscular wall of the right ventricle. The sac was of about the size of a small plum, and the lining membrane bore some rough adherent clot at its upper part and was ulcerated below at the opening into the right ventricle. The right coronary artery was remarkably dilated. Its opening in the right sinus of Valsalva measured ½ inch across and admitted the little finger easily and the lumen continued of large size to the point where the descending branch was given off. Beyond this point the lumen ended almost blindly, two fine holes indicating the continuation of the vessel along the auriculo-ventricular furrow. The artery showed no evidence to the naked eye of any acute inflammatory change, nor was acute endarteritis present on histologic examination. The left coronary artery was normal at its commencement and showed no obvious dilatation. The aorta above the valves showed a few patches of atheroma. Its branches were given off normally and no abnormalities in the rest of the vascular system were discovered. The abdominal organs showed cloudy swelling and there was no ascites. The right knee-joint was healthy.

Journal of Tropical Medicine and Hygiene, London

December 15, XIV, No. 24, pp. 365-380

22 Etiology of Beri-Beri. H. Fraser and A. T. Stanton.

Lyon Chirurgical, Lyons

December, VI, No. 6, pp. 617-702

23 *Temporary Fixation of Fracture with Long Nail. (Du maintien de la réduction de certaines fractures et de certaines sections osseuses, suite d'interventions chirurgicales, par l'enclouage temporaire.) M. Cantas.
24 *Advantages of Roentgenotherapy of Suppurative Lymphadenitis. (Traitement radiothérapique des polyadénites inflammatoires et suppurées.) F. Barjon.
25 *Roentgenoscopy of Kidney Pelvis. (Injection de collargol dans le bassinet suivie de radiographie pour servir au diagnostic de certaines affections rénales.) T. Nogler and J. Reynard.
26 Complications of Prostatitis. (Abcès de la fosse iliaque interne et adénites inguinales au cours des prostatites suppurées.) L. Thévenot and C. Rey.
27 *Plastic Operations on the Urethra. (L'urétroplastie par greffe veineuse doit-elle être conservée?) R. Leriche.

23. **Nail Fixation of Fractures.**—Cantas gives illustrations of a few cases of fracture involving the knee or long bones or amputations in which the patella was replaced to form the base of the stump, the parts being held immovably in place by a long, sharp, steel nail driven temporarily into the bone.

24. **Roentgenotherapy of Lymphadenitis.**—Barjon gives photographs of five patients with inflamed or suppurating cervical lymph-nodes before and after treatment with the Roentgen rays. The method is painless while its action, he says, is more rapid and more certain than any other measures in vogue to date, curing lesions in a few weeks which have resisted other methods of treatment for years. There is no scar or disfigurement left and the general health improves as the infectious focus is suppressed. The only by-effect observed in his experience with more than 300 exposures was transient headache after the exposures in a few rare cases. There seems to be no danger of inducing metastasis or spreading the infection, such as has sometimes been ascribed to excision of the lesions. The acute forms are most amenable to the Roentgen rays, young adenoid tissue being peculiarly sensitive to the action of the rays. Chronic, hard lesions require a longer course of treatment, but finally yield; the fibrous cicatricial forms are the most rebellious so that unless the swelling is disfiguring it is better not to attempt to treat it in this way. Cicatricial keloids are very favorably influenced by the Roentgen rays, often subsiding or even disappearing entirely under the exposures. He evacuates the pus or cheesy matter by puncture and aspiration, repeating this as often as necessary, sometimes injecting a modifying solution, supplementing the medical measures by roentgenotherapy, as also when the abscess has broken through the skin.

25. **Pyelography.**—This term has recently been coined for the process of injecting a silver salt into the kidney pelvis for roentgenoscopy. Nogier and Reynard report two cases in which this alone cleared up the diagnosis, revealing intermittent hydronephrosis in one case and in the other a small cavity with irregular edges, undoubtedly of tuberculous origin, and thus permitting radical treatment in time.

27. **Plastic Operations on the Urethra.**—Leriche comments on the success of plastic operations on the urethra in dogs, substituting defects by a segment of the saphena, but he states that he has been unable to find any record of a clinical instance of vein grafting for this purpose free from fistula or other complication entailing recurrence of the trouble in time. The experiences in this line published by other surgeons confirm his own conclusions from three clinical cases; namely, that the vein graft to be successful must not be sutured to the urethra but a special channel must be bored for it outside, thus bringing all its outer surface into contact with raw, live tissue and facilitating aseptic healing. Or the grafting operation might be deferred until the urethra has had a chance to heal by having the course of the urine diverted for a few months. Then the urethra could be tunneled and the vein graft carried into it as into a new channel; the graft-holder should be left in place for a week and both ends of the graft should project at first for some distance beyond the gap to be filled. The graft will then grow into place without the necessity for suture, and it may be possible thus to make a new urethra with less tendency to stricture and of a more constant caliber than would be possible with a Nové-Josserand skin-flap tube or Cantas' modification of this technic, twisting around from the inside of the thigh a flap of skin including in it a stretch of the internal saphena, and thus obtaining a pedunculated vein flap.

Obstétrique, Paris

November, IV, N. S., No. 11, pp. 953-1111

28 *Cervical Placenta Prævia. (Contribution à l'étude de la grossesse isthmico-cervicale.) L. Devraigne.
29 *Conservative Cesarean Section After Rupture of the Membranes. Le Lorier.

28. **Cervical Placenta Prævia.**—Devraigne reviews the literature which has been accumulating during the last sixteen years on implantation of the placenta below the internal os, the isthmic-cervical variety of placenta prævia. The possibility of implantation below the internal os is denied by some, but Devraigne reports a case in which the fetus had developed entirely below the internal os, the body of the uterus being entirely free. The patient was a woman of 35 and this was her sixth pregnancy. She ceased to feel any movement from the fetus after the sixth month and she was artificially delivered of a dead fetus which had developed exclusively in the distended isthmus. Tarnier has reported a similar case, only in his there was a complicating fibroma in the distended isthmus. In the sixteen cases of isthmus pregnancy reviewed, various measures were applied. The prognosis is extremely grave for both mother and child, only two of the infants being born alive and only six of the fifteen women surviving. The diagnosis may be difficult; all the clinical history can be summed up in the one word "hemorrhage." The main point is to bear the possibility of such a contingency in mind. The only means to arrest the hemorrhage under these conditions is by removal of the uterus; the patients are usually women who have borne several children. The precautions against puerperal complications must be redoubled in cases of placenta prævia; with fetid lochia he advises injecting a solution of iodin and hydrogen dioxid.

29. **Conservative Cesarean Section After Rupture of the Membranes.**—LeLorier reviews nineteen cases of Cesarean section after rupture of the membranes; notwithstanding that the amniotic fluid was septic and the uterus had been entered in some cases, the outcome was favorable for both mothers

and children. The maternal morbidity was 31 per cent., but the course of the cases showed that the classic technic offers all the advantages of the new extraperitoneal methods, while the technic is far simpler. He advises drawing the uterus out and suturing with the Lembert technic. Whether to drain or not is still open to discussion. He gives the details of his nineteen cases.

Presse Médicale, Paris

December 9, XIX, No. 98, pp. 1013-1024

30 Salvarsan in Relapsing Fever. (Traitement du typhus recurrent par le dioxydiamidoarsenobenzol.) Ardin-Delteil, L. Nègre and M. Raynaud.
31 Evolution of Matter. (L'évolution de la matière dans l'univers.) L. Matout.

December 13, No. 99, pp. 1025-1032

32 *Syndrome from Intestinal Arteriosclerosis. L. Lagane.
33 Connection Between Arterial Pressure and Viscosity of the Blood. (Pression artérielle et viscosité sanguine.) A. Martinet.

32. **Arteriosclerosis of the Intestine.**—Lagane discusses the syndrome liable to be induced by sclerotic degeneration of the walls of the arteries or arterioles in the mesentery or bowel. The attacks resemble angina pectoris in many of their features, especially the intensely painful cramps accompanying the transient paralysis of the segment of the bowel involved and consecutive meteorism. During the attack the abdominal aorta may be so sensitive that even the weight of the clothing is unbearable. The pain seems to be the result of some physical exertion or emotion which has induced a sudden modification in the circulation through the sclerotic region—an abdominal angina. Differentiation is difficult unless manifestations of arteriosclerosis elsewhere give the clue. When the arterioles are chiefly involved, the circulation is more permanently disturbed, and edema, interstitial hemorrhage and even ulceration may occur. Without involvement of the arterioles, conditions generally soon right themselves clinically. The syndrome has been called by various writers abdominal apoplexy, intra-abdominal intermittent claudication, intestinal miopragia and intermittent ischemic dysperistalsis. The intestinal crises may coincide or alternate with similar disturbances in the stomach from similar arteriosclerotic lesions in the vessels of the nerves. A retrospective diagnosis may be possible from the benefit of medication with nitrites or diuretics in the acute or chronic phases. Some have reported benefit and clearing up of the diagnosis under tincture of strophanthus alone or associated with theobromin. The condition is very liable to be mistaken for mucomembranous enterocolitis, neuro-arthritic diarrhea, the diarrhea of uremia or cirrhosis, pylephlebitis, intestinal cancer, peritonitis, lead colic, appendicitis or obstruction of the intestines. Mesenteric atheroma alone induces spasm of the intestine by irritation of the nerves or by ischemia of the intestine, with resulting thrombosis. Involvement alone of the arteries in the wall of the bowel induces limited apoplexy or ulceration, while the two forms combined lead to infarction of the intestine and in a later stage to local gangrene.

Revue de Gynécologie, Paris

November, XVII, No. 5, pp. 401-496

34 *Mechanism and Treatment of Genital Prolapse. (Mécanisme et traitement du prolapsus génital.) H. Trent.
35 *Kidney Functioning Before and After Nephrectomy for Tuberculosis. (Comparaison du fonctionnement rénal avant et après la néphrectomie pour tuberculose.) M. Chevassu and O. Moreno.

34. **Mechanism and Treatment of Genital Prolapse.**—Trent argues that relaxation of the anterior wall of the vagina is the main factor in genital prolapse, and that treatment should aim essentially to prevent inversion of this part of the vagina. Efforts to suspend the uterus are not the logical method of treating the condition, except in the absolutely exceptional cases in which the prolapse of the uterus is primary. A plastic operation on the vagina is generally all that is needed to counteract the tendency to prolapse. This is accomplished by making the anterior wall of the vagina narrower and by strengthening its supports. He does not operate until after failure of persevering treatment with a hard rubber pessary, first a thin ring, then a Prochownik pessary—a shallow perforated saucer—and then a wide ring. The convexity of the Prochownik pessary is turned upward, to fit against the anterior wall of the vagina. The main point is to select the pessary of the proper size and not get it too large. It should hold up well the anterior wall of the vagina, even during straining, while it should not distend the posterior wall. If the posterior wall feels like a bellying sail, the pessary is too large and should be changed for a smaller size. A total diameter of 7 cm. is the usual size. The diameter was between 6.5 to 8 cm. for 87 per cent. of his 167 patients in this class. He orders the woman to take a tepid vaginal douche daily, and have the pessary cleaned every three months or at longer intervals according to the degree of vaginal secretion. Trent advised operative treatment in only 16.5 per cent. of 97 private patients and in 14 per cent. of his 1,036 office patients during the same period. Reexamination of 103 in the latter group showed excellent conditions in 82 per cent. Only when there is inversion of the posterior wall of the vagina are operative measures indicated from the start. This is the case also when the supporting muscles are entirely atrophied so that they afford no support. In regard to the Schauta-Wertheim technic, he states that the prolapse recurred in 24 per cent. of the cases in which he applied this measure. He found recurrence in nineteen of seventy-nine patients operated on by various technics from three to eighteen years ago, and in three of his operative cases the women died from postoperative pneumonia or pulmonary embolism or degeneration of the heart and kidneys, for which the anesthesia and loss of blood were probably responsible. Some women complain of disagreeable or painful paresthesia in the field of operation and others that the vagina is abnormally narrow. These and other reasons compel him to preach with greater insistence the superiority over all other measures of the pessary treatment he advises.

35. **Kidney Functioning After Nephrectomy.**—Chevassu and Moreno give graphic tracings of the metabolic and other clinical findings in four cases in which one kidney had been removed for tuberculosis. The functioning of the remaining kidney is most instructively shown by Albarran's experimental polyuria and Ambard's formulas. Albarran's test is the rapidity with which 750 gm. of ingested water is passed out of the system; this test shows the water-eliminating power of the kidney, while the ability to eliminate urea is shown by comparison of the proportions of urea in the blood and in the urine. Ambard has found that when the kidney is excreting urea at a constant concentration, the output varies proportionately to the square of the concentration of urea in the blood. When the blood proportion is constant but the urine proportion variable, the output is inversely proportional to the square root of the concentration of urea in the urine. On the other hand, when the proportion in both blood and serum is variable, the output varies directly proportionate to the square of the concentration of urea in the blood and in inverse proportion to the square root of the concentration of urea in the urine. The findings with these two tests throw light on the prognosis, showing the cases in which the progress is onward and upward and those doomed to go down sooner or later.

Semaine Médicale, Paris

December 20, XXXI, No. 51, pp. 601-612

36 Visible or Palpable Pulse in Subclavian Arteries as Sign of Sclerosis of the Thoracic Aorta. (Les chocs des artères sous-clavières comme signe de la sclérose de l'aorta thoracique.) C. Trunecek.

Berliner klinische Wochenschrift

December 18, XLVIII, No. 51, pp. 2285-2332

37 *Artificial Pneumothorax in Treatment of Tuberculosis. (Ueber die Behandlung der Lungentuberkulose mittels künstlicher Pneumothoraxbildung.) F. Klemperer and J. W. Samson.
38 Statistics in Regard to Tuberculosis in Germany. (Zur Tuberkulosestatistik.) M. Mosse.
39 *Prophylaxis of Thrombosis and Embolism. H. Küster.
40 Advantages of Saphenectomy in Treatment of Varices. (Einiges über Krampfadern.) E. Unger.
41 *Exophthalmic Goiter. (Die Basedow'sche Krankheit.) H. Coenen.
42 *Public Stations for Therapeutic Rest in the Open Air in the Large Cities. (Liegekurgärten in der Grossstadt.) E. Bratz.
43 *Recent Progress in Knowledge of Tropical Diseases. (Praktische Ergebnisse aus dem Gebiete der Tropenkrankheiten.) H. F. W. Hoffmann. Commenced in No. 50.

37. **Induced Pneumothorax in Pulmonary Tuberculosis.**—Klemperer's experience confirms the practical importance of this method of treating severe unilateral tuberculous lesions. He reports four cases and discusses the special indications and technic, regarding it as not a particularly serious or dangerous method of treatment. He would restrict it to cases in which the disease does not seem to be arrested by the ordinary measures, including tuberculin treatment, but continues a slowly progressive course, not waiting, however, until the lesion has entered its final phase. The best results have been obtained in the moderately severe cases in a comparatively early stage.

Samson declares that in a certain number of cases the induced pneumothorax produces results unattainable by any other measure, and he urges its wider adoption in many otherwise incurable cases of tuberculosis. He ascribes the first suggestion of the procedure to the English physician Carson, in 1821; adding that Dauss rescued the suggestion from oblivion but Forlanini in Italy and Murphy in America suggested it anew and applied it in practice. Samson has applied the method in seven cases, making seventy injections of nitrogen in all, his experiences confirming those reported by other writers. The most striking and direct effect is the subsidence to normal of the temperature; the expectoration is also promptly and materially reduced, the pulse becomes slower and the tendency to cyanosis and hemoptysis is no longer observed. Some writers have reported apoplectiform symptoms during the puncture; Forlanini regards them as a reflex neurosis, a "pleura shock" or "pleura eclampsia," but Samson thinks that the trouble is due to gas embolism which can be avoided by a preliminary incision rather than blind puncture. The case reports follow in the next number.

39. **Thrombosis and Embolism.**—Küster deplores the persisting frequency of thrombosis and embolism in spite of all our modern progress. At the Breslau gynecologic clinic in the last five years there have been fifty clinically appreciable cases of thrombosis and embolism, and twenty-two terminated fatally. No premonitory symptoms could be detected in any instance, and there was nothing to sustain the assumption that the coagulating property of the blood had anything to do with the development of thrombosis. Far more probable is Aschoff's theory that the thrombi develop from purely mechanical causes, some eddy or back-water current permitting a deposit of blood-platelets at points where the current is peculiarly sluggish. This assumption is very encouraging as it points the way to successful prophylaxis; early passive and active exercising of the legs starts the blood stream and washes away the deposits. At the Freiburg and Vienna clinics no case of thrombosis has developed among 5,000 parturients allowed to leave the bed from the first to the third day after delivery, while at Basel seventy-three cases of thrombosis developed among 10,000 parturients kept a week or more in bed. Küster remarks, however, that it is not so much a question of leaving the bed early, as it is of mild exercising of the legs, thus changing the points for the eddies and backwater currents and sweeping away accumulated deposits before they reach any size.

41. **Exophthalmic Goiter.**—Coenen says in the course of this review of the present status of surgical treatment of this affection that some patients long clinically and subjectively entirely cured still show a distinct lymphocytosis even seventeen years after the operation. Complete return to normal on the part of the blood is rare, so that postoperative lymphocytosis cannot be regarded as an indication for further surgical measures. He quotes Garrè to the effect that a persistent thymus may be responsible for exophthalmic goiter; marked improvement of the general symptoms and complete restoration to normal of the heart action and blood-picture followed the removal of the thymus in a case of florid exophthalmic goiter. This experience can scarcely be explained otherwise than by assuming that the persistent thymus cooperates in the development of the Basedow syndrome, especially the changes in the blood-producing system. Experimental research has confirmed this view, and this factor, the thymus, must not be disregarded in future, even if it serves only as an index for the lymphatism.

42. **Public Stations for Rest in the Open Air.**—Bratz thinks that much more might be accomplished in the treatment of tuberculosis by providing in the cities a number of readily accessible roof gardens or parts of parks where persons with incipient tuberculosis might spend an hour or two each day, sheltered from the gaze of the public, without interfering too much with their occupation. He refers in particular to teachers.

43. **Sleeping Sickness Conveyed by Glossina Morsitans.**—In this review of recent progress in our knowledge of tropical diseases, Hoffmann states that according to telegraphic advices from East Africa, Taute has found that the *Glossina morsitans* is able to serve as the host for the trypanosoma of sleeping sickness. Six out of sixteen monkeys developed sleeping sickness after they had been bitten by groups of forty glossinas of this species, bred in the laboratory.

Correspondenz-Blatt für Schweizer Aerzte, Basel

December 10, XLI, No. 35, pp. 1217-1264

44 *Bronchoscopy. (Bronchoskopisches.) E. Gallusser.

44. **Bronchoscopy and Direct Medication.**—Gallusser comments on the beneficial action of direct medication of the bronchi with the aid of the bronchoscope, as he applied it in two cases of asthma rebellious for years to all other measures. His patients were two girls of 14 or older, and there has been no recurrence since he sprayed the bronchi directly with a novocain and epinephrin mixture. Ephraim also has reported the cure of chronic bronchitis or asthma in thirty-seven of fifty-eight cases after a single spraying; in twelve other cases the spraying had to be repeated two or three times before the cure was complete. He sometimes used 30 per cent. turpentine for the local application.

Deutsche medizinische Wochenschrift, Berlin

December 14, XXXVII, No. 50, pp. 2313-2360

45 *Traumatic Appendicitis. (Zur Frage der traumatischen Appendicitis.) O. Sprengel.
46 *Nervous Disease in Tobacco Smokers. (Die nervösen Erkrankungen der Tabakraucher.) L. v. Frankl-Hochwart. Commenced in No. 49.
47 Congenital Deformities of the Arms and Hands. (Ueber angeborene Verbildungen im Bereiche der oberen Extremität.) P. Glaessner.
48 Varnish for the Hands in Place of Gloves. (Dermagummit als Handschuhersatz.) H. Hellendall. Commenced in No. 49.
49 Behavior of Sugar in Urine Under Salvarsan. (Verhalten des Zuckers im Urin bei Salvarsanbehandlung.) P. Bendig.
50 Treatment of Obstetric Hemorrhage from Atony. (Beitrag zur Behandlung der atonischen Blutung.) E. Partos.
51 Cancer of Ovary in Girl of 5. (Krebs des Eierstocks bei einem fünfjahrigen Mädchen; Ovariotomie.) W. W. Rosanoff.

45. **Traumatic Appendicitis.**—Sprengel declares that there is no instance on record to date of appendicitis due to trauma. He reports the details of two cases which would surely have been regarded as a traumatic appendicitis if the operation had not followed so close on the trauma, the findings showing that it was merely a casual coincidence that a young man with developing appendicitis happened to be kicked in the right side by a horse.

46. **The Nervous Affections of Tobacco-Users.**—Frankl-Hochwart states that he has encountered sciatica in thirty-one cases and neuralgia in the arm in twenty-two others, in all of which excessive smoking seemed to be the essential factor. Tobacco, also, he says, seems to render the motor nerves peculiarly susceptible to the effect of slight trauma, as in the case of a lawyer of 30 who had slight radial paralysis following a strained attitude kept up for several hours in order to see better during a theatrical performance. The man was otherwise healthy and not a drinking man. A merchant of 40 also had slight left peroneus paralysis after playing cards for an evening with his legs crossed. The paralysis subsided in a week under electric treatment. Diffuse pains are more common; Hochwart has had 110 cases of this kind, the pain a disagreeable gnawing sensation in the extremities, chest or back. Sometimes the knee-jerk was a little different on the two sides, otherwise the nerve and joint findings were normal. In others some joints were slightly enlarged; it is possible, he

suggests, that nicotin poisoning might afford a predisposition for chronic arthritis. He rather doubts the existence of an actual nicotin polyneuritis, but is convinced that a superposed factor, otherwise harmless, might develop it, and cites three cases possibly of this origin, mentioning further Bury's case in which there was also tobacco amblyopia, and all the symptoms subsided when the man of 35 gave up smoking. Bury has stated that in two other cases of tobacco amblyopia the men did not have quite normal control of certain fingers, and there was some numbness and anesthesia. Hochwart says of intermittent claudication, in which tobacco certainly plays an important rôle, that there must be a preexisting tendency to cardiovascular derangement. Persons affected with this angiosclerotic intermittent dysbasia often present other anomalies in development, and Jews seem to be peculiarly predisposed to it. He has a patient who is an immoderate cigarette smoker, but seems healthy except for a vasomotor neurosis in the legs; they tire exceptionally easily as he walks, but the arterial system seems normal, as also in a second case of the kind, in a man of 24, the symptoms suggesting Dejerine's intermittent claudication of the spinal cord, with other symptoms indicating nicotin poisoning and the whole train subsiding on refraining from smoking. These patients smoked forty cigarettes a day or more, one having commenced to smoke at the age of 10. Tremor was noted in about a tenth of the total cases suggesting nicotin poisoning. Among twenty-eight patients with writer's cramp, eighteen were moderate and seven excessive smokers, only three not using tobacco. His records contain seventy cases of anomalies in the genital functions in young men who smoked a great deal, generally cigarette smokers; in a certain proportion these sexual disturbances were the only manifestations of nervous trouble. A few had some inherited nervous taint. The disturbance disappeared in a number of these patients on abstinence from tobacco. He discusses further the action of the nicotin on heart and respiration, and concludes his article by emphasizing the fact learned from his experience that the localization of the toxic action of nicotin is very much like that of syphilis. There may be changes in the optic nerve, weakness of memory, transient aphasia, vestibular vertigo, tremor, hemianopsia, hemianesthesia or ataxia; this fact suggests that we should not be too hasty in classifying such symptoms in hard smokers as neurorecurrences of the syphilis. In forty-five cases of apoplexy in syphilitics, 44 per cent. were hard smokers; and 34 per cent. were great or immoderate smokers among his 583 patients with tabes or general paralysis. Frankl-Hochwart is privat-docent of neuropathology at Vienna, and he has been collecting data for sixteen years on the nervous affections of tobacco-users. The present article is based on 1,500 cases from his private practice but he excludes from consideration 700 patients in whom some other toxic element cooperated, especially diabetes, syphilis or alcoholism.

Deutsche Zeitschrift für Chirurgie, Leipsic

November, CXII, Nos. 4-6, pp. 265-586

52 Bacteriology of the Blood in Anthrax. (Die bakteriologische Blutuntersuchung beim Milzbrand des Menschen.) G. Becker.
53 *Hypernephroma. (Zur Kenntnis der Hypernephrome.) M. T. Kostenko.
54 Experimental Goiter and Goiter Heart from Drinking-Water. (Weitere histologische Befunde bei durch Wasser erzeugten Rattenstrumen und Kropfherzen.) E. Bircher.
55 *Limits of Successful Resection of the Small Intestine. (Experimentelle und literarische Studien über die ausgedehnten Dünndarmresektionen.) Y. Soyesima.
56 Scarlet Red in Therapeutics. (Der heutige Stand der experimentellen und therapeutischen Verwertung der Scharlachfarbstoffe.) V. Schmieden and E. Hayward.
57 Technic for Access to Suture the Heart. (Beitrag zur Wahl der Methode der Freilegung des Herzens zur Naht.) O. König.
58 *Enterostomy in Peritonitis and Ileus. (Ueber die Enterostomie als eine lebensrettende Hilfsoperation bei Peritonitiden und Darmokklusionen.) A. Krogius.
59 *Small Intestine for Plastic Operations on the Esophagus. (Zum Ersatz der Speiseröhre durch Dünndarmtransplantation.) C. Ritter.

53. **Hypernephroma.**—Kostenko reports from Charkow twenty-two cases, including six of what he calls the typical benign adrenal hypernephroma. He reviews in particular the Russian literature on the subject, thirty-eight illustrations accompanying the article. He insists on the classification of typical and atypical, and on the similarity of the growths as they occur in either the kidney or the adrenals. The structure of the typical growths closely resembles the cortex of the normal adrenal, but the atypical show secondary changes in stroma and parenchyma. Tumors of similar structure are also encountered in other organs, in the liver, female genitals, pelvic cellular tissue and elsewhere, all evidently originating in aberrant adrenal cells. Sometimes the resemblance to normal adrenal tissue is more striking in the metastases than in the primary growth.

55. **Extensive Resection of Small Intestine.**—Soyesima discusses the limits of successful resection of the small intestine, basing his conclusions on the ultimate outcome in fifty-one cases on record and considerable personal experimental research on dogs. The outcome seems to depend more on the proportional length of the segment resected than on the absolute number of feet. Brenner's was probably the most extensive successful resection yet attempted, as he removed 83.6 per cent. of the entire small intestine, 540 cm., from a woman of 61 with incarcerated femoral hernia. At the necropsy of the patient nearly three years afterward, it was found that only 106 cm. had been left; the woman succumbed to progressive marasmus. Dogs seem to tolerate without harm resection up to 90 per cent., but 80 per cent. seems to be the limit in man.

58. **Enterostomy in Peritonitis and Ileus.**—Krogius emphasizes the life-saving importance of enterostomy, especially in the cases of obstruction of the bowel coming on a few days after a laparotomy for purulent peritonitis. The trouble in these cases may be merely a circumscribed paralysis of a small segment of the intestine, induced by the local action of the peritonitis. In other cases a similar circumscribed paralysis may develop or persist after a mechanical obstruction has been removed, although there may be no generalized peritonitis. The inability of the intestine to pass its contents along may be due to still other causes, such as a fatigued condition from prolonged distention, injury from eventration, tumors or tuberculous process. Whatever the cause, salvation lies only in recognizing the exact nature of the trouble in time and remedying it by an immediate enterostomy. The lack of high fever and symptoms of sepsis and the comparatively slow and good pulse, speak in favor of a circumscribed paralysis. A secondary mechanical obstruction from adhesions or other cause is generally accompanied with intense pains and increased peristalsis, and there is generally a longer interval after the operation. A laparotomy is required in this case, but for the circumscribed paralysis an enterostomy is all that is needed, and Krogius advises it in prophylaxis in dubious cases, especially when the bowel has been much distended. The opening should be made above the paralyzed stretch, and thus in the small intestine as a rule. Only when the large intestine is involved is a fistula into the cecum indicated. If the fistula is made by the Witzel technic it can be applied high up on the small intestine without danger of inanition. He found a primary enterostomy apparently a life-saving measure in thirteen cases, the details of which he tabulates. In twenty-eight other cases the fistula worked well but the patients succumbed to various complications elsewhere. In forty-three other cases the fistula did not do much good and the patients died, necropsy showing extensive diffuse peritonitis. He remarks that although 66 per cent. died of the total 107 cases in which he has applied enterostomy as a primary or secondary measure, yet the fact that 34 per cent. were saved, who in all probability would have succumbed, speaks volumes for the benefit from it.

50. **Utilization of Small Intestine as Substitute for the Esophagus.**—Ritter's experimental work has apparently established that it is possible gradually to accustom a loop of intestine, drawn outside the body from its normal sheltered nook, to changes in circulation which would inevitably entail gangrene if they occurred within a brief period of time. He found it possible to keep a loop of small intestine, 60 cm. long, in good vital condition after it was drawn outside the body, ready to utilize as a substitute for the esophagus. The essential point is to ligate the mesenteric vessels one at a

time, with sufficient intervals to permit adjustment to the novel conditions. By this means he was able to isolate from its mesenteric vessels a stretch of intestine 37 cm. long, its circulation proceeding satisfactorily and its aspect normal, suitable for free transplantation.

Medizinische Klinik, Berlin

December 17, VII, No. 51, pp. 1963-2004

60 Strabismus. (Ueber Entstehung und Behandlung des Schielens.) C. Adam.
61 *Pain in Sacral Region and Back. (Diagnose des Kreuz- und Rückenschmerzes.) S. Erben.
62 Treatment of Eclampsia. (Zur Behandlung der Eklampsie auf Grund von über 100 selbstbeobachteten Fällen.) F. Engelmann.
63 Occupational Neuroses in Telephone Operators. (Prognose und Therapie bei den Unfallneurosen der TelephonistInnen.) E. Beyer.
64 Technic for Endovesical Removal of Bladder Tumors. (Zur Therapie der Blasengeschwülste.) L. Casper.
65 Plastic Operation on Anal Sphincter. (Die Sphincterplastik nach Schoemaker.) P. Frangenheim.
66 Experimental Research on Curative Action of Superheated Air on Arthritis with Effusion. (Einfluss der Heissluftbehandlung auf Gelenkergüsse.) E. Schepelmann.
67 Behavior of Greater Omentum During Peritonitis and Enteritis. (Verhalten des grossen Netzes bei der peritonealen und intestinalen Infektion.) J. Koch.
68 General Principles of Treatment of Acute Dermatitis. (Dermatologie.) F. Pinkus.

61. **Diagnosis of Sacral Pain and Backache.**—Erben cites the points which differentiate lumbago from the rachialgia of neurasthenia, especially the transverse, low location of the pain, its sudden onset, its aggravation by straining, by turning in bed, the lack of especially tender points, of exacerbation under the influence of emotions and the frequent coincidence of curvature of the spine. The curvature is more of an acute angle than with scoliosis of other origin, and the abnormal attitude is a defense against pain-producing movements and not due to paralysis or muscular contracture. Erben is convinced that the lumbago of laborers is the result of dragging out of place one or more articulations in the vertebral column. The resulting disturbance subsides in the course of a week or two or three weeks at most, but it is liable to recur on slight provocation months or years later. If a single attack lasts longer than this, there is probably some incipient spondylarthritis or sliver of bone sprung from some spinous process, or some new growth in a vertebra. Chronic lumbago may be a manifestation of osteomalacia, cancer in the rectum, intradural tumor, tabes, leukemia with myeloma, polymyositis, neuritis or other general affection or, if the pain is unilateral, some local lesion may finally reveal itself. Increase of the sacral pain with menstruation suggests some gynecologic lesion. Acute sacral pain radiating into the leg, with fever, and increased by pressure is a premonitory sign of small-pox, while pain at the sacro-iliac articulation seems to be a constant accompaniment of Malta fever. Erben's article is accompanied by roentgenographs of several typical cases, and he discusses the various affections liable to induce pain in the back and its characteristic features in the different conditions. Mischief in the heart or aorta may long manifest itself merely by pain in the back, shoulder or scapula on one or both sides; exertion increases the pain which is not the case with the rachialgia of neurasthenia. If the pain in the shoulder subsides under diuretics or nitroglycerin, some organic affection in the aorta or coronaries may be accepted. Lesions in the posterior mediastinum are liable to induce intrascapular pain; lack of aggravation under diagnostic injections of tuberculin, apparently excludes a tuberculous process. The radiating pain with gastric ulcer and pancreas disease is generally in the left shoulder or scapula, while with gall-bladder trouble and appendicitis pain is felt in the right shoulder. If the pain in the back is increased by drinking cold water, cholelithiasis or ulceration in stomach or duodenum should be suggested, or an ulcer in the bowel below, from exaggeration of the peristalsis. With stenosis of the pylorus there is frequently pain in the left scapular region two or three hours after a meal. With a lesion in the cecum, the pain in the abdomen and right shoulder is aggravated by extreme stretching of the right leg, which is not the case with cholelithiasis, nephrolithiasis or lead colic. In case of pain in the abdomen and back at the same time, a little morphin will usually deaden the radiated pain while scarcely modifying the primary pain. With calculi in the kidney the pain is intermittent, while the pain with paranephritis may resemble that with lumbago of the upper lumbar vertebræ, but the flank is not tender with the latter as with paranephritis.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXIV, No. 1, pp. 1-194. Last indexed December 23, p. 2114

69 *Pathogenesis of Acute Disease of the Pancreas. (Ueber die Pathogenese der akuten Pankreaserkrankungen.) E. Polya.
70 Hair-Ball in Stomach. (Fall von Trichobezoar des Magens bei Infantilismus.) F. Hüttenbach.
71 *Joint Lesions in Tabes. (Zur tabischen Arthropathie.) M. Krüger.
72 Influence of Thyroid Treatment on Metabolism of Nitrogen and on Blood Picture. (Ueber den Einfluss von Basedowstruma- und Kolloidstrumapräparaten und Thyreoidin auf den Stickstoffwechsel und auf das Blutbild von Myxödem unter Berücksichtigung ihres Jodgehaltes.) A. Fonio.
73 *Consequences of Thrombosis in Portal System. (Ueber die Folgen der Thrombose im Gebiete des Pfortadersystems.) R. de J. de Jong.

69. **Pathogenesis of Acute Disease of the Pancreas.**—Polya devotes eighty-four pages to the description of his extensive experimental research, tabulating the details of 178 different experiments, supplementary to forty-six previously published. The work was done at the pathologic institute at Budapest. He found that the albumin-digesting pancreas ferment, trypsin, is in fact able to induce acute disease of the pancreas, but that the preceding stage, the trypsinogen, is harmless. Only when this trypsinogen is activated and thus transformed into trypsin, does damage result. He has established, however, that bacteria are able to induce this activation. The results of his research, therefore, sustain both the ferment theory and the parasitic theory of the pathogenesis of acute disease of the pancreas.

71. **Joint Lesions in Tabes.**—Krüger's experience with eleven patients with tabetic arthropathies, involving the knee in seven, throws light on the origin, clinical picture and treatment. The special feature of the arthritic process is its progressive character; the disturbances in gait expose the joints to trauma to an exceptional degree and interfere with healing. He comments on the typical Roentgen-ray findings; an extensive destructive and a proliferating process run their courses together and lead to abnormal bone growth outside of the capsule. The whole trouble frequently begins with an erosion of the bone; this is often distinctly evident in the Roentgen picture. The Nonne reaction is simple and often extremely useful, especially when there are no other symptoms of tabes. Measures to cure the underlying syphilis should be tried in every case, particularly when there is reason to suspect a gummatous lesion. The joint should be immobilized in the early stages. Krüger has never witnessed any benefit from resection of the joint. If an operation is indispensable, exclusion of the diseased joint is usually indicated. Oehlecker has reported good results from the Pirogoff operation with neuropathic disease of the ankle. As a rule, simple amputation is preferable to resection of the joint, although osteoplastic amputations might be advisable in certain cases.

73. **Consequences of Portal Thrombosis.**—De Jong gives an illustrated description of the necropsy findings in nine cases of thrombosis in the portal system, comparing them with the clinical course of the cases and showing the clinical picture at the time and later which must inevitably result from certain localizations of the thrombosis.

Münchener medizinische Wochenschrift

December 12, LVIII, No. 50, pp. 2649-2696

74 Action of Epinephrin and Pituitary Extract on Surviving Rabbit Uterus. (Ueber die Wirkung des Adrenalins und Pituitrins auf den überlebenden Kaninchenuterus und über die Verwertbarkeit der Uterusmethode für den Adrenalinnachweis im Serum.) W. Falta and G. B. Fleming.
75 Bacteriology of the Blood with Sinus Thrombosis. (Bakteriologische Blutuntersuchungen bei Sinusthrombose.) H. Herzog.
76 Dosage of Roentgen Rays by Artificial Light. (Beitrag zur quantitativen Messung der Röntgenstrahlen in der Therapie.) H. Ritter.
77 Umbilical Funicular Hernia. (Zur Pathologie und Therapie des Nabelschnurbruches.) W. Hannes.
78 Anesthesia in Obstetrics. (Zur Schmerzlinderung normaler Geburten.) S. Weinmann.

79 *Guaiacol and Arsenic in Tuberculosis. (Die Guajakol-Arsentherapie der Tuberkulose.) L. Nürnberger.
80 Salvarsan in Scorbutus. (Ueber Salvarsanbehandlung bei Skorbut.) M. Tuschinsky and G. Iwaschenzow.
81 Cerebrospinal Meningitis as Recurrence After Salvarsan. (Zerebrospinalmeningitis als Rezidiv nach Salvarsan.) E. Oberholzer.
82 Localization of the Speech Centers. (Beitrag zur Frage der Lokalisation der Sprachzentren im Gehirn.) E. Borchers.

79. **Guaiacol and Arsenic in Treatment of Tuberculosis.**—Nürnberger's experimental work failed to show any bactericidal effect from guaiacol and Fowler's solution, alone or together, on the tubercle bacilli in glycerin-agar cultures, while the course of tuberculosis in rabbits and guinea-pigs did not seem to be modified in the least by them.

Wiener klinische Wochenschrift, Vienna

December 14, XXIV, No. 50, pp. 1728-1758

83 *Hematoporphyrin in the Urine in Lead Poisoning. (Zur Kenntnis der Hämatoporphyrinurie bei der Bleivergiftung.) A. Götzl.
84 *Suture of the Heart. (Ueber Herzverletzungen.) E. Ranzi.
85 *Plastic Operations on the Esophagus. (Ueber den künstlichen Ersatz der Speiseröhre.) P. Frangenheim.
86 Treatment of Talipes. (Zur Klumpfusstherapie.) O. Semeleder.
87 Hernia of the Bladder. (Hernia properitonealis vesicalis.) O. Hanasiewicz.

83. **Experimental Radiologic Research on Lead Poisoning.**—Götzl's work confirms Perutz' discovery that certain forms of intensive artificial light induce a syndrome suggesting hydro estivale, when the animals are under the influence of sulphonal poisoning. Götzl used lead instead of sulphonal, but the sensitization and outcome were the same, when the lead poisoning had reached the point of hematoporphyrinuria.

84. **Suture of the Heart.**—Ranzi says that since Rehn published in 1896 the first successful case of suture of the heart, 223 cases of operative treatment have been recorded, with a mortality of 53.3 per cent. To this number Ranzi adds three cases of a stab wound and three of a firearm-wound of the heart, with operative treatment at von Eiselsberg's clinic at Vienna, but only one of the patients survived. The others were practically moribund when operated on. In two cases the operation was deferred for several hours as the anemia did not seem theatening, but the outcome showed that it might have been better in these cases to have operated at once. In the one successful case five hours had elapsed before the operation but the anemia was not very intense. In some of the cases on record the heart action had been entirely arrested by the accumulated blood, but the heart recuperated and started to beat again as soon as the blood was removed. This did not happen in the one case of this kind in Ranzi's experience.

85. **Artificial Esophagus.**—Frangenheim applied the Bircher technic to make an artificial esophagus out of a roll of skin, in a case of cancer in the esophagus. A fistula developed at the junction of the stomach and the new esophagus, and gastric juice and food from the esophagus escaped through the fistula, preventing healing. He thinks that this technic is doomed to failure unless the junction at this point can be made watertight, and for this he suggests utilizing a segment of small intestine, the combination of the Bircher tube plus a small segment from the small intestine offering unusual advantages. It is a difficult matter to get a segment of small intestine long enough to reach the whole way to the throat without danger of gangrene, but the above combined technic avoids the drawbacks of the other methods while retaining their special advantages.

Gazzetta degli Ospedali e delle Cliniche, Milan

December 10, XXXII, No. 148, pp. 1563-1578

88 The Morgagni Bicentennial. (Ricordiamo Giovanui Batista Morgagni.) A. de Giovanni.
89 The Wassermann Reaction in Diseases of the Liver. (L'importanza della sierodiagnosi di Wassermann nelle malattie del fegato.) M. Marzemin.

December 12, No. 149, pp. 1579-1586

90 Santonin in Treatment of Diabetes Mellitus. (Sulla cura del diabete mellito con la santonina.) D. Miotto.

Riforma Medica, Naples

December 11, XXVII, No. 50, pp. 1373-1400

91 *Stomach Disease of Mental Origin. (Psicopatie gastriche e vomiti incoercibili.) A. Murri.
92 The Cerebrospinal Fluid in Diagnosis of Syphilis. (Sull'importanza della citoscopia cefalo-rachidiana nei sifilitici.) U. Sorreutino. Commenced in No. 49.

91. **Psychic Gastric Disturbance.**—Murri cites some interesting cases in which an attack of "rose-cold" was brought on by holding in the hand an artificial rose, or an acute attack of nervous coryza by the sight of each glacier seen in crossing the Alps. These and similar instances emphasize the psychic origin of certain affections, generally of peripheral origin, but in the predisposed liable to occur from mental impressions alone. This is the explanation he offers for some cases of stomach disturbances and uncontrollable vomiting, saying that the stomach and intestines are just as liable to be the seat of these psychic affections as the nose. He remarks parenthetically that the practice of medicine is not a calm lake where one can lazily drift; it is rather a tossing sea where the physician has to be on the alert to keep his balance, grasping at theories to hold by and quick to seize on the true and disregard the false in each. He reports a case of uncontrollable, incessant vomiting for over two months in a man of 34 who had had business and family worries. No cause for the vomiting could be discovered; it resembled the cyclic, recurring vomiting of infants, and Murri is inclined to regard the case as the equivalent in an adult of the uncontrollable vomiting of infants. The accompanying acetonemia confirms this view, as also the absence of any known cause. The only difference was that the vomiting was incessant, lacking the cyclic character of the affection in infants. The nervous origin of the trouble seems beyond question, he thinks; the patient displayed other signs of irritability of the nervous system, tachycardia, arhythmia, slightly abnormal temperature, and a preceding period of anorexia and defective digestion.

Upsala Läkareförenings Förhandlingar, Upsala

XVII, Nos. 1-2, pp. 1-140. Last indexed November 4, p. 1578

93 Research on Certain Optical Illusions. (Om några synillusioner: I. Charpentiers illusion; II. Exners punktrörelse.) H. Öhrvall.
94 Medical Impressions of German Insane Asylums. (Reseintryck från några tyska sinnessjukanstalter.) E. Vestberg.
95 Influence of Osmotic Pressure on Development of Frog Embryo. (Osmotiska tryckets forhållande hos Rana temporaria under utvecklingen efter geléhöljenas genombrytande.) E. L. Backman and C. G. Sundburg.
96 Action of Electric Current on Nerves of Taste. (Några undersökningar angående den elektriska smaken.) G. Heüman.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Lehrbuch der Therapie innerer Krankheiten. Herausgegeben von Dr. Paul Krause, O.Ö. Professor und Direktor der Medizinischen Universitäts-Poliklinik in Bonn, und Dr. Carl Garrè, O.Ö. Professor und Direktor der chirurgischen Universitäts-Klinik in Bonn. Vol. 2. Spezielle Therapie innerer Krankheiten. Paper. Price, 10.50 marks. Pp. 712, with 10 Illustrations. Jena: Gustav Fischer, 1911.

Arbeiten aus dem Pharmazeutischen Institut der Universität Berlin. Herausgegeben von Dr. H. Thoms, Professor und Direktor des pharmazeutischen Institutes der Universität Berlin. Eighth Volume. Cloth. Pp. 280. Berlin: Urban & Schwarzenberg, 1911.

Retinoscopy (or Shadow Test) in the Determination of Refraction at One Meter Distance, with the Plane Mirror. By James Thorington, A.M., M.D. Sixth Edition. Cloth. Price, $1. Pp. 71, with 61 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

Text-Book of Medical Jurisprudence and Toxicology. By John J. Reese, M.D. Eighth Edition. Revised by D. J. McCarthy, A.B., M.D. Cloth. Price, $3. Pp. 660. Philadelphia: P. Blakiston's Son & Co., 1911

Manual of Operative Surgery. By John Fairbairn Binnie, A.M., C.M. (Aberdeen). Fifth Edition. Cloth. Price, $7. Pp. 1153, with 1,365 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

Studies on Leprosy. Public Health and Marine-Hospital Service of the United States. Public Health Bulletin No. 50, 1911. Paper.

List of the Medical Periodicals Preserved in the Libraries of Ireland. Price, Sixpence. Dublin: Hanna & Neale.

Forhandlinger paa Det 14de Almindelige Norske Laegemöte. 1911. Centraltrykkeriet, Kristiania, 1911.

Proceedings, American Conference of Pharmaceutical Faculties. Twelfth Annual Meeting. 1911.

Transactions of the Berks County Medical Society for 1908, 1909 and 1910.

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MEDICAL IDEALS FOR THE EVERY-DAY DOCTOR *

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NEWPORT, KY.

The ideals of to-day are the history of to-morrow in the embryo.

Who better than the man of medicine may have high ideals? Who better than he may anticipate the history he is helping to make? Who may look back to the history of the past with such pride in his profession? If we may judge the future by the past, if the deeds that men have done are a guide to what they may do, if the record of other days is an inspiration for days to come, if a noble heritage obliges us to nobility, then how great is our debt to the past! How deep is our duty to the present! How lofty is our inspiration for the future!

Every great movement for human welfare in promoting health and vigor has been instigated, advocated, and carried to success chiefly by the medical profession to its own great loss, and often in the face of bitter opposition from the people who were to be benefited. The whole pathway of medical research and progress is marked by the bloody footprints of the martyrs of science—a noble martyrdom as lofty as any the church can boast. Vesalius was persecuted because he dared to study the dead body that he might know and heal the living. Jenner was ostracized and pictured as a devil incarnate. Harvey was described as an infidel. McDowell was threatened with criminal prosecution. Jeffries was mobbed. Flexner is branded a monster. Carroll, Lazear, and others, died to prove the cause and secure the prevention of yellow fever, and the government took twelve years to grant a widow's pension for the service.

No other calling or profession has such a record of constant and unselfish devotion to humanity. When the great Judgment Day shall come, Medicine may stand erect and humbly unashamed, while even the Law and the Church must hang their heads, for Medicine has always been the friend of the people. The Law, designed to safe-guard the liberties of man, has often riveted the fetters of his slavery; and the Church, ordained to give men that highest truth which shall make them free, has at time so far forsaken her high behest as to declare the cruel yoke of the oppressor holy and heaven-sent. No such charge can be sustained against the healing art.

Does some one say "How about the quack doctor?" How about that insatiate vampire that lives by the blood of its victims—that unmitigated villain who robs the foolish and the suffering of money and of life itself? Are we charged with his deeds? Better charge Christianity with the hypocrite. For have not we cast out the quack? Have we not ostracized him? He is none of ours. And when we have done with him, has not the protecting arm of the Law been thrown about him and is he not received into the bosom of the Church? Does he not sit in the congregation of the saints, and do not even your religious papers befoul themselves with his lying and disgusting advertisements? Have not the courts again and again given him the advantage of every known technicality and quibble that he might not have impaired his most sacred liberty of fleecing the people? No, he is none of ours. Some of us have been regarded as unorthodox in religion because we found difficulty in believing in a burning hell; but we are coming around all right. We had to put fire and brimstone back into our creed, for we had no other suitable way of finally disposing of the quack doctor.

What is the spirit that animates the medical mind and must always animate it from time immemorial unto the end of history? Not the greed of gold. The average annual income of Kentucky physicians (and they are as good as others) is less than $1,000. There is hardly a doctor anywhere in the profession who could not instantly double his income, if he but adopted a code of morals that is daily in practice and accepted in the business world. Not the fanfare of fame. Even the greatest among us will be overtaken by his epitaph long before his name is heralded among the people. Not the pride of power, for such power as the doctor attains is exercised for the public good, hampered by political and personal indifference or hostility. Ask Dr. Wiley about power. And yet Medicine goes on healing and preventing diseases, in the main unmindful of money, forgetful of fame, and puny in power.

Do you remember Him who looked down from the slopes of Olivet on the holy city, and wept, and how He stretched forth his hands and said: "Oh! Jerusalem, Jerusalem, thou that killest the prophets and stonest them that are sent unto thee, how often would I have gathered thy children together even as a hen gathereth her chickens under her wings and ye would not!" Those were the words of Him who was known as the "Great Physician." If the humane and benevolent spirit that pervades the medical profession could be gathered into one great personality, then would that great beneficent soul of Medicine look down on the suffering world and weep, saying: "Oh, erring sick, and sorrowing humanity! How have I longed to bestow on you the boon of health and vigor and life abounding and ye would not!"

Your call to the service of the healing art is not the call of wealth, or fame, or power, or popular favor, or personal aggrandizement, or social distinction, or ease, or comfort, or long life. It is a call to war; a life-long enlistment on the side of humanity in its grim struggle with disease and death.

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* Oration in Medicine, Kentucky State Med. Assn., Paducah, October, 1911.

Man enters the world wailing and leaves it with a moan, and punctuates the journey from the cradle to the grave with many a cry of distress. He who deftly launches the traveler on the sea of life, who safely pilots the voyager through its storms and stress, making him fit for his seamanship until his bark is gently beached on the shores of eternity, has a great office to fill. So to conduct the advent of a new life as to make it safe in itself and free from damage to its maternal source is an important duty. To act as the counselor and guide of that new life in all matters physical, and to have a large share in shaping its mental and moral destiny, is a great task. To marshal the vital forces of that life and take command in its fierce battles with disease and death is a large responsibility. So to lead that life as to free it from self-destroying follies and lift it above foolish fears and superstitions, clearing the way for the development of its best powers and promoting its efficiency, is a lofty labor.

This is the work of the every-day doctor and it is a man's work, worthy of great men for its doing.

Man is never born great except potentially; nor can true greatness be thrust on him. It can be attained only by achievement. The man who habitually and heartily measures himself against the task before him is sure to

> "Grow each day and hour
> Into his life's potential power."

And the limits of that power, even to the every-day doctor, who shall set?

Our task calls for the active, attentive use of our best powers. We are not only to perceive what is thrust on our senses but to seek; not only to know what is forced on us by sight or hearing, or contact, but to look, listen and feel. The amount of knowledge acquired by the senses, its clearness and its permanence will depend largely on whether the senses are actively seeking knowledge or only passively receiving it. The same is true of the other faculties. If we allow our minds to drift and our conclusions to form themselves, they will be shallow, uncertain and unsafe. The matters we are called on to judge are far too important for this. They demand that our judgments be based on broad and thorough observation, careful comparison, and sound reasoning, the result of trained faculties actively at work. The best-trained mind is that one which, in the largest percentage of instances, automatically does its best, which does not need to be whipped up in each case to do good work, but has made thoroughness a habit. There are great differences in the original endowment and in the training of medical men, but these differences are not greater than those which result from experience. A man will either use and thereby improve his talents, or neglect and lose them.

The every-day practice of medicine is eminently fitted to make the most of any man if he but gives himself devotedly to the work for its own sake. Herein lies a large hope for the every-day doctor and the mediocre man. Look at the illustrious names that adorn the pages of medical history. It is nowhere recorded that they were born great. Their glory was not gratuitous. Their schooling was not superior. Their opportunities were not larger. But they had great problems to solve even as others. They had mighty difficulties to overcome even as all physicians. They had sore needs to supply, even as you and I. And they measured their littleness mightily against the mighty force of ignorance, disease and death. They realized the worth of the physician's work and labored worthily. As workmen needing not to be ashamed they lived the every-day of life on a high plane. With extraordinary energy they attacked ordinary duties. With uncommon concern they cared for their common cases. With patient persistence they solved and proved their problems. With a devotion to duty amounting to a holy zeal, they loved even their unlovely tasks and performed them with a thoroughness that lifted their common lives above the common things of life and grew in them the character that challenges the admiration of the world. Out of the every-day of life there came to the medical profession a John Hunter, an Ephraim McDowell, a Robert Koch, an Ochterlony, an Osler, a Murphy, a Mayo, and a multitude of others; and by what means? Can you imagine Laennec making a chest examination through a silk waist? Or Trousseau content with feeling the pulse and looking at the tongue? Or Sims satisfied with the surgery of his day? Or Cabot taking the patient's word for a diagnosis? Or Gorgas accepting his office as a sinecure? These are they that "waxed valiant in fight, out of weakness were made strong."

The every-day doctor may feel that they were men of very large natural ability and that we are not to be measured by them. They *were* giants, and we may be pygmies, but, mounting to their shoulders, we can see farther than they. It is not necessary that we be great; it is necessary that we be faithful. The great men of medicine did not start out to become great or famous; they simply did their work well and grew; for they had at hand the very best means of growth, even as you and I. They sat at the feet of the masters in studying their works, even as you and I are privileged to do. They touched hands with the best men of their day in their journals and associations, and much more may we. The race-long cry of suffering humanity assaulted their ears, as it comes to ours, and they set about its relief without stopping to appraise its money value or its offering of fame.

If any man in medicine will do that, the time will come when the profession, if not the whole people, will discover developed in him whatever greatness was potential in his endowment. Only let him not be easily content with present attainment. Let him feel that he has matriculated for a life-long course in the great university of practical experience, where every patient is a study, where every symptom is to be searched out and traced to its origin and weighed as to its significance, where every examination is an exercise in skill, every operation a training in technic and every prescription a drill in sound therapeutic reasoning.

The school of experience is proverbially expensive. The patients of the thoughtless doctor will find it doubly so; for he goes on repeating the same blunders, overlooking the same observations, reaching by the same reckless reasoning, the same careless conclusions, doubtful diagnoses, and "shot-gun" and unknown ready-made prescriptions. Such a man, profiting little by experience, drifts or blunders through his own and his patient's lives from his observation of obstetric positions as "head-first" or "feet-first" to the death report of "old age."

The great minds of medicine were not so made, nor did they come by chance. The practice of medicine has never been greatly raised by accident or freaks of fate, or strokes of genius. The great men of medicine were just hard, earnest and capable workers. They grew great by growing into the greatness of their task.

There is need that medicine grow into the greatness of its task. Great things have been accomplished, but greater remain to be done. There was a time when epidemic disease swept over the face of the earth like a devastating frost and human life withered before it like the flies. Well did the psalmist speak of "the pestilence that walketh in darkness" and "the destruction that wasteth at noon-day." For the tragedy of bubonic plague, small-pox, syphilis, cholera, malaria, yellow fever, diphtheria and cerebrospinal meningitis are written large in the closed chapters of history.

Medicine has done so much that we occasionally hear the opinion expressed that the doctor will soon lose his occupation entirely by reason of medical advance. That were indeed a consummation devoutly to be desired, but offering no early hope of attainment; for every great discovery in medicine has opened to the doctor a dozen doors of opportunity for every one it has closed.

Phagocytosis, so far from being a finality on resistance, has opened to view a long vista of agglutinins, opsonins, lysins, bacterins, vaccines, side-chain theories, complements, etc., and the end is not yet.

Ehrlich presents a new remedy which may cut short the prolonged treatment of syphilis, but in so doing he opens to research the great field of chemotaxis.

Lord Lister developed antiseptic surgery and so far from finishing surgery, it has filled the world with surgeons.

Medicine still has a great field for advancement. Tuberculosis has not surrendered. Measles and whooping-cough are still serious and universal scourges. Cancer remains the scandal of medicine. Gonorrhea and wild oats continue to be sown together and to yield their bountiful crops of disaster. The field of mental and nervous diseases is still largely a jungle of unknown horrors. The internal secretions are unsolved problems. Auto-intoxication is only a tattered cloak for our ignorance. Pneumonia baffles us very much as it did the doctors of ten centuries ago. The acute and chronic joint inflammations and degenerations are in a blur of uncertainty. Kidney disorders and arteriosclerosis await elucidation. There is much territory for medicine to explore and still more to conquer.

Great as is the call for the advancement of our science, the demand for improvement in our practice is still greater; for our science is eagerly and earnestly using every means at its command to solve the mysteries of the unknown, while our practice is falling far short in applying the truths already revealed.

When the science of medicine has presented a new means of accurate diagnosis, or developed a better treatment, or evolved a surer prognosis, or offered a safer prophylaxis, it would seem reasonable that these discoveries should immediately appear in practice and rapidly become universal in use. It would appear natural that the science and the art of medicine should walk hand in hand; that theory and practice should keep step in the onward march of medical progress.

The world has a right to expect as much. If my child is ill or injured, I desire that the art of medicine, as practiced at his bedside, shall apply the best that world-wide medical science has to offer, and I hear the voice of one saying, "Whatsoever ye would that men should do to you, do ye even so to them."

In only one department of practice is our art following closely in the footsteps of science—the department of major surgery. The other specialties are lagging noticeably, and general practice (the work of the every-day doctor) is so far in the rear as to create some doubt whether he belongs to the procession or only happens to be traveling that way.

The surgeon leads because his work is spectacular and is done in the lime-light of publicity; because it is constantly reviewed under the fairly competent criticism of the general practitioner; because it commands a fee that supplies the means of good work; and because the surgeon occupies a limited field which he can cultivate intensively and in which he can keep up to date and become highly proficient. The same reasons hold good, but to a lesser degree, in the case of the other specialists. The work of the every-day doctor is of the every-day of life, attracting little notice and reviewed by no authority nearer than the recording angel, or more capably critical than his own conscience. If well done, it is shamefully underpaid, and his field of labor is so extensive that intensive cultivation, proficiency, exactness, and keeping up to date, are impossible. Not much is exacted at the hands of the every-day doctor. His clientele does not require much and is not competent to judge whether he gives little or much. The demands of the law are small, only asking "ordinary care and diligence" and conscience is almost as easily satisfied.

But there *is* a call to higher things and eager men will harken, earnest men will hear, and honest men will heed. It is heard in the voice of scientific medicine, whose every established truth is a prophecy of good to humanity that pleads for fulfilment. It speaks in the tones of the healing art as she asks that the most beneficent task ever entrusted to human hands be well done. It comes to us in the world-old and ever-present cry of human need. It makes its mute appeal from the silent graves of the untimely dead that ask of us their rightful years cut off. It challenges us in the words of Him who said "What do ye more than others?" It upbraids us with the dupes of quackery, 99 per cent. of whom have slipped through our hands unhealed and unsatisfied. It stirs in the life of every man whose heart throbs with the joy of battle and whose mind is uplifted by the power of the ideal. What shall be the response of the profession and especially of the every-day doctor?

If we are to share in the conquests that await the advance of scientific medicine, it is necessary that we be equipped with broader knowledge, surer skill and riper wisdom. The physician is in need of a broad general knowledge of the whole of medicine. Only so can he escape the egregious blunders that grow out of narrowness of training or experience. Disease is not so exact in localizing itself or its manifestations as to warrant exclusive specialism. Every one of us should be able to see and understand far more than we can do. We may not be able to make a blood-count, or handle the x-ray, or use the cystoscope, or analyze the stomach contents, or remove an appendix, or definitely determine a heart lesion, but we should know the principles on which each of these procedures is based, the field for usefulness of each, and the man who *can* do the work; and that man ought to be in easy reach.

The man of widest knowledge in medicine to-day is the every-day doctor in general practice, and yet the times demand even of him that he broaden his field of vision. Even more insistently do the times demand that he narrow his field of work. Medicine has grown far too great for any one man to cover the whole field and do it well. The every-day doctor has undertaken too much and the consequence is that he cannot give, in many of his cases, the efficient service that present medical science demands. Nor can his inefficiency command the fees that the specialist receives and deserves.

The every-day doctor must do some specializing. He ought to serve his patients in every case in which he is prepared to render as good service as is available to them. If, in addition to this, he will devote himself to the special study of the chest, he will in time become the neighborhood expert in that field. If his medical confrères will do likewise for the alimentary canal, the genito-urinary tract, nervous disorders, pediatrics, general and emergency surgery, etc., each will finally become the local authority in his particular field of general practice. He will then be able to render a better service in some one line and to command a better fee because he will be worth it. His colleagues, recognizing his special ability, will call him oftener in consultation, thereby giving their patients a better service, the doctor a better income, and the profession the uplift of a better mutual understanding. At present we are confronted, in every well-populated community, with the paradox of too many doctors and too little efficiency of medical service. Let the every-day doctor, without giving up his general practice, specialize in some department of his work and this disgraceful paradox will tend to correction.

Consultations ought to be more frequent, and they would be if some near-by doctor were fitted to act as consultant. If the every-day doctor will so fit himself, he will improve his standing in the profession, increase the respect in which he is held by the public and, what is equally as important, enhance his own self-respect.

It is not necessary or desirable that the every-day doctor undertake to displace the present-day specialist; nor ought he to look with envious eyes on the opportunities and privileges the specialist enjoys, for the narrow garden-spots of specialism are well occupied and cultivated almost to the limit of productiveness, while the broad fields of general practice, now neglected, are fallow and inviting to intensive cultivation.

The greatest opportunities in the healing art to-day are waiting at the hand of the general practitioner; 95 per cent. of practice applies first to him and it is his to take what he will, his to have and to hold, if he will but prove himself worthy to have and competent to hold. Only let him not try to grasp everything, lest he show himself unable and unworthy to hold anything. Let him select so much and such kind of practice as he can serve with adequate art, commensurate with the best medical science has to offer. In cases in which his knowledge or skill are not up to that standard, let him seek aid in consultation, or send the patient to the man who can render the necessary service.

When the every-day doctor has learned to excel himself and others in something, he will begin to experience the pleasure of leadership, the distinction of success, the joy inherent in good work well done and the profits that in time accrue to worth.

When by doing less he has learned to accomplish more, when his skill in something has made him unwilling to do anything unskilfully, when his art is treading on the heels of science, then will medical science hurry forward to new conquests and the spirit of the healing art will go forth among the people who too long have "suffered many things of many physicians" in vain, and many will touch the hem of her garment in well-founded faith and be made whole and Medicine will find her rightful place in the esteem of men. Is this too good to be true? The answer rests with you and me, for in the Providence of God and the progress of medicine, there is nothing too good to be true.

SECTION OF POSTERIOR SPINAL NERVE-ROOTS FOR RELIEF OF GASTRIC CRISES AND ATHETOID AND CHOREIFORM MOVEMENTS

REPORT OF TWO CASES

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It is unnecessary to review the history and results of this operation, recent medical literature having treated this subject quite fully. We believe, however, that the diversified and, at times, unsatisfactory results of this operation are to be attributed to the difficulty of localizing definite roots after the spinal canal and dura are opened, the difficulty of localizing the seat of the disease from the neurologic examination, and the fact that cases suitable for this operation have not always been selected.

Case 1.—*History.*—H. T., a white woman, married, housewife, aged 50, entered the University Hospital, May 23, 1911. The patient complained of pain in the back, around the waist and in both legs, sharp, shooting in character, of almost constant duration, and of severe vomiting spells which occurred in paroxysms and followed each other at short intervals, causing great prostration and severe pain in the abdomen.

The duration of these symptoms was about five years, the vomiting spells occurring at first at intervals of several months and lasting from a few hours to one or two days, but on admission were almost constant, there being only a few hours in the twenty-four when the patient was not vomiting. The family history included nothing of importance. For the previous ten years the patient had suffered with what she called "rheumatic pains" referred to the back, hips and legs; had always been more or less nervous; had had several miscarriages; at times slight attacks of indigestion and headache; otherwise the history was negative.

Present Trouble.—About six years ago the pains in her back and down her legs would, at intervals of four or six weeks, become so severe as to necessitate her going to bed and remaining there several days. One or two years later these attacks became very severe. There was excruciating pain in the upper abdomen and between the shoulders, and intractable vomiting which occurred independently of the character of her diet, the vomitus being at first the contents of her stomach, then mucus, and finally a greenish blood-stained fluid. During these attacks she frequently had severe pains around the heart and there was great prostration but never unconsciousness. About two years prior to admission the uterus, tubes and ovaries were removed in one of the local hospitals. The patient's attacks gradually became more frequent, until the time of her entering the University Hospital when she was almost constantly in pain and very rarely free of nausea. For the previous year she had had some difficulty in walking, which was almost impossible in the dark; she had marked constipation, and, at times, voided urine involuntarily.

On admission to the hospital the patient was apparently suffering from severe pain, was constantly vomiting, retching, moaning and calling for relief. When she was placed in bed she crouched forward on her knees with her head and shoulders on the pillow, at times rocking backward and forward. She remained in this position constantly unless stupefied with morphin, but immediately on regaining consciousness resumed this position. In spite of all our efforts to relieve the patient the vomiting continued; it was impossible for her to take food; the prostration was extreme, emaciation progressive and a fatal outcome seemed imminent.

Physical Examination.—Because of the patient's condition this was not so thorough as was desirable. The following notes were made: Patient very emaciated; temporal arteries very prominent, tortuous and throbbing; heart slightly enlarged; lungs rather emphysematous; abdominal examination yielded negative results; urine negative; blood-pressure 140 mm. Hg; leukocyte count 12,800; hemoglobin 90 per cent.; Wassermann positive.

Examination of Nervous System: Both pupils contracted, not active to light but reacting to accommodation (Argyll-Robertson pupil); weakness of all muscles; rather flabby muscular tone; knee-reflexes markedly increased; superficial reflexes present; disturbance of control of bladder, patient frequently wetting the bed; coordination of upper and lower extremities poor; Romberg sign very suggestive.

Sensory Examination: At time of the examination the patient was suffering so much pain that it was impossible to make a complete examination, but there were numerous areas on both lower extremities and trunk where tactile sensation was incorrectly localized and where pain sensation was markedly delayed; muscular sense was absolutely absent in the lower extremities and very much impaired in the fingers.

Diagnosis.—The diagnosis of tabes dorsalis was made from the presence of Argyll-Robertson pupil, character of sensory disturbances, bladder disturbance and character of vomiting spells, which were taken to be gastric crises, in spite of the fact that the patient had increased knee-reflexes.

As the patient had been treated in various hospitals and was becoming progressively worse, the gastric attacks becoming not only more frequent but also much more severe, it was thought advisable to recommend Foerster's operation of section of the posterior spinal roots. This was accepted by the patient and her family, and the operation was performed June 3, 1911.

Operation.—Division of the posterior roots of the seventh, eighth, ninth and tenth thoracic nerves. Operator, Professor Randolph Winslow; assistant, Dr. Coleman; anesthetist, Dr. DeVilbis; anesthetic, ether by the drop method. The field of operation was prepared by the application of solution of iodin containing 50 per cent. of 95 per cent. alcohol and 50 per cent. tincture of iodin. A vertical median incision was then made over the spinous processes, starting at a point just above the fifth dorsal and extending down to the eleventh. The muscles were separated from the bony structures by blunt dissection, bleeding controlled and the spinous processes and laminæ of the sixth, seventh and eighth dorsal vertebræ then removed. The dura was opened and the posterior roots of the seventh, eighth, ninth and tenth thoracic nerves were cut. The dura was brought together by interrupted catgut sutures, the muscles, fasciæ, etc., sutured with catgut, and the skin closed by subcutaneous silver wire suture. Sterile dressings were applied and the patient returned to bed in good condition.

Postoperative History.—On recovering from the anesthetic the patient was somewhat nauseated but did not vomit. She suffered severe pain in the abdomen, back and legs. This, if anything, was more severe than before the operation. She lost entire control of the bowels and bladder and the use of her lower extremities. In ten days the skin suture was removed, the wound having healed by primary union. The patient soon regained control of the bowels and was again able to move the legs freely, although complaining of great pain when she did this. The control of the bladder was again partially recovered. The patient at the time of this report still had violent attacks of typical tabetic pain in her legs, lower abdomen and back. Her appetite was good, the patient was gaining weight and since the operation, almost five months, had never had the slightest inclination to vomit. She was, except at intervals when she had her pain attacks, very comfortable and happy. Her knee-reflexes were still increased and her sensory disturbances, with the exception of a band of absolute anesthesia about 3 inches in width extending around the lower abdomen and onto the back, were about the same as before operation.

Case 2.—*History.*—The patient, O. L., a white youth aged 17, entered the University Hospital Jan. 12, 1911, complaining of uncontrollable movements of arms, legs and body of about nine years' duration, which were getting worse. The patient's mother was insane; had been in state hospital for treatment of insane for about eight years, but her mental trouble dated back many years; father was a painter by occupation. Otherwise the family history was negative. The patient's birth was difficult, requiring instruments. He had measles when about 10 years old. Otherwise the history was absolutely negative. His habits were good.

Present Illness.—At the age of about 8 years the patient was hit on the left side of the head with a baseball, but this did not seem to have been very severe. About four months after this a contraction and drawing up of the right wrist was noticed, this paroxysmal spastic contraction gradually becoming more extensive and involving other groups of muscles in right forearm and arm, then right leg and thigh. In about two years the left arm became affected, gradually in the course of another year involving the left leg. These abnormal movements gradually became more extensive, more severe, being much less readily relaxed voluntarily until at the time of examination the entire body, with the exception of the muscles supplied by the cranial nerves, was affected. These movements ceased during sleep when the patient was perfectly relaxed and were always rendered much more severe by excitement.

Physical Examination.—Chest and abdomen apparently negative; temperature, pulse and respiratory rate about normal; urine negative; blood examination negative; blood-pressure 110; Wassermann examination negative.

Nervous Examination: Cranial nerves normal; intelligence normal; speech normal; no mental manifestations; sensory functions for all forms of sensation normal.

Motor Functions: Motor power of upper extremities good; trunk good; lower extremities show marked weakness in peronei group of left leg, also some weakness in this same group on right side. The deep reflexes were extremely difficult to elicit owing to the muscular contractions. The superficial reflexes could not be obtained. The rectal and vesical reflexes were normal. It was impossible to test the gait or coordination on account of the constant muscular contractions. These abnormal movements consisted of involuntary, uncontrollable athetoid contractions of muscles or irregularly situated groups of muscles, bringing about slow chorea-like movements of the body and extremities. This condition was almost constantly present during the waking hours, passing from one part of the body to another, while at times the entire body was involved. These contractions gradually relaxed, when the limbs could be passively manipulated without the presence of any spasticity. This but rarely occurred, as usually the presence of the examiner intensified the movements. This at times became so extensive that it was quite exhausting, the patient being bathed in a profuse perspiration. At times the contractions of the chest and abdominal muscles were so prolonged as to cause cyanosis.

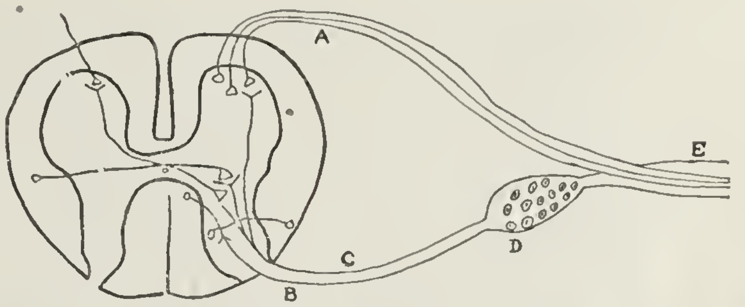

Diagram of cross-section of spinal cord showing nerve-roots and ganglion and point at which the posterior root was cut. A, anterior root; B, posterior root; C, point at which posterior root was cut; D, ganglion of posterior root; E, mixed nerve.

This patient having already been under observation for a considerable period and his condition having become progressively worse, it was determined to resect some of the posterior roots in the hope of alleviating his condition.

Diagnosis.—Despite a very careful examination, this case failed to reveal symptoms that could be attributed to any gross localizable pathologic condition. Our explanation of the manifestations was that we were dealing with a condition of hereditary nervous instability which did not manifest itself until about the eighth year, and at that time in a local deficiency of the inhibitory functions of the cerebral cortex, this deficiency gradually becoming more extensive until it involved the entire cortex. Constant peripheral sensory stimuli entering the spinal cord through the posterior roots, unless physiologically inhibited by higher centers, stimulate the cells in the anterior horns of the cord and bring about contractions of muscles or groups of muscles. In our patient we believed we were dealing with a condition in which there was a deficiency of physiologic cerebral inhibition. Our efforts to increase this inhibitory control having been fruitless, we thought the cutting off of the peripheral stimuli by section of the posterior roots might relieve the patient. We selected the posterior spinal root as being the most favorably situated for cutting off the peripheral stimuli, as in this place we could cut off these stimuli without at the same time producing paralysis.

The experimental nature of the procedure was explained to the patient and his father; they consented, and we selected the left leg as the portion of the body on which to try the procedure, knowing we could not make conditions worse.

Operation.—Feb. 6, 1911, the patient was prepared for operation. He was anesthetized with ether by Dr. Hooper. Professor Winslow, assisted by Dr. Coleman, performed a laminectomy in the lower dorsal and upper lumbar regions in the usual manner. The dura was opened. It was very difficult to locate definite posterior roots but several coming off from the left side of the lumbar enlargement were cut. The dura was closed. Muscles, fascia and skin were properly sutured, dressings applied, and the patient returned to bed in good condition.

Postoperative History.—Recovery from the surgical condition was uninterrupted. At first there was loss of bowel and bladder control and of sensation on the left side, involving the skin over the buttock and outer side of leg. There was also marked weakness of right leg and complete paralysis of left leg and thigh. In a few days the patient regained complete control of the bowel and bladder. The original motor power returned to the right leg but it was several weeks before he could voluntarily move the left leg and thigh. Within a few days of the operation the abnormal movements returned in both upper extremities, right leg, thorax, and right side of abdomen but not in the left leg or left lower abdomen.

At the time of this report, nearly nine months after the operation, the movements had become, if anything, more marked in the upper extremities, thorax, right lower abdomen and limb, but in the left limb and left lower abdomen they were still absent. There still remained some weakness in the left limb, with foot-drop and persistent and complete loss of sensation over the outer and dorsal surface of the left foot.

In conclusion we wish to call attention to the fact that in neither case can conclusive deductions be drawn from the present sensory disturbances. In Case 1. the sensory examination before operation was necessarily very incomplete, and from the nature of the disease itself we are led to expect many sensory disturbances. It is, therefore, impossible to draw correct conclusions from the present sensory disturbances without an exact knowledge of the conditions before operation. In Case 2, owing to the uncertainty as to just which sensory lumbar roots on the left side were cut, it is impossible to attribute to any definite sensory roots the present sensory disturbances.

We can only state that in both cases there are definite areas of anesthesia—in Case 1, an irregular band around the lower abdomen, extending posteriorly over the lower lumbar region; in Case 2, over the outer and dorsal surface of the left foot, which apparently did not exist before operation. It may also be stated that both patients were entirely and promptly relieved of the conditions for which the operations were performed—in Case 1, vomiting spells; in Case 2, abnormal movements in the left lower extremity.

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TONSILLECTOMY WITH A SINGLE INSTRUMENT, THE TONSILLECTOME

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The constant increase of publications, and positive evidences gleaned from them, as to the rôle the pathologic tonsils play in the cause of many general and local diseases has led to a corresponding activity in the perfection of the technic for the removal of these glands. Some of the methods of operating which have been and many of which still are in vogue, are as follows:

1. Tonsillotomy by means of the MacKenzie, Mathieu and other tonsillotomes.
2. Drawing forward the tonsil from the fossa and cutting off with knife or scissors.
3. Drawing forward the tonsil from the fossa and snaring off with hot or cold wire.
4. Dissection of part or all of the tonsil by cautery.
5. Liberation of the pillars by knives, separators, scissors, drawing forward the tonsil and snaring it off.
6. Liberation of the pillars by a sharp knife and dissection of the tonsil by scissors, dissectors and finger, up to the firm attachment at the base, drawing it within the loop and snaring it off.
7. Liberation of the pillars and dissecting completely with knives or scissors, removing the tonsil without the aid of the snare.
8. Complete enucleation by means of the finger, without preliminary liberation of the pillars.
9. Lifting out the tonsil by means of Sluder's or Ballenger's guillotines, and employing the molar eminence of the lower jaw as a fulcrum, in addition to employing the finger to feed the tonsil through the opening of the instrument (fenestrum), causing the tonsil to be everted from its capsule. The latter is thus turned on itself and liberated from its attachment to the pillars by the sharp blade of the instrument. A snare has been suggested in addition to the Sluder instrument.
10. Lifting out the tonsil and employment of either Sluder's or Ballenger's instruments, the latter preferred, entirely ignoring the molar eminence as a landmark, but feeding the tonsil through the fenestrum of the instrument, while held firmly behind the tonsil, causing it to be everted, while the sharp blade severs the capsule from all its attachments (my modification).[1]
11. Employing a small Mathieu's tonsillotome, and the same technic adhered to as mentioned in No. 10, severing the attachments from behind forward (my modification).
12. Employing the same technic as mentioned in Paragraphs 10 and 11, but making use of the instrument illustrated (Fig. 1), the tonsillectome. This is a Pierce-Miller snare, modified by having a small but heavy fenestrum at the end, very much like the ordinary Vedder tip, through which the tonsil is pushed and everted. The wire loop is hidden in the slit of the fenestrum and is continued as a twisted stylet through the cannula, fixed and operated in the usual manner of this snare.

I have developed the technic mentioned in Paragraphs 10, 11 and 12 within the past nine months with a fairly large material, and have come to the conclusion that the method mentioned in Paragraph 12 is the best, because it removes the entire tonsil, with capsule intact, without any button-holing, with no attachment of the muscles or pillars, with practically no bleeding either at the time of operation or after. There is less reaction following this method than after any other, except it be in tonsillotomy, and that operation is not to be considered for those pathologic conditions of the tonsil for which the operation is performed. Until Dr. Sluder presented his method of tonsillectomy I was satisfied with the technic of dissecting with knife, scissors, finger and snare, but the bleeding, primary reaction and secondary scars that at times resulted, made me wish for a better method. Great credit is due to Dr. Sluder for giving us his method.

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[1] In the British Med. Jour., Nov. 25, 1911, page 1402, Whillis and Pybus describe a method of tonsillectomy by means of a guillotine (MacKenzie) very much like the Sluder operation, not mentioning the molar eminence, however.

A tonsillectomy by means of one instrument has been performed by many an operator. I refer to the accidental removal of the entire tonsil with capsule intact by means of various tonsillotomes, but the developing of a technic with the intention and result of doing a tonsillectomy by means of one instrument, or without previously dissecting the pillars from the tonsil, must be accredited to Dr. G. Sluder of St. Louis.

Referring to the title of this paper, I do not mean that the instrument illustrated as my tonsillectome is the only one applicable. As a matter of fact, any tonsil instrument which is provided with a strong fenestrum can be made use of in this technic of dislodgment and removal of the tonsil. Such instruments should be called tonsillectomes.

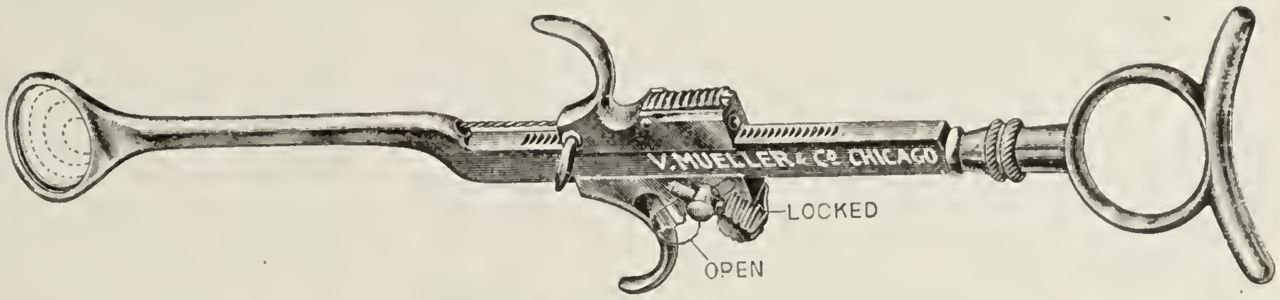

Fig. 1. The tonsillectome.

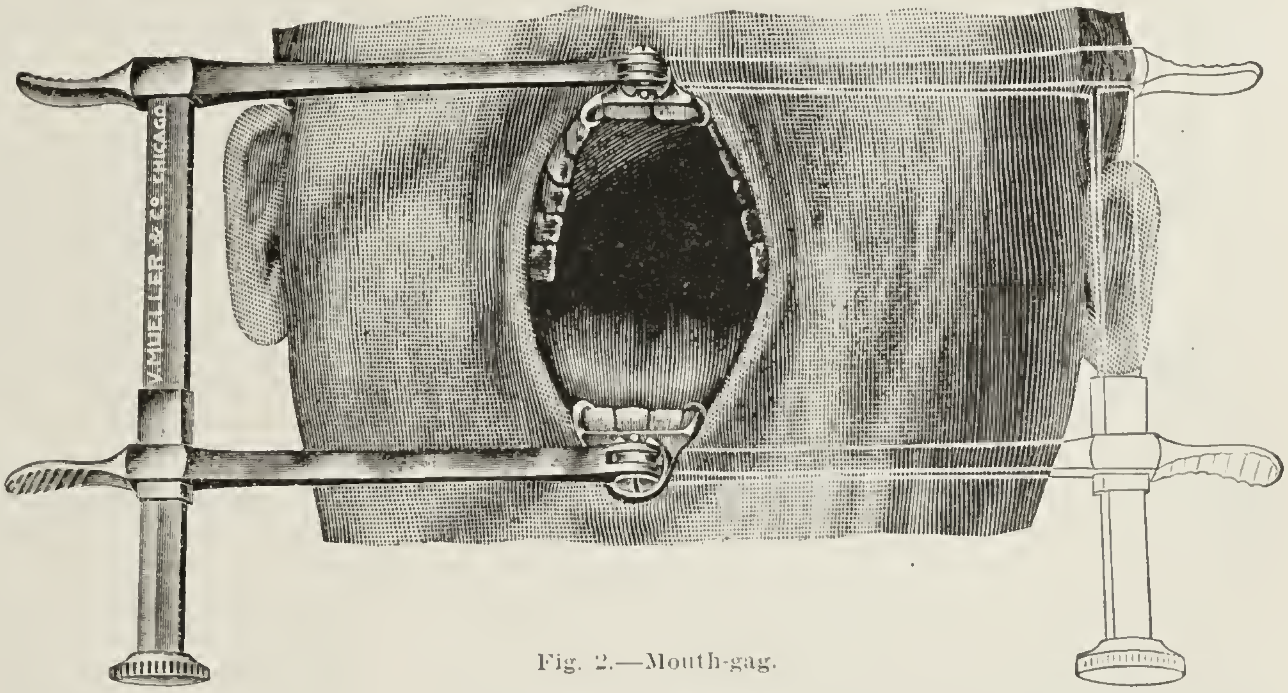

Fig. 2.—Mouth-gag.

I must confess that while I tried to adhere to the technic laid down by Sluder, in reference to the molar eminence, I was unable always to do a perfect and complete tonsillectomy, and consequently have modified it as mentioned in Paragraphs 10 and 11.

After the very free flow of blood, however, that results from these sudden liberations of all the attachments of the tonsil by the use of the sharp guillotine, I have further modified the technic as mentioned in Paragraph 12.

POINTS IN TECHNIC

1. General preparation of the patient.

2. Atropin sulphate, 1/200 gr., half an hour before operation.

3. General anesthesia, ether preferred; patient in the recumbent position, and proper illumination.

4. My mouth-gag (to be described later).

5. Tongue-depressor, sponges, artery and volsellum forceps.

6. Method of operation: The anesthetist holds the head firmly. The tonsillectome is passed behind the tonsil, going across the tongue from the opposite angle of the mouth, scooping up the tonsil until it appears in the oral cavity in the form of a round tumor behind the anterior pillar. Holding the instrument firmly in this position, by gentle, steady pressure the operator feeds the tonsil through the fenestrum until it disappears under the finger. The snare is unlocked and the wire drawn down until the tonsil is seen on the inner side of the fenestrum, everted, forming a cauliflower-like mass. The tonsil is seized now with a volsellum forceps to prevent it from dropping into the throat when the crushing is completed. If the patient is now awakening, he should be reanesthetized while the tonsillectome is in position, and the tonsil slowly crushed under the mask while etherization is going on. The tonsil is removed and the capsule is found turned on itself. The same procedure is repeated on the opposite side. The same wire loop may be used for the second tonsil by pushing it back into the slit of the fenestrum.

There is practically no bleeding in the majority of cases, and if, as frequently occurs, the adenoid operation is to be performed, it is very much facilitated, owing to the absence of blood.

I have practically given up performing this operation under local anesthesia for these reasons: To do this operation thoroughly, the pharyngeal muscles must be completely relaxed and no amount of local infiltration anesthesia will accomplish this; the patient instinctively puts these muscles on tension when one attempts to lift the tonsil out of its fossa. Again, in the adult the small submerged flat tonsil is more firmly adherent, and it requires greater pressure to feed it through the fenestrum. To perform a tonsillectomy under local anesthesia I do the dissection method as mentioned in Paragraph 6.

In conclusion, I wish to say that occasionally one finds tonsils that cannot be removed by the instrument I am describing, or by the Sluder or the Ballenger instrument, and require being dissected in the usual way. This is particularly so in adult cases in which there have been many attacks of peritonsillar abscess, or in which an operation has been performed previously (stumps). It is my practice to discontinue the attempt of removing the tonsil with the tonsillectome as soon as I find that it will not readily be pushed through the fenestrum, and proceed with the usual dissection without further traumatization of the tissues. In very large tonsils one will find some difficulty in working the tonsil through the small fenestrum, especially if the velar lobe is large, but by systematically pushing the tonsil through from below upward and taking care not to allow it to slip back, or to allow the instrument to be dislodged backward, one will observe, all of a sudden, a giving away of the resistance, and the tonsil is through the fenestrum. The smallness of this fenestrum in my instrument appears to be the first objection to any one not familiar with this method of operating, but I have found that it is preferable to larger sizes, because once the tonsil is worked through, it has a tendency not to slip back and can be snared off more easily.

In connection with this operation, I desire to present two new instruments:

1. Mouth-gag (Fig. 2), which is so constructed as to be always out of the way of the operator. The cross-bars may be turned from one side to the other without disturbing the portion fitting over the teeth. The patient may be placed in any position for operation. It is easy of introduction, and opening, fits jaws or teeth of almost any size or shape, and will not break the teeth or pinch the lips. These are some of the objections to the different mouth-gags on the market.

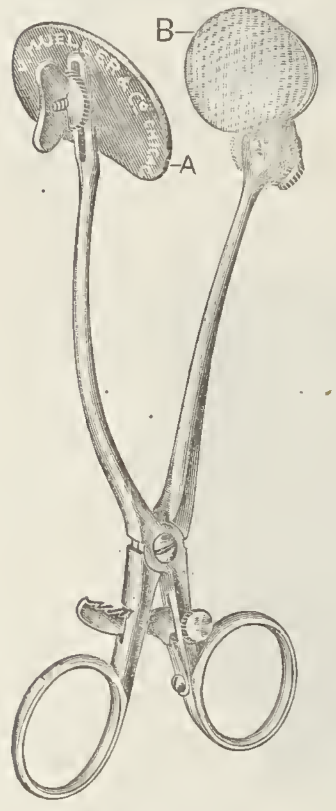

Fig. 3.—Tonsil-clamping hemostat.

2. Tonsil-clamping hemostat (Fig. 3). Should, for some reason or other, bleeding occur either at the time of operation or subsequently, it can always be controlled by this instrument. The inner blade has a cup, into which is drawn a large gauze sponge, and fastened by a thumb-screw. This gauze sponge fits into the cavity created by the operation. The outer blade has at its termination a small oval blade which comes in contact externally with the ramus of the jaw, and acts as the counterpressure for the sponge. It is not painful while applied and will not cause the skin necrosis that one frequently encounters from the older hemostats. The pressure may be regulated by the ratchet lock, and a gauze pad can be placed under the small blade between it and the jaw, thus relieving undue pressure at this point. I have been using this clamp more than two years, frequently placing it in one side while operating on the second tonsil, thus working in a bloodless field. For this purpose, however, since adopting the operation described in this paper, the clamp becomes unnecessary.

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Natural Feeding.—Statistics are eloquent in favor of natural feeding. Of 4,000 infants dying in Munich in 1903, 83 per cent. were artificially fed, and in Berlin, in a period of five years, only 9 per cent. of the infant mortality occurred in breast-fed infants. Holt states that, in 1903, of fatal cases due to digestive disturbances in infants, only 3 per cent. had been exclusively breast-fed. As our own Woods Hutchinson tells us: "The best way to modify cow's milk is to pass it through the body of the mother," and "the best and most paying job the community can set the mother at is that of raising her own child to the highest pitch of vigor and efficiency."—C. S. Sheldon in *Bull. Am. Acad. Med.*

EXPERIMENTAL THERAPEUTICS

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The treatment of every patient is more or less of an experiment. All therapeutics might therefore be termed "experimental"—but there is a vast difference between experiments! Experiments may be framed so loosely, the observations may be so superficial, the analysis of the results so careless, the deductions so illogical, that the experiment has no permanent value—it is not an experiment in the precise sense of the word. A great deal of the therapeutic experimentation of the past has been of this order. However much this sort of therapeutics may or may not help an individual patient, however much or little it may add to the individual experience of the practitioner who practices it, whatever use it may have in one way or another—and doubtless it has some use—it cannot be said to add anything substantial to the stock of human knowledge, to aid others materially in the treatment of their patients, to promote seriously the understanding of the principles of therapeutics.

It is often said—perhaps too often—that therapeutics is not a science, but an applied art. Granting this, is there an applied art which does not rest to some extent on scientific principles, on planned experiments, accurate and reliable observations and logical deductions? The difference between an exact science and an applied art appears to be this: that the applied art involves more or less of unknown, and therefore uncontrolled factors. The master of the art, through intuition or experience, may somewhat discount these uncontrolled factors. But what are "intuition" and "experience" if not a dim perception of the principles involved in the unknown factor? The less hazy the facts, the clearer the judgment. Granting that the day has not come—never will come—when we can reduce all the complicated conditions of health and disease to a mathematical equation—granting that human knowledge has its limitations, here as elsewhere—is this a good reason for "lying down" in inertia, for despairing of all improvement? Because we know that much of therapeutics will never be an exact science, is it necessary or advisable to encourage needlessly slipshod methods?

Empiricism has added much that is valuable to human knowledge—but also much of error. The quarrel of science is not with empiricism as such; the quarrel is with the usual by-products of empiricism: with superficial observation and wild deduction. A *fact* is a fact, whether it is discovered by an academician or by a hod-carrier. If science cannot explain a fact, so much the worse for science — the fact need not care. But science may well afford to be impatient of *pseudo-facts.* It may justly refuse to waste time on assertions which are based on slovenly observations. The man who makes an empirical discovery, who believes it to be a fact, has the moral obligation to establish by exact observation that it *is* a fact, and not a figment of his imagination. If he does not do this, he has no right to speak of it as a fact at all—whether it is a fact or is not a fact, he knows little or nothing about it. Even a lucky guess, even an intelligent guess, cannot pass current in science, is not a real addition to knowledge, until it has been subjected to a fair trial; until it is supported by evidence which is capable of convincing any critical but fair-minded person who is conversant with the subject.

Only then can it be considered as a fact scientifically established. Whether a fact is established or not makes little difference to the fact, but it makes a great difference to science and to humanity. Until a fact is properly established, it cannot be properly used.

The establishment of facts and of the principles which connect them is as useful, as indispensable, in the applied art of therapeutics as it is in any other applied art, or in any "pure" science. Facts and principles can be established only by intelligent and accurate experiments and observations. Hence the need of "experimental therapeutics" of which one hears so much in these days. Experimental therapeutics is not a new science or branch of science; it is nothing more or less than the investigation of therapeutic problems according to the accepted canons of experimentation. Such investigations can be made in a country doctor's practice or in well-equipped hospitals and laboratories—the particular problems might differ, but the spirit would be the same. The essential conditions are not in the material, but in the mental equipment, of the investigator. What is needed is, first of all, a frank dislike for cant—an inability, native or acquired, to accept superficial impressions and hasty conclusions as demonstrated facts. These, for want of something better, may have to do duty in active practice—but even here, they are hazy hints rather than useful tools.

The other requirements are: a problem, a plan to direct observations, accurate records, the comparison, analysis and synthesis of the results and, finally, logical and critical deductions. These requirements exist wherever and however experimental therapeutics is to be investigated.

In detail, the subject may be investigated either at the bedside or in the laboratory; on patients or on animals. Both methods are necessary; each has its peculiar field, its advantages and its drawbacks. There is nothing in the pretended quarrel between the pharmacologist and the clinician, in the pretended struggle for supremacy—nothing but pretense, "clouds of ink and vapors of words."

Pharmacology has for its object the investigation of the action of drugs, and the pharmacologist welcomes any fact bearing on this, with little care whether it comes from the clinic, or from the laboratory, or from the country practice. He welcomes it, whether he can explain it or not, whether it agrees or disagrees with his previous conceptions—provided only that it is a fact—that it bears evidence of being a fact and not an invention of the imagination. The complaint of the pharmacologist is not against clinical therapeutic facts; on the contrary, his complaint is that there are so few of them. He is struck with the paucity of exact, quantitative, critical records as to the effects of drugs on the human individual, either in health or disease. Every clinician has unlimited opportunities for making such observations—he need but stretch forth his hand, blindfold, to grasp a problem, worthy and easy of investigation. With such a wealth of virgin gold lying about uncovered, the pharmacologist—and incidentally also the scientifically trained clinician—cannot be blamed for being somewhat impatient with the counterfeit coinage that is everywhere thrust on him. This is not said in a spirit of fault-finding—all our houses contain some panes of glass.

This, then is one of the most important fields of experimental therapeutics—the carefully planned, accurately executed, and intelligently digested study of the effects of drugs on human patients. This is, of course, the province of the clinical therapeutist. The direct association of the experience of the pharmacologist can, however, be made very useful in this direction, as is shown by the fruits which the suggestions of Cushny are bearing in England. The development of the clinical branch of experimental therapeutics will have an even greater *indirect* influence on the laboratory branch of experimental therapeutics. As has been said, both the clinical and laboratory branches are absolutely necessary for the fruitful development of the subject: the clinical branch, because it furnishes the material, the problems, and the final test; the laboratory branch, because it can furnish a deeper analysis, and therefore a better understanding of the clinical facts. Clinical observations can be made (and to be of any use, they must be made) just as accurate as laboratory observations; but in the human subject, observations cannot be as readily controlled, the conditions cannot be so easily kept uniform or varied—in one word, the problems cannot be analyzed, as they can be in the animal.

The laboratory branch of experimental therapeutics also, is not a new subject. Its essence is nothing more or less than the study of the effects of drugs under abnormal conditions—and almost every analysis of pharmacologic action involves the creation of some abnormal conditions. It is not a new discovery that the action of drugs is modified by the conditions under which they act—this was known before modern pharmacology came into existence. This is merely one of the great but ancient problems of pharmacology, which has of late years received a considerable impetus. Pharmacology has so far concerned itself mainly in analyzing the actions of drugs under relatively simple conditions. As this task advances, the pharmacologist is in a position to vary and to complicate these conditions intelligently, and thus more of his problems come to lie in this special field of experimental therapeutics. This intelligent and planned variation in experimental conditions is at present a very popular subject of research, and deservedly so. It should be heartily welcomed, both by pharmacology and by clinical therapeutics.

Pharmacology, like every science, has its own fundamental problems—problems which often have no immediate practical bearing, though ultimately their practical importance may be all the greater. Like every other fruitful science, however, pharmacology is ever ready to help in the solution of the practical problems of the day. Its principal practical task is to help in the solution of the practical problems of therapeutics. In order that it may help intelligently, the therapeutists must state their problems clearly. As we have seen, this has often not been done, and thereby the usefulness of pharmacology has been greatly diminished, and thereby also misunderstandings have arisen between the more superficial, or more narrow, champions of the two camps. Incriminations and recriminations do not advance us much; the important question is not whether pharmacology or therapeutics shall lead; what leadership is needed, will fall to those who are best able to lead. The important and fruitful question is, how the two subjects can help each other most effectively. And here the cry of the pharmacologists to the clinicians is for problems which *are* problems. Let the clinicians set forth real facts; then the pharmacologist can investigate them and analyze them; he can deduce scientific principles, and even practical hints, which cannot fail to be of direct value to the clinician. When pharmacology and therapeutics do not agree, it means a mistake somewhere: somewhere, the problem has not been clearly stated, the facts have not been accurately observed, the deductions have not been justified—and often, one can readily see that the mistake begins and ends with the clinician. This does not mean that the pharmacologist is infallible—he is subject to all the human errors of the clinician; but anyone familiar with the literature of both pharmacology and therapeutics can have no doubt as to which is more careful in verifying its "facts," and which, therefore, is more apt to be right.

The error of stretching the deductions beyond the facts may be made by pharmacologists as well as by clinicians. It is a common human failing—which, however, is greatly reduced by habits of accuracy. One particular phase of this is so important, practically, that a few words will be pertinent. I refer to the transfer of laboratory results to clinical practice. Some people affect to look down on experiments with the test-tube, the frog, the guinea-pig, the rabbit or the dog—somewhat as if man enjoyed a peculiar exemption from the laws of Nature. In some instances, this peculiar attitude is due to simple ignorance; in others it is assumed, consciously or unconsciously, from interested motives. These need not concern us. Every scientific worker concedes that there is danger in transferring the experience gained in one field to another field, even when the two fields are very similar. Every caution must be used to make the transfer safe. On the other hand, the progress of science depends on our ability to make such transfers, to "generalize" with judgment. Even medical practice depends entirely on just such transfers—on applying to the new patient the experience gained on the long line of his predecessors. It would be fair to ask where this caution is most often neglected: in the empirical transfer of "practical" experience, or in the critical transfer of laboratory results? The answer is scarcely doubtful.

Here, again, I do not believe that the laboratory pharmacologist is the conceited and dictatorial individual that he has been painted. Do not let us make the mistake of constructing the "ideal pharmacologist" out of our imagination, to meet the fancied needs of debate. Let us take him as he is, as we find him in his own mirror: the special pharmacologic and physiologic journals. If one looks through the papers in a pharmacologic journal without prejudice, one must be impressed by the consideration which is shown to clinical data. In nearly every case, the pharmacologist will seek to correlate his findings with the prevailing clinical opinions. Where he is unable to do this, he may insist that the clinical facts need further investigation or analysis in the light of his results—a fair request, as every one will acknowledge. When he finds that clinicians disagree, he may be pardoned for insisting somewhat on the uniformity and accuracy of his own results—although this may easily be overdone. But it is only when he can confirm and explain the results of the clinic that he speaks with any degree of assurance.

In brief, then, the advance of experimental therapeutics depends on the cooperation of pharmacological and clinical experimentation. The pharmacologist needs to extend his investigations to more varied conditions, so as to discover the basic principles. He is also needed to carry the analysis of the clinical data beyond the limits set by human material. The clinician should both furnish, and finally test, the practical problems. For this, it is essential that clinical experimentation should follow the canons of other scientific experimentation. Otherwise its scientific usefulness is *nil*, and even its practical usefulness is, at best, doubtful.

THE ACTION OF DRUGS IN PATHOLOGIC CONDITIONS

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The achievements of modern pharmacology may be regarded as twofold in character—scientific, by virtue of its contribution to physiology, and practical, on account of its service to therapeutics. By means of chemical substances we have been able to obtain valuable information concerning the physiologic processes in the lower organisms as well as in higher animals. We have increased our knowledge and broadened our ideas of metabolism in different species of animals, and learned that animals differing widely in structure may yet closely resemble each other physiologically. We have also learned, on the other hand, that important metabolic differences may exist even in forms which are closely allied, and which differ but little or not at all in their mode of living and environment.

The most important achievement, however, of modern pharmacology is its contribution to therapeutics. Not only can we lessen or abolish pain by means of chemical substances, but we are able at present even to eradicate disease. These marvelous practical results are largely due to the study of pharmacologic action and chemical constitution, which is the discovery that the reaction of the cell to a chemical substance may be modified or even completely reversed by a change in one or more elements or radicles of the molecule. The change may be one of substitution of a group, or it may simply be a transposition of a radicle in space. The results of these lines of inquiry suggest that pharmacologic action, which is determined by the interaction of cell and chemical substance, ought to vary whichever constant is modified. A change in the cell may be followed, therefore, by a corresponding difference in its reaction to pharmacodynamic agents.

Evidence is accumulating that any disturbance of the complex and delicately adjusted mechanism of the cell may lead to altered chemical and physical activity. Oxidation may be modified if equilibrium between inorganic ions and protoplasm is disturbed. The permeability of the blood-corpuscles may be altered by altering the physical condition of the colloids, which is likely to be of interest in connection with the mechanism of the penetration of substances into the cell, whatever that mechanism may be, whether physical, as Overton[1] believes for the basic dyes, or chemical, as held by Mathews[2] for these substances, and by Koch[3] for strychnin and other drugs.

Indeed, experimental evidence which has of late years been forthcoming indicates that the reaction of the cell to foreign substances may be quantitatively and even qualitatively different under changed conditions of environment, or after the production of changes morphologic, chemical or physical in character. As will be shown later, a disturbance in any of these factors may bring about corresponding variations in pharmacologic action.

The effects of potassium cyanid on the cell under normal conditions are too well known to need mention. Loeb[4] has shown that the effect on sea-urchin eggs of hypertonic solutions may be inhibited by small quantities of potassium cyanid and thus the life of the cell may be saved. A complete reversal of effect of potassium cyanid is thus obtained by simply changing the osmotic conditions of the surrounding fluid of our organism.

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[1] Overton: Vrtljschr. d. naturf. Gesellsch. in Zurich, 1899, xliv, 88.

[2] Mathews: Jour. Pharmacol. and Exper. Therap., 1910, ii, 167.

[3] Koch: Jour. Pharmacol. and Exper. Therap., 1910, ii, 265.

[4] Loeb: Die chem. Entwickelungs Erregungen des tierischen Eies, Berlin, 1909, p. 53.

According to Warburg,[5] barium chlorid, which has no influence on the respiration of the normal red blood-cells in the bird, inhibits oxygen metabolism after the cell membrane has been destroyed by alternately freezing and thawing.

From Stewart's[6] experiments on the mechanism of hemolysis, it appears that the hemolytic action of saponin is diminished when the blood contains ammonium chlorid.

The modifying effect of changes within as well as without the cell on the behavior of chemical reagents when brought in contact with it is also made evident by experiments on higher animals and under conditions far more complex.

Thus Fleischer and Loeb[7] found that calcium chlorid solution increased the transudation of fluid into the peritoneal cavity in normal rabbits. According to experiments reported recently by Chiari and Januschke,[8] the pleural exudates caused by various inorganic poisons and diphtheria toxins in dogs and in guinea-pigs may be diminished or completely prevented by the intravenous injection of small doses of 3 per cent. solutions of calcium chlorid.

The work of Ellinger[9] shows that a change of chemical reaction in the surrounding fluid may render innocuous the poisonous action of cantharidin on the glomeruli of the kidney. Cantharidin given to rabbits which were fed carrots, thus rendering the urine intensely alkaline, was not followed by nephritis.

Ehrlich[10] observed, in rabbits infused with a solution of methylene-blue, well-marked staining of the pancreas due to staining of the granules and protoplasm of the islands of Langerhans. He failed to observe staining of the nerve-ends under these conditions. If certain dyes of the triphenylmethane series be added to the solution of methylene-blue, the nerve-ends become stained, although neither of the substances alone is capable of staining these end-organs. Ehrlich assumed, therefore, a change in the function of the nerve apparatus, which alters its absorbing power. The studies of Bondy and Jacoby[11] on the distribution of salicylic acid have shown that the joints of animals infected with *Staphylococcus aureus* contain larger quantities of this substance than those of normal animals similarly treated. The distribution of iodin in the tissues after the administration of potassium iodid shows that in health the blood contains more iodin than any other tissue. According to the findings of Loeb and Michaud,[12] the eye and the lungs of tuberculous animals may contain more iodin than the blood, while the organs with tuberculous lesions contained 50 per cent. to 150 per cent. more iodin than the same organs when free from this disease. They also state that the amounts of iodin were proportional to the extent of the involvement, and varied with the progress of the tuberculous process. Differences in the distribution of iodin after the administration of potassium iodid have also been reported in carcinoma by von den Velden.[13]

These facts indicate that the selective action of drugs is at least quantitatively modified by morbid changes.

That interference with the functions of an organ or its complete removal from the body modifies the action of drugs was pointed out long ago by the classical experiment of Claude Bernard (and later by Hermann[14]), in which it was shown that after ligation of the ureter or renal blood-vessels in the rabbit, curara becomes toxic when given by mouth.

The investigations on the pharmacology of epinephrin have shown that under conditions induced experimentally some of its characteristic actions observed in normal animals may be either suppressed or completely reversed. Ellinger[15] failed to observe epinephrin glycosuria in rabbits when nephritis had been produced by cantharidin or by ligating the renal blood-vessels. Meltzer[16] states that by cutting vasomotors on one side or after elimination of the central innervation of the blood-vessels in the ear of the rabbit, the subcutaneous administration of medium doses of epinephrin was followed by constriction, while in the normal rabbit the drug causes dilatation of these vessels. The action of epinephrin varies also in inflammatory conditions, according to the same observer;[17] for he failed to obtain in inflamed areas the constriction of the vessels which it causes in simple hyperemia or in normal tissues.

Within recent years data have been accumulating on the behavior of drugs in conditions of profound disturbance of metabolism such as is caused by the removal of the organs of internal secretion. Omi's[18] experiments with salicin in the dog after removal of the pancreas brought to light the interesting fact that the liver of such animals acquires the ability to break up this glucosid into its component parts—a function the livers of normal carnivora possess to a slight degree or not at all, while Jeandelize and Perrin[19] claim to have observed an increase in the toxicity of sodium arsenate and of mercuric chlorid in thyroidectomized rabbits.

On the other hand, it has been the experience of many clinicians that patients with exophthalmic goiter are very susceptible to anesthesia. After feeding thyroid to mice and guinea-pigs Hunt and Seidell[20] observed diminished resistance to morphin. They also reported that thyroid feeding also lowered the resistance of rats to acetonitril, but increased the resistance of mice to this substance.

The complex physical and chemical processes set in motion by febrile conditions have within recent years claimed the attention of the physiologist as well as that of the biochemist. The data already obtained, meager as they are, justify the hope that this is a fruitful line of investigation, and that patient and diligent efforts will have their reward. We know already that protein catabolism is much accelerated in fever. According to Kastle,[21] oxidation in many diseases accompanied by a febrile condition shows many departures from the normal. As this is probably true of other processes in the body under these conditions, it would seem *a priori* that the reaction to foreign substances introduced into the body would also be altered. Indeed, this contention is fully borne out by experiments on animals as well as by bedside experience, as shown by the results obtained with the antipyretics.

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[5] Warburg: Ztschr. f. physiol. Chem., 1911, lxx, 413.

[6] Stewart: Jour. Pharmacol. and Exper. Therap., 1909, i, 49.

[7] Fleischer and Loeb: Jour. Exper. Med., 1910, xii, 288.

[8] Chiari and Januschke: Arch. exper. Path. u. Pharm., 1911, lxv, 120.

[9] Ellinger: München. med. Wchnschr., 1905, lii, 499.

[10] Ehrlich: Studies on Immunity, 1906; Eng. trans. by Baldouain.

[11] Bondy and Jacoby: Beitr. z. chem. Phys. u. Path. (Hofmeister), 1906, vii, 514.

[12] Loeb and Michaud: Biochem. Ztschr., 1907, iii, 307

[13] Von den Velden: Biochem. Ztschr., 1908, ix, 54.

[14] Hermann: Arch. f. Anat., Physiol. u. wissensch. Med., 1867, p. 64.

[15] Ellinger: München med. Wchnschr., 1905, lii, 499.

[16] Meltzer and Meltzer: Am. Jour. Physiol., 1903, ix, 252.

[17] Meltzer and Meltzer: Jour. Med. Research, 1903, x, 136.

[18] Omi: Biochem. Ztschr., 1908, x, 258.

[19] Jeandelize and Perrin: Compt. rend. soc. de biol., 1908, l, 233; ii, 235; 1910, lxviii, 146.

[20] Hunt and Seidell: Bull. 47, Hyg. Lab., U. S. P. H. and M.-H. S.

[21] Kastle: Bull. 31, Hyg. Lab., U. S. P. H. and M.-H. S.

Wachsmuth,[22] and later Liebermeister,[23] announced about half a century ago that the action of quinin is different in health and in disease.

Liebermeister[23] made numerous observations with this drug in a variety of conditions accompanied by pyrexia, and noticed that in some cases of typhoid, doses which exert a marked depression of temperature in the later stages of the disease have no antipyretic effect in its earlier stages. It occurred to him then to study the action of the drug in health as regards its effect on temperature. He therefore carried out a number of observations with quinin on convalescents from typhoid and other febrile diseases when the temperature became normal. The results show that in some cases a marked reduction of temperature occurred after the administration of the same doses of this drug. In other cases no effect on the temperature was observed, but even in those cases of apyrexia in which quinin reduced body temperature, the effect, he states, was less marked than in fever. The administration of the drug in health, as observed by him in one case, shows that large doses may be borne without affecting body temperature. Thus 40 grains of quinin administered in seven hours failed to lower the temperature in a healthy subject. Likewise Jurgensen[24] states that doses which lower the temperature in disease remain without effect in health. Buss,[25] who experimented with doses of 1 to 2 gm., found that these amounts did not affect temperature in health. Observations on the synthetic antipyretics are not quite so concordant. Riess[26] failed to obtain marked reduction of temperature in health with salicylic acid. After the administration of 5 gm. he observed a fall of only 0.9 C. The same dose, when given in febrile conditions, lowered the temperature 2 to 6 degrees C. Buss,[27] who carried out experiments himself, and others, asserted that they never observed any lowering of temperature in febrile cases. Kairin in doses up to 1.5 gm., according to Filehne,[28] has no effect in health; a single dose of 0.5 to 1 gm. lowers the body temperature 0.5 to 2 degrees C. in fever. According to Cohn and Zadek[29] this drug does not affect normal temperature after the administration of 3 gm. When given in pneumonia, typhoid, and other febrile conditions, 0.25 lowered the temperature 0.5 C. to 1 degree C. Maragliano and Queirolla[30] gave 4 to 5 gm. an hour to ten healthy individuals, but were not able to induce a lowering of the temperature in any of them. After .5-.1 gm. doses of kairin given in fever, however, they observed a reduction of temperature of from 2 to 4 degrees. Moreover, the antipyretic effect they noticed varies directly with the fever. Murri[31] observed a fall of from 3 to 5 degrees in febrile patients, but obtained no effect in normal individuals when given the same amounts distributed over an equal length of time. Similar results were obtained with antipyrin. Some observers state that slight reduction of temperature was noticed after taking antipyrin in afebrile conditions, but reduction was much less than in disease accompanied by fever. Friedrich Müller[32] observed that after the administration of large doses of antipyrin the temperature goes down even in normal individuals, but the reduction is slight—only 0.2°. The same observer reported marked diminution of the elimination of nitrogen when antipyrin was given in fever, but obtained little or no effect on protein metabolism when the drug was administered in health.

Pusinelli[33] corroborated the observation of Müller on the effect of this drug on temperature in health; after the administration of 1 gm. to a healthy individual the reduction in temperature amounted to a few tenths of a degree C. He observed, on the contrary, a slight rise of temperature after giving doses of from 2 to 3 gm. to a healthy person. The dose he employed in fever, which varied between 0.5 to 2 gm., lowered body temperature from 1° to 2° C. one hour after its administration, and later a further decrease of temperature was noted.

Acetanilid, as might be expected, has been the subject of numerous experimental studies on man and on animals as regards its action on the body temperature. Simpson[34] reported a slight fall of temperature (about 0.6° F. maximum) after taking fairly large doses in health. The same doses in febrile conditions were followed by a fall of 2° F. Cahn and Hepp,[35] who made observations on animals with relatively large doses, stated that the temperature of normal animals is not affected. This seemed contradicted by the experiments of Lépine[36] and Bokai.[37] A critical examination of their experiments, however, shows that the conditions under which they were carried out leave serious doubt whether the animals could be considered normal. Bokai experimented on dogs in a condition of narcosis induced by opium and gave them 0.25 gm. of acetanilid per kilo, which is a very large dose. The size of the dose may also account for the results obtained by Lépine, who administered 0.3 gm. acetanilid per kilo intravenously to dogs and subcutaneously to rabbits. Sackur,[38] who carried out an elaborate series of experiments on forty-eight individuals with sodium salicylate, kairin, antipyrin, thallin, acetanilid and acetphenetid, came to the conclusion as a result of his observations that doses which lower the temperature in disease have no influence on temperature in health. Indeed, in some cases, he states that he sometimes observed a rise of temperature in healthy people after the administration of these drugs.

The difference in response of the body to these drugs in febrile conditions may be due, however, to toxins as well as to uneven rise of body temperature. Inanition, partial or complete, is another factor which ought to be taken into account, since little or no food is taken in these conditions. Let us examine what evidence we have on these points, in conditions in which the body temperature was varied by experiments on healthy animals, causing it either to rise above or fall below the normal.

Wagner[39] has shown that the immunity of the hen to anthrax may be abolished by producing a hypothermia. Gibier and Metchnikoff[40] increased the susceptibility of the frog to this disease by submerging it in water at a temperature of 35 to 37 C. Similar results were reported by Doyen and Cournont,[41] and later by Morgenroth,[42] who abolished the immunity of the frog to tetanus toxin by raising the surrounding temperature to 20 C.

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[22] Wachsmuth: Arch. f. Heilk., 1863, iv, 73.
[23] Liebermeister: Deutsch. Arch. f. klin. Med., 1867, iii, 600.
[24] Jurgensen: Die Körperwärme des gesunden Menschen, Leipsic, 1873, p. 41.
[25] Buss: Ueber Wesen und Behandlung des Fiebers, Stuttgart, 1878, p. 168.
[26] Riess: Berl. klin. Wchnschr., 1875, xii, 673.
[27] Buss: Deutsch. Arch. f. klin. Med., 1875, xv, 457.
[28] Filehne: Berl. klin. Wchnschr., 1882, xix, 681.
[29] Cohn and Zadek: Deutsch. med. Wchnschr., 1883, ix, 487.
[30] Maragliano and Queirolla: Centralbl. f. med. Wissensch., 1884, xxii, 672
[31] Murri: Centralbl. f. med. Wissensch., 1884, xxii, 428.
[32] Müller: Centralbl. f. klin. Med., 1884, v, 570.
[33] Pusinelli: Deutsch. med. Wchnschr., 1885, xi, 145.
[34] Simpson: New York Med. Rec., 1887, xxxii, 706.
[35] Cahn and Hepp: Centralbl. f. klin. Med., 1886, vii, 562.
[36] Lépine: Lyon. Med., 1886, liii, 269.
[37] Bokai: Deutsch. med. Wchnschr., 1887, xiii, 905.
[38] Sackur: Dissertation, Breslau, 1890, p. 35.
[39] Wagner: Quoted by Zeehuisen; see note 46.
[40] Gibier and Metchnikoff: Quoted by Zeehuisen; see note 46.

The influence of temperature on the toxicity of inorganic substances, alkaloids, glucosids and narcotic drugs has been the subject of a number of investigations. The narcotic effect of morphin in frogs is said to be increased, according to Hausmann,[43] when these animals are placed in water at a temperature of 20 to 26 C. He points out that the narcotic effect of this drug is decreased when the temperature is lowered, but tetanus occurs more readily.

This investigator[44] also made very interesting observations in his studies with colchicin, tannin, saponin and abrin on hibernating bats. He found that the toxicity of these substances was much greater when treated animals were placed in a thermostat than when allowed to remain in the cold. The experiments he carried out later, jointly with Kolmer,[45] on unicellular animals, corroborate these findings. Colloidal silver was shown to be more toxic to paramecia when the temperature of the solution was raised from 15 C. to 33 C. The results with colchicum in this connection were especially striking. Paramecia placed in 1 per cent. solutions were normal after four days, when the temperature was 15 C., but when the temperature was raised to 33 C. the duration of life was only three and one-half hours.

Zeehuisen[46] studied the action of apomorphin and of morphin in pigeons in hypothermia and in hyperthermia. When the temperature was moderately lowered he observed diminished movements and a decreased tendency to vomiting after the administration of apomorphin. When the temperature of the pigeons was reduced from 3° to 15° C., there was complete inhibition of emesis. The toxicity was at the same time increased; there was greater nervous irritability, and convulsions were induced more easily. When the temperature was higher than normal the emetic action of the drug was lost and the movements of the beak ceased. The toxicity of morphin was increased when the temperature was raised, but was not affected in hypothermia.

According to Veley and Waller,[47] who studied the effect of chloroform, alcohol, quinin and aconitin, toxicity of these substances was greater at a higher temperature. In their observations on the effects of these substances on the contraction of striated muscle, they found that a muscle exposed to a two-thousandth normal solution of quinin recovers at once at a temperature of 19 C.; when the temperature of the solution was 25 C., recovery was delayed five minutes. Muscular fatigue after alcohol is similarly influenced. Recovery begins after one minute at a temperature of 20 C., but is retarded four minutes at a temperature of 24 C.

Experiments on man and animals in starvation with alanin are suggestive from our point of view. After the feeding of subcutaneous injections of 15 gm. of inactive alanin in starving dogs, Rachel Hirsch[48] found the levorotatory alanin in the urine. The same amount, she states, was completely destroyed when given to well-fed dogs. She reported similar results with alanin in starving phloridzinized dogs, and Brugsch and Hirsch[49] corroborated these findings in a professional faster.

These experiments would lead to the expectation that a difference may also result in the action of drugs when the diet has been restricted or when food has been withheld altogether for a sufficient length of time. The following investigations lend support to this view.

Jordan,[50] who carried out a number of experiments with digitalin on dogs, which he allowed to fast from three to twelve days, reported that symptoms appeared after much smaller doses of the drug in starvation. It is interesting to notice that he also observed diminished irritability of the vagus in hunger, which decreases with the length of starvation. According to Roger,[51] atropin and quinin sulphate are less toxic to rabbits which were starved twenty-four to twenty-six hours. He found that after injection of quinin sulphate into a peripheral vein the minimum toxic dose was about 25 per cent. greater in starving rabbits. But when this drug was injected into the portal vein the fatal dose for the well-fed rabbits was 160 mg. per kilo, and only 86 mg. per kilo for the starving animals. He obtained the same results with atropin, but his findings with nicotin were negative.

Aducco[52] studied, in several species of animals, the resistance of drugs in starvation, and found that in inanition strychnin, phenol and cocain are more poisonous to dogs, rabbits, guinea-pigs and pigeons.

Monaco and Trambusti,[53] on the other hand, reported that death in phosphorus poisoning is delayed in complete inanition, while an abundant diet hastened death in dogs and rabbits poisoned with this substance. The work of Mansfield[54] shows that doses large enough to cause a slight reaction in well-nourished rabbits, were fatal to the same animals when starved from five to ten days. According to Mansfield and Fejes,[55] the brain in starving rabbits retains larger amounts of chloral than the brain of well-fed rabbits. At the end of thirty minutes, the amount of chloral in the brain was about the same in normal and in starving rabbits. At the end of one hour the difference was about 50 per cent. After one and one-half hours the brain of the starving rabbit contained almost twice as much chloral as that of the normal rabbits. Experiments with alcohol failed to show, however, any difference in the alcohol content of the brains of well-fed and of starving rabbits.

In experiments on the toxicity of caffein, Salant and Rieger[56] found that rabbits which had been starved five to six days were less resistant to this drug than well-nourished rabbits. The toxicity when food was withheld increased 30 per cent. in nearly all the cases examined. On the other hand, the recent work of Hunt[57] shows that partial starvation may increase the resistance of animals to some poisons. He found that mice and guinea-pigs which received only small quantities of food survive doses of acetonitril which proved fatal to these animals when the amount of food given was unrestricted.

Attention may also be directed toward chronic alcoholism and chronic lead-poisoning as conspicuous examples in which changes in the body associated with abnormal metabolism determine important differences in the behavior of drugs, both as to their total effect or as to some of the changes they undergo in the body.

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[41] Doyen and Courmont: Compt. rend. Soc. d. biol., 1893, xlv, 618.
[42] Morgenroth: Arch. Internat. de pharmacol. et de thérap., 1900, vii, 265.
[43] Hausmann: Arch. exper. Path. u. Pharmakol., 1905, lii, 315.
[44] Hausmann: Arch. f. d. ges. Physiol., 1906, cxlii, 317.
[45] Hausmann and Kolmer: Biochem. Ztschr., 1907, lii, 503.
[46] Zeehuisen: Arch. exper. Path. u. Pharmakol., 1895, xxxv, 181.
[47] Veley and Waller: Proc. Roy. Soc., London, 1910, Ser. B, 82, p. 205.
[48] Hirsch: Ztschr. f. exper. Path. u. Therap., 1905, i, 141; 1906, ii, 668.
[49] Brugsch and Hirsch: Ztschr. f. exper. Path. u. Therap., 1901, iii, 638; 1907, iv, 947.
[50] Jordan: Centralbl. f. med. Wissensch., 1895, xxiii, 145.
[51] Roger: Compt. rend. Soc. d. biol., 1887, series 8, iv, 166.
[52] Aducco: Centralbl. f. inn. Med., 1894, xv, 700.
[53] Monaco and Trambusti: Central. f. inn. Med., 1894, xv, 701.
[54] Mansfield: Arch. internat. de pharmacol., et de thérap., 1905, xv, 467.
[55] Mansfield and Fejes: Arch. Internat. de pharmacol. et de thérap., 1907, xvii, 348.
[56] Salant and Rieger: Proc. Am. Soc. Pharmacol. and Exper. Therap., Jour. Pharmacol. and Exper. Therap., 1910, i, 569.
[57] Hunt: Bull. 69, Hyg. Lab., U. S. P. H. and M.-H. S

Hunt[58] has shown that resistance to acetonitril in chronic alcoholism is diminished. In experiments which I made recently[59] with chenopodium oil it was observed that the toxicity of this substance was markedly diminished in rabbits which had received alcohol for several weeks. Some unpublished work of this laboratory[60] on caffein and theobromin indicates that demethylation is retarded in rabbits which received alcohol for two weeks. Since demethylation is in all probability an attempt of the body to reduce the toxicity of the methyl purins it may be inferred that retarded demethylation is likely to increase the toxicity of the substances. In numerous observations I made on the toxicity of caffein in animals, I have been impressed with the greater susceptibility of rabbits to caffein when these animals show well-marked lesions of coccidiosis of the liver or other lesions. It is quite possible that retarded demethylation is responsible for these results. Experiments on resistance to drugs in chronic lead-poisoning have not been made to my knowledge. I could find only one statement, by Otto Loewi,[61] to the effect that much smaller doses of atropin are effective in this condition.

The subject of fatigue has received considerable attention within recent years from physiologists in this country and abroad. The work of Lee[62] on frog muscle indicates that muscular fatigue in these animals is caused by carbonic acid, sarcolactic acid and the monobasic phosphates. Whether other substances may likewise cause fatigue, as has been asserted by some investigators, is for the present unknown, nor are there any data regarding the causation of general fatigue of the nervous system. Evidence of the presence of profound changes of the nervous system in this condition was presented by the recent work of Barbour and Abel.[63] In their experiments with acid fuchsin, they made the following observations. Tetanus appeared in normal frogs one to twenty hours after injection of 1 to 4 mg. acid fuchsin per kilo, while in some frogs even much larger doses failed to produce symptoms. Frogs which have been exercised until fatigue was produced reacted to this drug much more quickly and after smaller doses. Some of these experiments were carried out on the same animals in normal condition and fatigued; doses which produced no effect at first, several days later were followed by tetanus within ten minutes after injection when the subjects were fatigued.

Abnormalities of the organs of circulation, whether produced experimentally or occurring naturally, likewise afford instances of modified pharmacologic action which may be quantitative or even qualitative. Von Plavec[64] and others pointed out several years ago that cardiac activity is increased after theobromin in the diseased heart, but the drug has no effect on the heart in health. Caffein in collapse is cited by him as another instance. A dose just large enough to cause a mild stimulating effect in the healthy individual will increase many times the pulse volume and amplitude in collapse.

The same observer[65] reported that 0.2 to 0.3 gm. theobromin and theophyllin given three times a day have no effect on the frequency or quality of the pulse in health. In advanced cases of failing compensation, however, he noticed a striking increase of cardiac activity after the administration of such doses of these drugs. Frankel and Schwarz[66] made a number of experiments with milligram doses of strophanthin which they injected intravenously into individuals with normal heart action, but failed to notice any circulatory changes or any effect on diuresis. The same doses of strophanthin, when given in cases of valvular disease with failure of compensation well established, were followed by a decrease of frequency and an increase in amplitude of the pulse. Cloetta's[67] studies with digitalis are of interest in this connection. He has shown that in rabbits, in which he induced aortic insufficiency with cardiac hypertrophy, digitalis caused diminished cardiac hypertrophy and changes in the circulation. Similar experiments with digitalis on the healthy rabbit were without any effect. According to Bielfeldt,[68] injection of glycogen in healthy horses is followed by slight rise of temperature, increased frequency of pulse and respiration. In sick horses which suffer from cardiac weakness, the injection of glycogen decreases pulse frequency and at the same time strengthens heart action. Eychmüller[69] made a number of observations with therapeutic doses of digalen. He reported a moderate increase in amplitude and slowing of the heart-beat in the healthy heart. In valvular lesions with failing compensation, the effect of the drug was much more marked in these respects. That differences in the mechanism or mechanisms of adjustment in abnormal conditions are, in some instances at least, the cause of altered pharmacologic action is strikingly illustrated in the case of amyl nitrite. According to Rzentkowski,[70] this drug does not cause a fall of blood-pressure in health as it does in cases of arteriosclerosis. This, he believes, is because in health there is a compensatory constriction of the abdominal vessels which is lost in arteriosclerosis.

Injury to the cardiac muscle likewise modifies its reaction to drugs. This was shown some years ago by Talma and Weyde,[71] who reported that the action of ammonia was much less favorable on the heart of the frog after it was poisoned by quinin. More recently Nicola[72] studied the influence of barium chlorid in fatty degeneration of the heart induced experimentally. He states that barium chlorid has no effect on cardiac activity when the process is well advanced. According to the observations which Wiggers[73] reported recently, anemia produced experimentally modifies the action of a number of drugs. Retardation of the pulse observed after the administration of epinephrin under normal conditions was not seen when this drug was given in hemorrhage, according to this observer. Digitalis likewise loses its retarding effect under these conditions. Changes in the action of the nitrites, nitroglycerin, ergotin, morphin and chloroform on the circulation as a result of hemorrhage have also been reported by him.

The data presented above, although incomplete, ought to be sufficient to serve as a stimulus to further research in the direction suggested. To assume that a substance introduced into the body will produce the same effect under all conditions is unjustifiable and may lead to

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58. Hunt: Bull. 33, Hyg. Lab., U. S. P. H. and M.-H. S.
59. Salant: Proc. Am. Soc. Pharmacol. and Exper. Therap., Jour. Pharmacol. and Exper. Therap., 1911, ii, 391.
60. Salant and Phelps: Unpublished results.
61. Loewi: Wien. klin. Wchnschr., 1910, xxiii, 274.
62. Lee: The Journal A. M. A., 1906, xlvi, 1491.
63. Barbour and Abel: Jour. Pharmacol. and Exper. Therap., 1910, ii, 167.
64. Von Plavec: Arch. internat. de pharmacol. et de therap., 1904, xiii, 275.
65. Von Plavec: Arch. internat. de pharmacol. et de therap., 1908, xviii, 499
66. Frankel and Schwarz: Arch. exper. Path. u. Pharmakol., 1908, suppl., p. 188.
67. Cloetta: Arch. exper. Path. u. Pharmakol., 1908, lix, 209.
68. Bielfeldt: Dissertation, Berne, 1909.
69. Eychmüller: Berl. klin. Wchnschr., 1909, xlvi, 1677.
70. Rzentkowski: Ztschr. f. klin. Med., 1909, lxviii, 3.
71. Talma and Weyde: Ztschr. f. klin. Med., 1885, ix, 276.
72. Nicola: Arch. farmacol. sper., 1908, vii, 219.
73. Wiggers: Proc. Am. Soc. Pharmacol. and Exper. Therap., Jour. Exper. Pharm. and Therap., 1911, ii, 391.

error, and in therapeutics to serious consequences. The factors which determine the action of a drug are numerous. Mention was made above of the fact that oxidation, synthesis and other chemical processes in the body are in all probability affected in disease. In addition to these, the processes of absorption and elimination should be taken into account. It has been shown experimentally that these processes are modified in some conditions. Thus, after the removal of the kidneys in the rabbit, the rate of absorption from the peritoneal cavity is increased. This was shown several years ago by Meltzer and Salant,[74] and has been corroborated recently by Fleischer and Loeb.[75] Mayerhofer and Pribram[76] observed improved absorption of toxins, ferments, potassium chlorid, proteins, and so on, from the small intestine of animals in which enteritis was induced experimentally. Outikhine's[77] observations in experimental keratitis afford corroborative data on this subject. He states that the coefficient of absorption of fluorescein is increased from 2 to 38.4 in the anterior chamber of the eye and atropin is absorbed much faster from the conjunctiva in experimental keratitis. The recent experiments of McCrudden,[78] on the other hand, point to increased rate of elimination when the intestines are hyperemic or inflamed. He found that the elimination of morphin is more rapid after the administration of croton oil, quillaja, senega, mustard oil or alcohol. McCrudden[78] believes that since these substances are local irritants they cause hyperemia and increased secretion, which favors better elimination of this drug. It would seem, therefore, that in some conditions the effect of drugs may be more easily absorbed and eliminated faster. On the other hand, if the organs of absorption and elimination are diseased so that their functions are not affected to the same degree, and compensation is not established, the effect of a poison might under these conditions be different. As all processes called into existence by experimental procedure or in the course of disease are far from being understood, prediction of the action of a drug can at best be only approximate. And, indeed, sometimes the results may be altogether surprising. I may give an illustration from my own experience. Several years ago Dr. Meltzer and I were engaged[79] in the study of the effect of strychnin in nephrectomized rabbits. Since strychnin is entirely eliminated by the kidneys, their excision ought to render the drug more toxic to this animal. Indeed, it was taken for granted by some experimenters that strychnin administered to nephrectomized animals would necessarily produce the usual symptoms as soon as enough of it had been administered, even if given in divided doses.

As a matter of fact, the single toxic or fatal dose was found to be, in our experiments, even somewhat larger after the kidneys were removed. More interesting still was the fact that when the drug was injected very slowly or by the administration of subminimum doses at sufficiently long intervals of time, three to four times the amount were required to produce the characteristic reaction.

This is certainly a striking illustration how misleading *a priori* conclusions in biology may be. The value of speculation and of theory is by no means to be underrated. Indeed, this is to be encouraged in every laboratory for biologic experimentation. Its greatest, and, indeed, its only value, however, is to stimulate investigation, for experimental evidence is the only safe and reliable test of the validity of a theory.

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[74] Meltzer and Salant: Jour. Med. Research, 1903 xi, 30.
[75] Fleischer and Loeb: Jour. Exper. Med., 1910, xli, 487.
[76] Mayerhofer and Pribram: Ztschr. f. exper. Therap., 1909, vii, 247.
[77] Outikhine: Dissertation, St. Petersburg, 1907; Ann. d. ocul., 1909, cxii, 74.
[78] McCrudden: Arch. exper. Path. u. Pharmakol., 1910, lxii, 374.
[79] Meltzer and Salant: Jour. Exper. Med., 1901, v, 643

CONSTITUTIONAL INFERIORITY AND ITS PSYCHOSES

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The term "constitutional inferiority," which has found prompt adoption in America because it filled a need in our psychiatric nomenclature, and which is already beginning to creep into the expert testimony of our medicolegal cases as a plea for irresponsibility, owes its introduction into this country to Dr. Adolf Meyer.[1] He states that in seeking a designation which would "do justice to the hysterias and psychasthenias, which could be defined as such," while realizing "that there was a whole group of cases in which such a definition could not be maintained," he decided to include the latter under the heading of "constitutional inferiority." However, he admits his indebtedness to Koch, who had been designating the oddities and peculiar nicks in the personalities of various people under the classification of *psychische Minderwertigkeiten* (psychic inferiority). In the discussion of constitutional inferiority, as here considered, we must at the outset waive the theory that practically all persons who fall subject to functional psychoses are congenitally predisposed by an abnormal psychic make-up, a condition so well recognized that in the discussion of the characters of patients and even acquaintances psychiatrists are apt to resort to such descriptive terms as the manic make-up, the melancholic make-up, the præcox type or the shut-in personality.

There are annually admitted to the New York State Hospitals a comparatively very small group of patients with puzzling, atypical cases, differing widely in mental make-up, who are embraced in the group of constitutional inferiors, and who in many instances present not only difficulty in diagnosis, inasmuch as their alienation does not adhere to any recognized forms of mental disorders, but whose responsibility and consequent detention permits unlimited divergence of opinion.[2] It is a study of the male patients so classified who were discharged from the Manhattan State Hospital from October, 1907, to October, 1910, which forms the basis of this paper.

In a sense the term constitutional inferiority is a misnomer, for the word "inferior" seems inevitably to connote mental debility, whereas in a psychiatric sense an inferiority does not necessarily imply an intellectual defect, but may imply an inferior emotional equilibrium in the intellectually brilliant. Through an erroneous conception of the term there have been comprised in the group of constitutionally inferiors all varieties of constitutional abnormality, from the mentally defective, i. e., the congenitally high-grade imbecile or those enfeebled by such extraneous factors as the febrile intoxications or traumas in childhood, to those who are mentally brilliant though asymmetrically developed. In reality, we can distinguish in this group two types of inferiority: qualitative and quantitative.

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[1] Meyer, Adolf: Discussion of paper on Constitutional Abnormality by C. P. Oberndorf, New York State Hosp. Bull., ii, 823.
[2] Wright, H. A.: New York Med. Jour., December, 1908.

QUALITATIVE INFERIORITY

Persons belonging to the class marked by qualitative inferiority possess many characteristics often found in men of genius and successful achievement, but they lack the determination and poise to complete cleverly though impulsively conceived plans. After a transient outburst of intense application, the individual fluctuates, hesitates and discontinues without plausible reason. In the sense of being mentally defective the members of this class are not inferior; in fact, their mental attainments to a certain extent elevate them above the humdrum mediocrity of work-a-day normality, especially in their own estimation, for self-appreciation is a dominant qualification. These intellects, however, which are so unequally developed, allow one special aptitude to flourish at the expense of other faculties, though, as a rule, in no particular sphere is the defect so marked as to entail permanent pathologic consequences. The qualitatively inferior—the disequilibrated, as the French pithily express it—exhibit a defect of kind, not of amount.

It appears that in the development of any personality, either normal or abnormal, the strength and nature of the emotional trend tends to overbalance intellectual influences, since the latter are acquired while the former are congenitally inherent. This is especially so in the psychopathic or qualitatively inferior person, who, though often exceptionally well educated, fails to show normal restraint, is inclined to exaggerate and magnify trifles and to attach undue importance to minor incidents—a characteristic attributable to increased impressionability, sympathy, susceptibility and sensibility.

Thus the qualitatively inferior, who so frequently advocates delicate though warped ideals, at times actually does achieve, especially in artistic spheres, the unusual and seemingly unfeasible — things which the more normal and circumspect person would never consider undertaking.

As an example of this type, I mention a patient who has attained considerable popularity as the author of a certain class of fiction, and who might readily have been considered a prodigy. As a child of 4 years he was found constantly running about with an encyclopedia under his arm, and had so many facts at his disposal even as a child that he frequently bested old men and recent college graduates in argument. On the one side he was studious and quiet, being a member of a reputable microscopic society at the age of 8; on the other, he was headstrong, very powerful, fond of athletic sports, particularly those of a hazardous nature. To quote his own words, "as a boy I was introspective, but later when I became a cow-puncher this gradually subsided." Being possessed of an unusual amount of personal magnetism he attracted to himself many friends. While always egotistical and masterful he was sensitive almost to a fault, so scrupulous that a prevarication on the part of any one whom he met would annoy him, and, though quick-tempered, he quickly subsided from his outbursts. In spite of the fact that he had been appointed an instructor in chemistry in a good preparatory school at 15, and had every prospect for a brilliant university career, he preferred the untrammelled life of the Western plains to the convention of a college course. For a number of years he worked as a ranchman, cowboy and shipping clerk, and later became an expert accountant, brewery manager, farmer, caricaturist, artist, editor, free-lance and novelist. A friend describes him as "a man who looked deeply into a great many things, studied them carefully and worked them out well up to a certain point, only to drop them." When at one time he became absorbed in gas and electric motors, after much perseverance he designed a fairly good example, only to tire of his plan before perfecting it and to transfer his attention to practicing on the violin. He mastered the theory of sound with the idea of developing a plan for the improvement of the violin, but suddenly abandoned his intentions without apparent reason. Later, when he achieved success as a writer, he permitted his whims, outbursts, disregard for conventions and distorted ideals to multiply without any attempt at restraint, so that living with him became almost intolerable. His case is diagnosed as a psychasthenic state with rudimentary ideas of persecution on the part of his family; but withal he remains a man of charming personality, keen in observation, adroit in expression, a delightful companion; and when the feeling of "emptiness in the head" disappears, as it does transiently, he draws and paints with talent, writes clever verse, and during one brief period of activity his fertile mind evolved eight ideas for patents, some of which received sanction from high scientific authorities.

QUANTITATIVE INFERIORITY

Inasmuch as careful tests for the gradation of the mentally defective have been arranged by Binet, and adapted to American standards through the investigations of Dr. Goddard,[3] it is now possible to draw the line quite sharply between the high-grade imbecile and the constitutionally quantitatively inferior. These latter individuals, so often first recognized by the schoolteacher and school physician, are most prominently deficient in critical judgment, imagination and ability to grasp abstract ideas — ethical, religious and moral; but their psychic equilibrium is on the whole firmer than that of the qualitatively inferior. The under-development of these faculties, so innately intellectual, leads to a defective sense of proportion between coarser and finer feelings, to the faulty interpretation of ordinary occurrences through uncritical grasp of their significance, to inability to distinguish between right and wrong, and, fortunately, also to susceptibility to suggestion from their mental superiors. For this very reason, such individuals may become subservient to the commands of some gangster in the large cities so that they eventually commit some breach of the law, or, on the other hand, if they are properly influenced by some pedagogue with psychiatric experience, may be induced through affection and devotion to apply themselves to a simple routine. It is astonishing how admirably these persons who are so sullen, malicious and exasperatingly obstinate at home, conduct themselves under the general regulations of institutional life, where every movement is not criticized, where their individuality is respected and their activities directed.

This class, it should be emphasized, does not include any persons who, though of low educational or occupational status, or who, though handicapped by such defects as deafness or blindness, have utilized their opportunities to good advantage; nor does it exclude the increasing number of youths of the rich, who, living in luxury and sustained as social parasites, have been prevented from descent to the low strata unavoidably reached by the quantitative inferior unless he is artificially supported.

This type of personality and the psychosis to which it is prone is exemplified in a young Italian who has just been discharged from the hospital after his fifth attack. Beginning life inauspiciously with the handicap of an ancestry which included insanity in his maternal grandmother, mother and a maternal aunt, he developed feebly in physique and mind. At school he failed of promotion so frequently that he remained in classes with much younger boys and when he was finally given a trial at work of a simple kind, he proved utterly inefficient.

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[3] Goddard, H. H.: The Binet and Simon Tests of Intellectual Capacity, Training School, New Jersey, December, 1908.

Even at the age of 15 he showed psychotic symptoms in the form of an excitement which, however, was not sufficiently severe to demand commitment; at 16 he suffered from an hallucinatory episode of sudden onset, during which he appeared dull and stupid and expressed vague paranoid ideas. At 17 he entered Manhattan State Hospital because of an upset during which he began to laugh and cry and dance, talked in a rambling fashion, ate only after urging, gave fragmentary replies, probably hallucinated, and appeared entirely unconcerned about his predicament. After a year's residence in the hospital he had recovered sufficiently to secure a lowly occupation, only to lose control of himself again when he was discharged by his employer a year later. At this time he imagined that people were persecuting him, then became mute and tearful, and later showed mental flightiness and unrest. Although he remained in the hospital for two years on account of frequent outbursts of temper, on discharge he managed to retain a position as elevator boy for over four months, when, realizing himself on the verge of an excitement, he voluntarily, in January, 1911, applied to the hospital for treatment. One month's rest sufficed to restore him to his own low normal level.

THE MIXED FORM

From the above distinction it is to be expected that a number of cases would present features of both groups — a condition almost inevitable when one reflects that the gradation cannot be precise, and that there is nothing to preclude an individual being born with defect in both the intellectual and emotional spheres. As a rule the shortcomings of the persons classified in this mixed form approach those of the quantitative inferior.

The psychoses of the constitutional inferiors all present anomalous features, but the following summary indicates the predominating types of psychoses, or at least the most prominent symptoms which led to commitment. While certain of the patients showed no well-defined mental disorder at the time they were committed, the families, after enduring innumerable outbursts of peevishness or violence, or years of idleness or blundering on the part of the patients, finally felt compelled to seek relief from their domestic difficulties.

CONSTITUTIONAL INFERIORITY

Qualitative Type:	
No cause for commitment other than personality or a very mild outburst	4
Excitements	7
Depressions	1
Hysterical type	1
Neurasthenic type (usually depression)	4
Mixed Type:	
Alcohol an important factor	2
Head trauma a factor	1
Vague causes	3
Quantitative Type:	
No cause for commitment other than personality or a very mild outburst	2
Excitements	7
Epilepsy a factor	2
Dementia præcox (subsequent course)	1

While it is noticeable that excitements or depressions constitute a large percentage of the upsets in these individuals, the excitements lacked most of the cardinal features of manic attacks, namely, flight of ideas, marked psychomotor activity or distractibility, euphoria or over-productivity, but in the quantitative class, more often consisted of explosions of sullen petulance or brute violence with complete loss of self-control; and in the qualitatives, of righteous, vehement outbursts of indignation which others failed to appreciate. So, too, the depressions were marked by resistiveness, irritability and general dissatisfaction rather than distinct psychoses with mental retardation, self-accusation and dejection.

When the excitements are accompanied by hallucinations (a condition by no means rare in inferiors and made the subject of an extensive study among criminals by Birnbaum[4]) one of the most perplexing problems in psychiatry confronts the physician, namely, the differentiation from dementia præcox.[5] Inasmuch as the patient is accessible only to a limited examination at such times, a tentative diagnosis can be based only on the anamnesis and subjective symptoms, but it will almost invariably prove of value that even in the filthiest patients, with catatonia, stupor and indifference, a definitely acute onset without premonitory symptoms offers a more favorable prognosis. In many cases of this type which began abruptly, the patients are at present self-supporting after months or even years of mutism, apathy and catatonia, during which the unremitting tube-feeding and incessant care seemed to be a hopeless expenditure of time and labor.

Paranoid ideas of the quantitative inferiors are usually puerile in conception, flimsy in construction, dependent on environment and amenable to correction when the causative factor can be removed, but apt to recur when the patient drifts back to his old haunts. This does not imply that such paranoid ideas may not prove a menace to those against whom they are directed, for the quantitative inferior is not restrained by pity for his victim or by contemplation of consequences to himself, so that when his ire is aroused he is apt to act immediately by employing some simple direct means of revenge — usually a personal assault.

In striking contradistinction to this are the paranoid complexes of the qualitative inferiors, whose impressionable natures cause them to notice remarks and occurrences which would leave no imprint on blunter individuals and may arouse them to unjustifiable hatred or unreasoning love which they attempt neither to conceal nor to check. These paranoid conditions are usually founded on actualities and sustained to a limited degree by reason, but are embellished by sensibility and unfettered by impulse. As a matter of fact, the case of one of the patients who has been included in this study, a negro elevator boy, of unusual intelligence for his station, who at 20 years was admitted to the hospital after an episode of excitement during which he threatened his wife, and who shortly after his discharge was committed to the Matteawan Hospital for the Criminal Insane for a homicidal attack on his father, has been published[6] as a type of the paranoid complex.

Into this group have also fallen a goodly number of immigrants whom I have omitted in classification because their brief stay and inability to cooperate interfered with definite conclusions. They are usually of the illiterate peasant class from hamlets in Poland, Russia or Austria, who, when left isolated in a strange land where ordinary affairs presented a bewildering complexity, and when unable to comprehend or make themselves understood, became suspicious or turbulent and were finally conducted to some reception hospital in a panic-stricken state. Nearly all of this class soon pass from view through the deportation laws and while many were quieted after assurances from physicians, others showed symptoms of incipient dementia præcox.

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[4] Birnbaum, Karl: Psychosen mit Wahnbildung und Wahnhafte Einbildungen bei Degenerativen, Carl Marhold, Halle, 1908.

[5] North, C. H.: Insanity Among Adolescent Criminals, Am. Jour. Insanity, April, 1911, p. 677.

[6] Gregory, M. S.: Present-Day Limitations of Our Conceptions of Paranoia, New York Med. Jour., June 13, 1908, p. 1140.

When such predominating factors as alcoholism and epilepsy exist in the cases, a doubt might be raised as to the justification of separating them from the classical alcoholic and epileptic disorders. Such matters of classification will necessarily always be open to contention and are really dependent on the features which are to be emphasized. For example, the case of one of my patients who has been admitted to the hospital on three occasions within two years has been diagnosed by three different observers as dementia præcox, allied to dementia præcox and constitutional inferiority with an episode of irritability. The final grouping of the case must depend on an exhaustive study of the patient's personality. On the other hand, a maniacal excitement, an epileptic confusion, a depression or an alcoholic hallucinosis so distinctly classical in symptomatology may occur in a person of unquestionable inferiority in one sense or the other, that the nature of the disorder must be utilized as a criterion for prognosis.

PROGNOSIS AND TREATMENT

Obviously there can be no recovery in constitutional inferiority, but constitutional inferiors usually recover from the psychotic episodes which have been described without any apparent detriment to their mentality. It is, however, by no means uncommon for a typical dementia præcox to develop into the type of person here described as a quantitative inferior. From the limited number of cases which it seemed valid to consider, the length of time during which institutional care appeared advisable was, as might have been expected from their superior adjustability, less in the qualitative type, averaging three and one-half months in twenty-one cases. Among the quantitatives the average detention in twelve cases exceeded six and one-half months.

It has been pointed out that many quantitative inferiors encounter little difficulty in a primitive environment, so that the advice is frequently offered that they should be sent to a farm. Such a course, which is reminiscent in its conception and in its fallacy of the counsel sometimes given to patients with tuberculosis that they should seek a high altitude, is usually futile. Just as the consumptive needs the aid and judgment of a skilled and sympathetic physician to direct and encourage him, so the inferior requires the assistance of some one who understands his difficulties and struggles and is willing to condone his failures and encourage his efforts. Without this, country life in itself has little to offer.

A large proportion of the qualitative inferiors whose recovery is, I think, actually retarded by the depressing surroundings of an asylum and association with the insane, could be treated in a hospital for neurasthenics and minor mental disorders, which from time to time is advocated as an absolute necessity, and which, it seems, must eventually be established in every progressive state.

I wish to thank Dr. Mabon, superintendent of the Manhattan State Hospital, for the privilege of publishing this paper.

249 West Seventy-Fourth Street.

A SUPRAPUBIC DRAINAGE-TUBE

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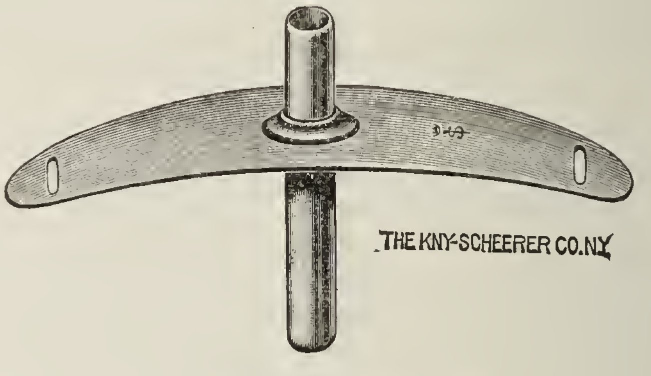
SEATTLE, WASH.

In senile hypertrophy of the prostate we often encounter patients with almost complete obstruction of the prostatic urethra, especially where the middle lobe has projected upward like a fibroma and has been referred to as a ball valve. In these cases constant catheterization is required and in time this operation becomes quite difficult and painful. Besides their refusal to be operated on, these patients are often very old, feeble and wasted, so that we do not care to expose them to the risk of a general anesthetic, or to the shock that follows the removal of the prostate. It was for just such cases that the tube and plate described below was made.

Many changes were necessary before it proved practical and satisfactory. The last model worked very well and was quite comfortable to the patient.

A sheet of 1/32 inch brass, 2 by 5 inches, is cut into an oval; through the center of this is run a ⅜ inch tube, 3 inches in length; the end that is inserted into the bladder is 2 inches long and the outer end 1 inch. This tube is perfectly straight. It was found that a curved tube was hard to insert and gave considerable discomfort. The oval plate is slightly bent to fit the gently rounding contour of the abdominal wall. The whole instrument is now silver-plated; this was found necessary on account of the corroding action of the urine.



A suprapubic drainage-tube.

The suprapubic cystotomy necessary for the insertion of this tube can easily be done under local anesthesia. The patient's bladder is allowed to become well distended so that it becomes quite distinct above the pubes. The lower abdomen is prepared for operation and the median line anesthetized by urea-hydrochlorate infiltration.

The skin and fascias are now divided, the fat retracted and the bulging bladder exposed. The latter is secured with a suture on either side of the median line to anchor it and then incised. The bladder can now be explored with the finger if a cystoscopic examination has not been possible, for in many cases it contains a small calculus.

The tube is now inserted and held to the patient's body by means of tape or elastic passed around the back and through the button-hole slits in the plate. A rubber tube now connects the outer end of the tube to a bag, bottle or other receptacle.

This plate and tube in no way can be compared to a prostatectomy in its results or its satisfaction, but we all occasionally see a case in which we have the condition described above and for which something must be done at once; it has proved satisfactory to me.

THE LAKE FOREST HOSPITAL FOR CONTAGIOUS DISEASES

ALFRED C. HAVEN, M.D.
LAKE FOREST, ILL.

The treatment of contagious diseases in private homes is very unsatisfactory. Every community should provide a hospital for such cases. What are the requirements of an ideal isolation hospital?

The location ought to be secluded, and the grounds spacious, allowing convalescents out-door exercise. The building should be planned for the purpose, and not remodeled. It should have, preferably, an east frontage, securing sunshine morning and afternoon. The building should be one story in height and fire-proof. It should be adapted for isolating not only the two sexes, but also for separating several different diseases simultaneously, and keeping them so. The physicians should have rooms for exchanging clothes prior to visits, and facilities for bathing afterward. Rooms must be provided for office, laboratory, dispensary and supplies. Groups of wards, or private rooms, in units, viz., a ward with six beds, a diet kitchen, with gas range and sink, a bathroom, preferably with shower baths and movable iron tubs, and, if possible, a small nurses' private room should be included in the plans. These units may be multiplied to meet the demand. The basement should contain two disinfecting rooms, the "dirty" and the "clean" rooms. In the partition dividing them should be placed the steam boiler for disinfecting purposes. All goods to be treated are brought, in suitable sealed bags, to the "dirty" room, and after disinfecting, removed from the boiler into the "clean" room, or the "dirty" room alone may be used for the formaldehyd process. A laundry and a store-room should also be provided in the basement. The floors in the wards should be of cement with no angles or corners to collect dust, and there should be hose connections in each room for cleansing.

The caretaker should occupy a separate cottage to the rear of the hospital. This should contain not only a living-room, chambers and bath, but also a good-sized kitchen where the meals for the entire hospital may be prepared and carried to the wards on simple wooden plates, which are never returned, but burned. Each ward should have its own dishes and outfit. The cottage should also contain in its basement the steam heating plant for the entire hospital with arrangements for heating any ward separately.

The caretaker need not then be quarantined, as he does not have to enter the main building when it is occupied by patients. The entire hospital should be surrounded by a cement terrace ten feet wide. The wards are entered from the terrace on the outside.

Suppose the hospital is in active use. The physician enters the main hall and the physician's room, puts on his duck suit and rubbers, passes out on the terrace and enters the ward or wards he wishes to visit. He returns by terrace to the physician's room, has his shower bath, dons his former clothes, and passes out. The patient is brought in the ambulance, which backs up to the terrace door of the desired ward.

The grounds about the hospital should be attractively laid out, and planted with shrubs. The terms "con-

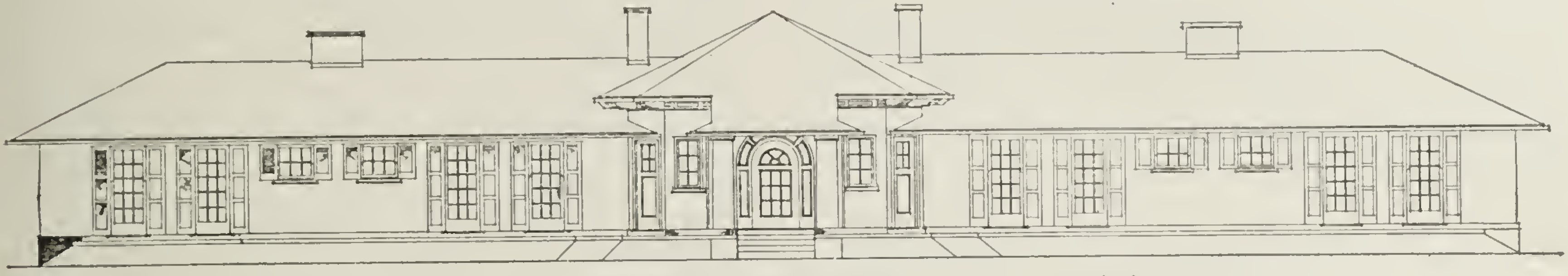


Fig. 1.—Front elevation of the Lake Forest Isolation Hospital.

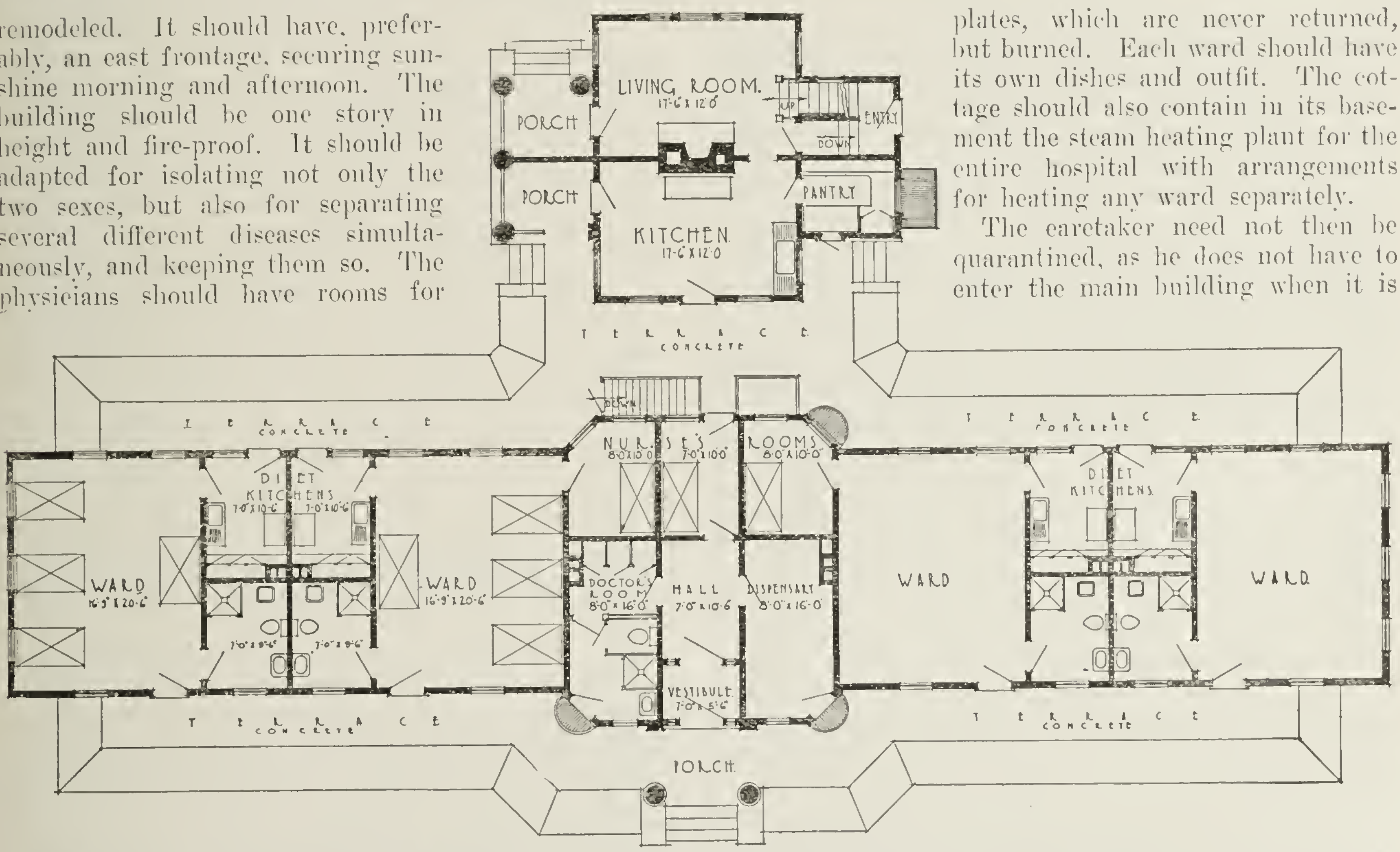


Fig. 2.—Floor plan of the Lake Forest Isolation Hospital. The caretaker's residence in the rear contains also two bedrooms, a bath and a storage-room above.

tagious" or "pest house" should be replaced by more euphonious terms.

These are the ideals that have inspired the trustees and architect, Mr. Charles S. Frost, in planning an isolation hospital for Lake Forest, as shown in the accompanying plans. It will be noted that the end wards in each wing have no connecting nurses' retiring rooms. This arrangement was made in order to save space. These wards are intended for female patients and the nurse in each will occupy one of the beds in the ward. The terraces are not covered by porches in order that as much sunshine as possible may reach the wards. The grounds cover three acres. The exterior of the building will be of rough plaster on metal lath. The estimated cost, including furniture, is about $20,000. This is the only hospital on the North Shore for the treatment of contagious diseases exclusively. Lake Forest also has a hospital, Alice Home, for emergency cases.

ACUTE POLIOMYELITIS IN CALIFORNIA

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SACRAMENTO, CAL.

Acute poliomyelitis has been existent in California for a good many years, appearing sporadically, and in occasional epidemics. The disease has not until recently been considered contagious and the public health reports are, therefore, extremely unsatisfactory sources from which to obtain data concerning the history of this malady in the state.

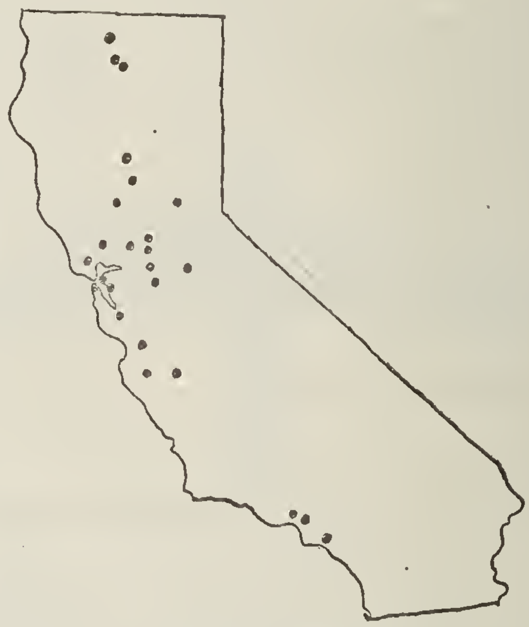
The first case of which I have been able to get an accurate account occurred in Eureka, California, in 1875. The case was a typical one, in a child, aged 2 years, with acute onset followed in a few days with paralysis in the lower extremities. This patient tells me that another child had the same disease at "about the same time." A search through the California journals on file in the state library, and through the *Index Medicus,* has failed to give me any further cases recorded between 1875 and 1896. In 1897 appeared a report by Sherman[1] of eight cases occurring in the state during the summer of 1896; of these, seven were in San Francisco, and one in Napa. Newmark[2] reports four cases occurring in Merced County in the summer of 1898. Woods[3] describes an epidemic, "about fifty cases," occurring in and about San Francisco in 1901, with a recurrence of "several cases" in 1902. Since 1902, no literature of the disease in California has appeared that we could find.

During the summer of 1910, however, the most extensive epidemic yet seen in this state presented itself. Under the auspices of the state board of health I had an opportunity to obtain all the available records and to see a considerable number of these cases. The San Francisco Medical Society appointed a commission to investigate the epidemic as it prevailed in that city. A copy of this excellent report has been sent to the board by Dr. E. C. Fleischner,[4] chairman of the committee, and has been incorporated into the data of the epidemic of 1910 in the state. On account of the fact that in the beginning the disease was not a reportable one to the board, a good many cases are doubtless unrecorded. It has been some time since we have had many cases of this disease, and a diagnosis may have been occasionally overlooked, especially in abortive or rapidly fatal cases. It is certain, therefore, that our reports are incomplete and the deductions drawn from them must, of course, be more or less faulty. The epidemic of 1910 did not differ in clinical features from the characteristics of the ordinary type of the disease. We were able to collect a complete record of 125 cases; 120 in 1910, and five before October, 1911. Of these cases, 75 per cent. occurred from May to September, 1910. The number of males attacked was practically double that of the females; 63 to 37 per cent. Seventy-three per cent. of the cases were under 8 years. The onset in 88 per cent. was given as sudden, and in 12 per cent. slow. The type of onset for the sake of classification was divided into:

1. The classical, or gastro-intestinal type, in which gastro-enteric disturbances, with fever, predominate. This group included about 67 per cent. of all cases.

2. The meningitic type, in which symptoms of meningeal irritation were most prominent, such as the retraction of the neck, etc. This group comprised about 25 per cent. of the cases.

3. The abortive, which practically does not appear in this investigation as it was thought impossible, in the absence of facilities for doing any serodiagnostic work, to draw definite conclusions from so indefinite a symptom-complex. No cases were included in the report unless paralysis occurred. Of the paralysis, 23 per cent. occurred in the upper, 73 per cent. in the lower extremities, the remaining 4 per cent. being cases in which trunk and respiratory muscles were involved causing death. There are seven deaths recorded, making a mortality rate of 6 per cent. in the epidemic. It is very probable that this death-rate is too low. Eighty-two per cent. of the cases began with fever; 54 per cent. with gastro-intestinal disturbance; 46 per cent. without marked gastro-intestinal symptoms.



Map of California showing geographical distribution of acute poliomyelitis from January, 1910, to October, 1911. Dots indicate localities from which cases of the disease were reported.

Since the work of Flexner,[5] who has shown that poliomyelitis is a transmissible disease, we have been particularly anxious to trace, if possible, the mode of transmission in order to work out some practical sanitary method for the limitation of the infection. In the field, however, it has been unbelievably difficult to demonstrate direct transmission. In the 125 cases I was able to elicit a history of exposure in eleven only, or 9 per cent.; in the remaining 91 per cent., no reasonable history of contact with other cases could be obtained. In the report which was sent out from the board of health office to the practitioners in the state, the question was asked concerning the number of persons exposed to each case. In the fifty-eight reports which came back complete, 113 adults and 113 children had been directly and repeatedly exposed during the acute stages of the illness. There were no secondary cases in adults, and but five demonstrable secondary cases in children. This morbidity percentage (4.5) is quite low when compared with that of the other diseases of children.

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[1] Sherman, H. M.: Occid. Med. Times, August, 1897, p. 445.
[2] Newmark, Leo: Med. News, 1899, lxxiv, 101.
[3] Woods, A. M.: Occid. Med. Times, March, 1903, p. 77.
[4] Fleischner, E. C.: Cal. State Jour. Med., September, 1911.

[5] Flexner, Simon: The Journal A. M. A., Sept. 24, 1910, p. 1105.

Early in the investigation of this epidemic we obtained indefinite reports and rumors of acute paralysis of the domestic animals in the neighborhood and at about the same time that acute poliomyelitis appeared. In Stockton, a colt was said to have been paralyzed; in Sacramento, chickens; in Davis, a kitten; and in Petaluma, a dog. The board has never been able to obtain possession of any of these animals for pathologic investigation. One horse which was attacked with some sudden malady, associated with a weakness in the fore-quarters, was autopsied and that portion of the cord supplying the front legs sectioned. No areas of round-cell infiltration or hemorrhage were found.

The towns in which poliomyelitis appeared, as indicated by the health officers' reports, were marked in order of time on a map of the state to find out if there were any definite order in the spread of the disease. It was found that the disease had existed in San Francisco several months before it was reported in other parts of the state. The first extension was to Stockton, June 2, 1910; the next to Berkeley, June 15, 1910; and so forth, without definite geographical order. The disease has appeared at widely separated points at almost the same time. This capriciousness of extension seems to suggest either a very considerable incompleteness of records, a transmission by means of carriers to considerable distances, or an existence of the virus under natural conditions. The accompanying map shows towns at which the disease occurred from January, 1910, to October, 1911. It is interesting to note that in the cold weather the disease invaded the southern part of the state which had previously been exempt from infection. It is suggestive that all the towns, except one, in which the disease has appeared are on railroad lines.

Plugging the Frontal Sinus After Its Evacuation for Sinusitis.—Torrini has applied to frontal sinusitis the principle of plugging the cavity left after evacuation and removal of the front wall, with an antiseptic and non-absorbent substance which can be introduced in a semifluid state and hardens after its introduction, like Mosetig's iodoform filling for cavities in the long bones. Torrini, writing in the *Revue Hebd. de Laryngologie*, 1911, xxxii, 689, reports experiments with the method on four lambs, with encouraging results. It permits radical treatment while preventing postoperative deformity and obliterating the surgical cavity. He made an incision through the eyebrow and turned back a flap including the periosteum to which he left adherent some thin flakes of bone. The entire anterior wall of the frontal sinus was then removed, permitting thorough treatment. He then filled the cavity with Beck's bismuth paste: not a trace of the operation could be detected on the animals a year later. Even after removal of the skin down to the periosteum, there was nothing to locate the site of the sinus in question; the anterior wall had regenerated from the flakes of bone left on the periosteum. The paste had not been absorbed, but the cavity seemed to have grown smaller. The filling in the cavity acts as a barrier against infection from the sinus from the nose.

THE DISASTROUS RESULTS OF DELAYED DIAGNOSIS IN PULMONARY TUBERCULOSIS

ETHAN A. GRAY, M.D.
CHICAGO

Nowadays when so much is being done against consumption, it would seem unnecessary either to call attention to the importance of early diagnosis, or to offer further data on the difficulties encountered in the diagnosis of this disease. Yet many cases develop and pass into the moderately advanced stage without being recognized.

My attention has been directed recently to the large percentage of error, resulting in late diagnoses, in a series of cases of tuberculosis which I have had the opportunity to study. The series comprises forty-five cases, all of which had been under the care of more than one physician before coming to me. At the hands of the first physician in the respective cases, twenty-six were not recognized, or were recognized only when the diagnosis was obvious to the casual observer.

The initial diagnoses were as follows: "Lung affected" non-tuberculous, four; non-tuberculous or no diagnosis, four; "catarrh," three; "stomach disease," three; colds, two; bronchitis, three; menopause, one; rheumatism, one; pleurisy, one; influenza, one; chronic disease, one; diabetes, one; long uvula, one; a total of twenty-six cases.

The delay in these twenty-six cases before the correct diagnosis was made, was as follows: In two cases, two weeks; in four cases, one month; in one case, five weeks; in three cases, two months; in three cases, three months; in two cases, six months; in two cases, nine months; in two cases, one year; in one case, two years; while two patients stated that they were not informed of the true nature of their disease for six years, although they had had it for that period, these being chronic cases, supposed to be "bronchitis."

At the time of making this report the condition of these patients might be classed as follows: Incipient, three; average delay before diagnosis was made, three weeks; moderately advanced, five, average delay, eight months; far advanced, thirteen, average delay, five months; dead, two, average delay, eight months; cured or arrested, none. Recovery and delay are not compatible in tuberculosis.

The data here given suggested grounds for further investigation regarding this error and delay. Where there has been found so large a percentage of error, some good basic reason should exist. It was decided to take a larger number of cases and tabulate the first symptoms of tuberculosis noted according to the patient's history.

Therefore, a first series of 150 case records of tuberculosis in the Chicago Fresh-Air Hospital was analyzed. These records concern patients in all stages of tuberculosis, except two, who had, respectively, valvular heart disease and sarcoma of the lung. The remaining 148 patients gave fifteen different symptoms as the primary cause of complaint. Some of these symptoms, such as cough, chest pain, night sweats, hemorrhage, loss of weight, might readily direct the attention of the examiner toward the lungs. This group numbers eighty-eight, the remaining sixty cases being divided as follows:

Stomach disorder	5	Pneumonia	3
"Colds"	24	Influenza	4
Weakness or breakdown.	21	Pleurisy	3

Combined with the above causes, were sore throat in three; diarrhea, chill, spitting, one each.

I will concede that all patients applying for admittance into a hospital for consumption will be certain to be examined for this disease, and that here a low incidence of error is to be expected.

A second series of 350 case records was examined, the patients being those of the Policlinic Dispensary of the Municipal Sanatorium of Chicago. Of these, 214 cases were diagnosed as tuberculous; 136 as non-tuberculous.

In answer to the question, "What was the first symptom of disease noticed?" there were nineteen different answers given. There were in this series 100 examinations of persons who had been exposed to tuberculosis, and had been, in consequence, brought in by visiting nurses. Of these forty only were found to be tuberculous.

Again, taking symptoms which might be held to point to lung disease we have the following:

Symptom	No. of Cases	Tuberculous	Non-Tuberculous
Cough	130	88	42
Chest pain	26	14	12
Hemorrhage	8	7	1
Night sweat	5	3	2
Expectoration	7	4	3
Loss of weight	15	12	3
	191	128	63

Of these 191 cases presenting symptoms which, as above stated, might suggest tuberculosis, over one-third failed of positive diagnosis.

Eliminating the 100 cases exposed to tuberculosis, as above noted, there remain fifty-nine cases for examination.

These are distributed as follows:

Symptom	No. of Cases	Tuberculous	Non-Tuberculous
"Throat disease"	6	4	2
"Stomach disease"	5	2	3
Swollen glands	12	8	4
Influenza	1	0	1
Sore eyes	3	0	3
Whooping-cough	1	0	1
Chills	13	9	4
Hoarseness	3	2	1
"Catarrh"	9	6	3
Asthma	2	1	1
Bronchitis	2	2	0
Fever	1	1	0
Empyema	1	1	0
	59	36	23

Questioning of many of these patients elicited the following facts: 1. In many instances the family physician accepted the patient's diagnosis, making what seemed to be an obvious deduction from the leading symptom offered by the patient. 2. The physician later misinterpreted perfectly obvious symptoms of thoracic disease because of his first and false diagnosis.

The foregoing tables must show that it is not always possible to make a diagnosis on symptomatology. It is frequently very difficult to make a positive diagnosis of tuberculosis of the lungs, even when applying the best known physical and laboratory methods, and the neglect to use all available methods in diagnosis constitutes the difference between the thorough and the superficial physician.

That it must be impossible to base a true diagnosis on any symptom is definitely shown by the fact that 33 per cent. of coughs were not of tuberculous origin. The same is true of the symptom "chest pain," for 46 per cent. with this symptom were non-tuberculous.

Now all these errors mean delay, which I have already emphasized, and delay spells death to the consumptive.

The foregoing is a plea for thorough examination with the chest bared to the waist, or the trunk to the hips, instead of auscultating the chest through the shirt front, or even through the outer garments.

In addition, laboratory methods of examination should be used to confirm, not to make, a diagnosis, unless it is impossible to make one otherwise. Tuberculin, the radiograph, blood examinations, all are of value, but are adjuvant only. They should not be used to the exclusion of inspection, palpation, percussion and auscultation. These things we have with us, these we have learned to use, and these we should continue to apply as long as we are possessed of our perceptive senses.

RECAPITULATION

1. No certain diagnosis of pulmonary tuberculosis can rest on symptomatology.

2. Error is bound to result in the absence of thorough physical examination.

3. Error means delay, and delay means disaster to the patient.

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PYLORIC OBSTRUCTION IN INFANTS WITH MUSCULAR HYPERTROPHY AT THE PYLORUS *

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Reports of cases called congenital pyloric stenosis are so frequent in recent medical literature that an apology seems due from any one who would once more bring this subject forward.

Such apology would seem especially necessary when one considers the exhaustive papers of Coutley, Weil and Pehu, Koplik, Morse, Ibrahim and a score of other writers. Yet in spite of the brilliant studies of ten years past, studies based on the consideration of many cases, we to-day, in the presence of one suffering from this malady, are victims of divided counsels. Men of vast experience say: Operate at once or fail in your duty. Men of equally great experience hold operation to be in some degree a lesser form of malpractice. Shall we follow Hutchinson, who finds that nineteen-twentieths of his twenty patients recover if treated medically, or Burghard, Stiles, Scudder and Stillman, who believe that for many of these infants, operation offers the only relief? Perhaps, in the face of such uncertainty, we may be excused for asking once more for consideration of this subject.

We have cared for and studied fourteen such patients and have seen a number of others by the courtesy of colleagues, without opportunity for adequate study. We have also made a very exhaustive scrutiny of the literature.

Like all others interested in the matter, we have pondered the different proposed classifications and believe that Nichol offers the most helpful suggestion.

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* Read in the Section on Diseases of Children of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

He divides his cases in which operation is imperative (major spasm, in his nomenclature) from those in which expectant treatment is indicated (minor spasm).

We believe Koplik's classification, based entirely on consideration of supposed etiology, to be less useful in practice, especially as in it is included the condition of pure spasm without hypertrophy, which we take to be a very distinct clinical entity well proved to arise from hyperchlorhydria, and we have excluded this not infrequent type from consideration here. The question we have to answer is in which of the cases the patients will endure temporizing and which must at once undergo operation. Our own view is that in a large proportion of the cases, obstruction is not absolutely persistent and that in such, dietetic and expectant measures suffice, and also that a few patients who do suffer from persistent positive obstruction, if brought promptly to operation, have a very fair chance to recover. Moreover, operation, where successful, offers a complete and almost immediate amelioration of the distressing symptoms, while the abatement of vomiting, wasting and discomfort under medical measures is delayed for weeks, often for months.

Such a division, however, is not always a certain guide; for our fatal cases include two in which the symptoms pointed to an intermittent obstruction; while among our recoveries without operation are at least two instances in which all the clinical evidence seemed to indicate complete persistent obstruction. Moreover, a scrutiny of nearly 300 cases from the literature shows this to be an average experience.

To one of us it has seemed that the type of vomiting had some prognostic value. When the vomiting comes on during, or immediately after, every meal and is of the regurgitant type altogether or in part, that is to say, in cases in which cumulative propulsile vomiting is inconstant, one should feel more hopeful for the patient's ultimate recovery without operation; and it would seem that the less dominant the propulsile type of ejection, the more rapid the cessation of symptoms.

A careful search of other observers' reports fails to confirm this view. In very few of the hundreds of reports examined, however, was the type of vomiting reported in detail. We believe a further study may prove of value and we suggest that when such cases are encountered daily notes should be made of the number of ejections, the time of each, the amount ejected, its relation to the ingestion of food, the appearance and the odor of the vomitus; possibly a special chart would prove of value in such investigation. It seems probable that in nearly all the cases the vomiting at first is of the regurgitant type and that, as suggested by Marsh, cumulative propulsile vomiting develops coincident with the beginning of stomach dilatation, so it seems reasonable to suppose that the less severe the lesion the longer the time that will elapse before the appearance of stomach dilatation and propulsile vomiting. A search of the literature reveals that a large proportion of the cases of recovery under expectant measures were characterized by the regurgitant type of vomiting at some time in the course of the disease, usually at a time not remote from the beginning of treatment. This, however, is far from universal, as in the majority of cases of patients reported cured without operation the vomiting is stated to have been propulsile and cumulative, occurring three to six times in twenty-four hours. However, but few of these gave in detail the character of the vomiting from the onset of the disease. Had the cases been studied with this point in mind, we are confident that much valuable information would have been derived, for no individual's experience is likely to be wide enough to form the basis of a final conclusion. One point we wish to insist on is that occasional patency of the pylorus, as shown by the appearance now and then of a milk stool, with an increase in the amount of urine and a temporary gain in weight, cannot be relied on as always of good prognostic significance, as witness Cases 8 to 10 of our series, and many reports of other observers. It seems that it may be on the violence of the closure of the pylorus that prognosis depends and it is reasonable to assume that the type of vomiting is to some degree a measure of this violence.

Fritz Talbot has suggested that a good measure of our ability to overcome obstruction at the pylorus may be had by putting small amounts of warm water into the empty stomach. If the water be persistently rejected there is little chance that foods which stimulate pyloric closure will pass into the duodenum. One speaks of violent pyloric closure, for, although we have little but surmise to go on, there are several facts that favor the idea that in these cases we are dealing with a more or less violent spasm of a hypertrophied muscle, a spasm that entirely closes a pyloric way already narrowed by the overgrowth of ring muscle, subcutaneous tissue and mucous membrane. The overgrowth itself seems but rarely to cause complete obstruction, as happened in a case of Morse, which came to post-mortem some months after operation; but this is the only instance of the sort that we could find in the literature. On the other hand, Bloch, Batten and other writers report the pylorus open and the gastro-enterostomy wound closed at autopsies made from six to twelve months after operation. Of course, in considering these cases we must recall to mind that normal growth rapidly widens the pyloric canal while it contributes little to the thickening of its walls. Pfaundler finds 1/10 inch to be the normal thickness of the wall at birth; and this is increased but little by the end of the first year. The lumen, on the other hand, rapidly widens at the end of the fourth week; it is then 3/10 inch wider than at birth and has gained a further 12/100 inch by the time the child is a year old. When the relation of cross-section to radius is remembered and the fact that the tumor is chiefly a simple overgrowth of circular muscle, itself a constituent of the normal pyloric wall, it will be seen that the normal increase in lumen ought, in time, to neutralize the narrowing due to the encroachment of the overgrown structures of the pyloric wall. This inference is supported by clinical evidence, for if these children can be kept alive until the fifth or sixth month they begin a progressive amelioration and are often exceedingly well-developed babies at the fourteenth or sixteenth month of life.

That in some cases, at least, the condition is one of spasm of an abnormal pyloric muscle already overgrown at the time of birth seems to be reasonably certain. In favor of the antenatal origin of the overgrowth, we have cases reported by Ibrahim, by Dent and by Cunningham, in which the tumors were found in fetal cadavers, and a number of cases in which the symptoms came on at birth, and in which a characteristic pylorus was found post mortem or at operation. Cunningham finds that the folds of mucous membrane, supposed to help obliterate the pylorus in these cases, occur normally; that the longitudinal muscle of the pylorus is proportionally hypertrophied and that many of the individual fibers of the hypertrophied muscles are of the giant type, conditions that obviously could not arise from postnatal hypertrophy due to overwork from closing spasm. And the fact that we have parallel congenital hypertrophies of muscle in the genito-urinary tract and in the intestine (Hirschsprung's disease, for instance); furthermore, that we find the relatively common pylorospasm, due to hyperchlorhydria, occurring in babies in whom one might reasonably expect hypertrophy of the pylorus if it could occur as a result of spasms, and in whom, after weeks or months of such a condition, there is no such increase in the circular muscle, is direct evidence that the condition is not of postnatal origin.

But while the evidence does not permit the assumption that the hypertrophy is the result of spasm, the fact of spasm must be accepted, for it is testified to by so many clinical events, as for instance, the intermittence of symptoms, the temporary amelioration that often follows a change of diet and the occasional passage, even in intractable cases, of a milk stool. The degree of the hypertrophy does not govern the degree of obstruction. Some cases with huge tumors have had less intense symptoms than others with relatively small hypertrophy. The expulsive character of the vomiting, too, can only be reconciled with the idea of violent contraction about the pylorus, and the variable intensity of the peristaltic wave suggests that the obstructing force is not of constant measure. Furthermore, Batten's report of a child spontaneously relieved of symptoms, who died eleven months later from a recurrence, but whose pylorus at postmortem revealed the characteristic hypertrophy, would indicate that spasm played a large part in the production of symptoms in this case at least.

It is easier to find evidence of spasm than to understand the reason for it, and until we do understand the underlying cause our treatment cannot be based on close reasoning and, therefore, must needs be to a degree empirical. We shall gain little guidance in the matter of treatment from acceptance of any of the many theories extant, for at the best they are but examples of sapient surmise. Without a doubt, however, study of the laws that concern opening and closure of the normal pylorus, as we can find them in the research of Pawlow, Starling and Cannon, can be relied on to shed some light on the working of the abnormal pyloric apparatus.

For a time it was assumed that hyperchlorhydria was a factor in these cases, but the work of Miller and Wilcox, of Ibrahim, and the findings in some of our cases, negative this view; in fact, whenever trustworthy examinations have been made, the secretory power of the stomach, except for rennin, has been normal. Miller and Wilcox found rennin secretion markedly increased in all their cases.

In a recent and very valuable contribution, Cowie has shown that foods of high acid concentration, while in the infant's normal stomach, increase the time of pyloric closure because the duodenum needs a longer period in which to effect neutralization and so initiate the opening reflex. Further, he tells us that foods of extreme alkalinity also tend to lengthen the time of pyloric closure because, as Cannon has shown, there must be a certain mild degree of acidity in the stomach before the pyloric opening reflex is initiated, and the higher the alkalinity, the longer it will take to acquire the needed degree of acidity. It is probable that there is an optimum degree of alkalinity of food for these babies and it seems due them that, whenever possible, we should investigate every such case by methods similar to those used by Cowie working on normal stomachs of babies. We must not overlook the fact, however, that from Holt's service have come reports that lime-water used in moderate quantities increases the production of hydrochloric acid, or that many writers have advocated the use of lime-water in quantities sufficient to prevent rennin coagulation in the stomach and so avoid the stimulus to pyloric closure supposed to arise from the presence of curds in the stomach. Scrutiny of the meals given the spontaneously cured patients here reported would indicate that the diet plays little part in either the production or the cure of the condition. The course of these cases is practically identical and yet some were fed whey, some condensed milk in varying dilution, some percentage formulas, and others were breast-fed. It seems irrational to feed vomiting infants food high in fat, yet some writers have reported recoveries while children were being fed mixtures rich in cream.

Two of the three patients here reported as dying without operation were under observation too short a time for any valid inferences to be drawn from their cases. One died of hemorrhage, a condition several times reported by other observers as the cause of a fatal issue. The second patient died in status epilepticus, the convulsions beginning at a time when lessened vomiting and improving stools seemed to indicate that the child was on the mend. The third died suddenly, within twenty-four hours of the appearance of good milk stools which followed amelioration of the vomiting. This child had an enormous hypertrophy of the pyloric apparatus and yet passed good stools. Such deaths are described in a number of communications and are probably due to the profound metabolic disturbance occurring in this condition.

In Cases 11 and 12, in which the patients died after operation, two very young babies were operated on because of alarming rapidity in weight-loss and absolute lack of response to lavage. However, in neither of these cases were these features more marked than in Case 6, in which operation was urged, but was refused, and in which the patient ultimately recovered. This infant, however, had a wet-nurse and was older when it began to develop symptoms.

Patients 13 and 14, recoveries after operation, were the first and second in the experience of one of us, and relief was so instant and positive after operation in both as well as in two other cases, one in Dr. Cheney's practice, one in Dr. Lartigau's (here mentioned by the courtesy of these colleagues), that at that time it seemed that failure to operate in every case would be wrong. Our subsequent experience has shown, however, that in the present state of our knowledge there is little to choose between a course of masterly inactivity and one of masterful intervention. Whether we follow Hutchinson, who decries all operations, or Scudder, who always operates, will depend to a degree on the personal bias of the physician and the problem presented by the individual case.

By far the best operative statistics are those of Burghard, who eschews gastro-enterostomy and practices pyloroplasty, a point we would commend to the consideration of our surgeons. In spite of Heubner, we believe that stomach lavage with hot, dilute (preferably 1 per cent.) soda bicarbonate solution given once or twice daily, is a measure of great value in the treatment of these cases. External heat applied through the medium of an electric heating-pad or Japanese stove is also of much use. Drip enemas during the time when vomiting is intractable are sometimes, though not always, of use. Condensed milk in moderate dilution is quite as well borne as any other food that we can find for such babies. It is especially of use when combined with mild alkaline laxative.

In conclusion we feel that, while our experience is too limited to allow positive statements, there is evidence to suggest that those patients who retain the regurgitant type of vomiting do better than those whose vomiting is constantly cumulative and propulsile: and we are impressed with the need for a uniform method of studying and reporting these cases which confront us so often and puzzle us so deeply.

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ABSTRACT OF DISCUSSION

DR. W. W. BUTTERWORTH, New Orleans: An experience of seven cases observed in the last month does not throw much light on the subject. In one case in which I wanted an operation performed the parents refused consent and the child recovered. This condition occurs more frequently in the first-born and in boys. This patient began vomiting the first week in April and grew steadily worse, and finally was having twenty vomiting spells in twenty-four hours and I thought his time had come. What saved his life was giving him a few drops of belladonna. Then the old negro nurse began giving him a few things and the child began gradually to recover. Dr. Matas had occasion to operate on a child for this condition. The first child in that family had died of the trouble so the parents had some experience with the condition. In this case the tumor was not demonstrable but the character of the vomiting was unmistakable. When one feels the hard, fibrous ring there can be no question of the necessity of an operation. But I must confess my inability to say where to draw the line. The best results in my hands have come from the use of stomach-washing, warm bicarbonate solution and the use of antispasmodics. Further than this I have nothing to suggest.

DR. L. PORTER, San Francisco: I did not bring up the question of the clinical picture because there has been so much written on that subject. In common with Dr. Butterworth, I have at times found belladonna useful. Five deaths occurred in these fourteen patients, two under operation. The finding of the tumor was of interest. In many of these cases, in fact, in all of the stomachs I have observed, not only the pylorus but also the stomach itself is hypertrophied, and the stomach overlaps the pylorus, making it very difficult to palpate the tumor. The interesting question comes up as to why, if these cases have an element of spasm, the tumor does not relax under the anesthetic at the time of the operation.

EXPERIENCES WITH THE COLEMAN-SHAFFER DIET IN TYPHOID FEVER *

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INTRODUCTION

The last two decades or more have witnessed the growth and rapid development of the idea that patients suffering from typhoid fever should be liberally fed on a judiciously chosen general diet, rather than maintained, as of old, on scant and meager "fluid" nourishment. The establishment of the fact that this disease is in all probability a bacteriemia or blood infection, accompanied by or accompanying specific intestinal lesions has directed the attention of the therapeutist toward the maintenance of the general condition and state of nutrition of the patient rather than toward the local intestinal condition *per se*. It is about realized that at this moment we are not in possession of a means of directly combating or altering the pathologic course of the infection; the aim has become more than ever before, so to maintain the strength and nutrition of the patient and his several organs as to allow him the optimum conditions for successfully surviving a fever process characterized by its protracted length and its progressive drain on the tissues. American internists have been the originators of this idea of "feeding the fever," and preeminent in carrying it out, with results that are well known and clinically accepted as beneficial to the patient.

Studies in the metabolism of fevers have shown that in all except the very lightest forms of infection there is an acceleration of the metabolic processes, more particularly, however, of the catabolic changes, resulting in a continuous loss to the body of the reserve fat, and soon in a progressive and uninterrupted drain of protein tissue. The loss of nitrogenous equilibrium, as evidenced by a negative nitrogen balance in the excretions, is demonstrable throughout the course of the active disease. This drain of protein (for the main part, muscle) and other tissues is ascribed to three causes, namely, the pyrexia, the customary starvation, and lastly, a toxic factor. Of these three factors, the second (the loss caused by insufficient nutriment in the diet) is the most easily overcome by increasing food values; that due to pyrexia and toxic agencies is more difficult to combat and prevent. Experimental work (Voit) on animals has shown that artificial raising of the body temperature in dogs, not above 39 C., causes no appreciable increase in metabolism; on the other hand, the metabolism of a fasting dog, whose temperature is maintained by external heat at 40 to 41 C., is accelerated about 37 per cent. above the normal. A loss of tissue is also experimentally demonstrable by the injection of toxic agents, whether there be a rise of temperature or not; and among these agents the bacterial toxins are the most potent.

One of the important facts established by the experiments and observations of modern workers is the principle that protein loss can be wholly or in part prevented by increasing the proportion of carbohydrate and fats in the food intake. Von Noorden, Müller, Chittenden, and others have again and again succeeded experimentally in normal subjects in preventing or "protecting" protein withdrawal by liberally increasing the proportion of the other food elements. Thus Chittenden, in his classical studies on the nutrition of man, has occasionally noted, in his experiments on the reduction of the protein ratio in the food, a negative nitrogen balance with consequent loss of body weight; however, maintaining this lowered protein intake but largely increasing the carbohydrate in the food, he has noted the reestablishment of nitrogenous equilibrium and the loss of weight converted into a tangible gain.

It was on the basis of this important principle that Coleman and Shaffer,[1] working on protein metabolism in typhoid fever, have suggested a practical form of diet which shall contain a liberal protein proportion, but with a very greatly increased carbohydrate ratio, as well as a moderate increase in the fat content. They aimed, therefore, to provide a diet which should convert a minus to a plus nitrogen balance, prevent loss of weight during the infection and maintain general nutrition; this to be done by so greatly increasing the carbohydrate and fat proportion of the food as to prevent nitrogen loss. The foods offered were easily digested and assimilated, leaving small residue and causing no undue gastro-intestinal disturbances. Their patients were fed at short intervals throughout the day, and at longer intervals at night; the dietary consisted of liberal quantities of milk with cream or cocoa, cereals, eggs, broths, bread, butter and whisky. In addition they made use of an almost tasteless sugar, capable of administration in large quantities, namely, lactose. This sugar they used in quantities up to 10 to 20 ounces a day. Cream, on account of its high fat content and very high calorie value, was also liberally used. The caloric value of the day's ration as administered by them usually varied between 3,500 and 5,000 units; an occasional patient may have taken 6,000 calories or even more for a short period. With such a highly nutritious forced diet, consisting for the most part of carbohydrate and fat, they reported satisfactory results. The diet was well received and untoward symptoms were not observed. Their studies in protein metabolism, undertaken throughout the course of the infection, show a very marked diminution in the customary nitrogen loss. This latter in many successful cases was completely checked or even converted into a nitrogen gain; the loss of weight was similarly seen to be greatly diminished or to have ceased.

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* The observations on which this article is founded were drawn from cases on the First Medical Service of Mount Sinai Hospital, while the author was house physician of that division. It was with the kind permission of Drs. Brill, Rudisch, Davison and Libman that the diet was introduced and studied. I wish to express my thanks to the attending physicians on this service for their kind consent and for numerous suggestions received throughout the course of the experiments.

[1] Coleman and Shaffer: Arch. Int. Med., Dec. 15, 1909, p. 538.

The attempt was made in some of the wards of Mount Sinai Hospital, during the summer of 1910, to utilize the ideas and practical suggestions of Coleman and Shaffer in modifying the diet of the typhoid patients.

THE DIET AND ITS ADMINISTRATION

The patient, on admission to the ward, was frequently found in a condition of neglect, showing evidences of insufficient nursing and ill-judged dieting. A fetid, neglected condition of the mouth and throat was the rule; it was also quite customary to find on the first examination marked abdominal distention. A history of constipation was almost invariable. Because of the disturbed condition of the gastro-intestinal tract it was customary to allow the first twenty-four hours for preliminary care. The teeth and mouth were cleansed, enemata were used to empty the lower bowel and frequently, in cases admitted early in the course of the disease, calomel was given.

Directly thereafter, the patient was placed on what soon came to be known to us (the hospital staff) as the "liberal typhoid diet," a diet borrowed in its essentials from the suggestions of Coleman and Shaffer, and adapted to our practical needs as we found them, and to our particular class of patients.

The following lists are offered as sample diets given to patients throughout the course of illness:

OUTLINE OF AVERAGE TYPHOID DIET

Breakfast, 6 a. m.: Farina 1 portion, with lactose 1 oz. and cream 1 oz. Coffee 6 oz. with cream 1 oz. and lactose ½ oz.

8 a. m.: Hot milk 6 oz. with cream 1 oz. and lactose ½ oz.

10 a. m.: Cocoa 1 cup (8 oz.) with cream 1 oz. and lactose ½ oz. Bread and butter 1 slice.

Dinner, 12 m.: Broth 8 oz., bread and butter (in form of milk toast) 1 slice of bread with milk 4 oz. and cream 1 oz. and lactose ½ oz. Egg (poached) 1. Rice 1 portion, with lactose 1 oz. and cream 1 oz.

2 p. m.: Ice-cream 1 portion; bread and butter 1; milk 6 oz., with cream 1 oz. and lactose ½ oz.

4 p. m.: Orangeade 8 oz., with egg 1, and lactose ½ oz

Supper, 6 p. m.: One of the wheat breakfast foods 1 portion, with cream 1 oz. and lactose 1 oz.; bread and butter 1; egg 1; malted milk 2 oz. with milk 6 oz., cream 1 oz. and lactose ½ ounce.

8 p. m.: Orangeade 6 oz., with egg albumin 1 and lactose ½ oz.

12 p. m.: Hot milk 6 oz., with cream 1 oz. and lactose ½ oz.

4 a. m.: Lemonade 6 oz., with egg albumin 1 and lactose ½ oz.

TABLE 1.—TOTAL CALORIES PER DAY ON AVERAGE TYPHOID DIET

Food Substance	Amount		Calories
Cereal	3 portions	at 160	480
Lactose	8 oz.	at 125	1,000
Cream	10 oz.	at 70	700
Bread and butter (without crusts)	4 slices	at 87	348
Eggs	3	at 60	180
Egg-albumin	2	at 40	80
Cocoa	1 cup (8 oz.)	at 180	180
Milk	28 oz.	at 20	560
Ice-cream	1 portion	at 90	90
Broth	8 oz.	at 7	56
Malted milk	2 drams	at 120 (per oz.)	30
Total calories			3,704

OUTLINE OF A MORE LIBERAL TYPHOID DIET

Breakfast, 6 a. m.: Farina 1 portion, with lactose 1½ oz. and cream 1½ oz.; bread and butter 2 (without crusts); egg 1; coffee 5 oz., with cream 1½ oz. and lactose 1 oz.

8 a. m.: Hot milk 6 oz., with cream 1½ oz. and lactose ½ oz.

10 a. m.: Malted milk 2 oz., with milk 6 oz., cream 1½ oz. and lactose 1 oz.; bread and butter 2.

Dinner, 12 m.: Broth 8 oz., bread and butter (in form of milk toast) 2, with milk 6 oz., cream 1½ oz. and lactose 1 oz.; eggs (poached) 2; rice 1 portion, with cream 1½ oz. and lactose 1½ oz.

2 p. m.: Ice-cream 1 portion, bread and butter 2, milk 6 oz., with cream 1½ oz.

4 p. m.: Orangeade 6 oz., with egg 1 and lactose ½ oz.

Supper, 6 p. m.: Wheat breakfast-food 1 portion, with cream 1½ oz. and lactose 1½ oz., bread and butter 2, egg (scrambled) 1, cocoa (2 cups) with cream 2 oz. and lactose 1 oz.

8 p. m.: Orange-albumin (white 1 egg) with lactose ½ oz.

12 p. m.: Hot milk 6 oz., with cream 2 oz.

4 a. m.: Orange or lemon-albumin (white 1 egg), with lactose ½ oz.

TABLE 2.—TOTAL CALORIES PER DAY ON LIBERAL TYPHOID DIET

Food Substance	Amount		Calories
Cereal	3 portions	at 160	480
Lactose	10 oz.	at 125	1,250
Cream	16 oz.	at 70	1,120
Bread and butter	12 slices	at 87	1,044
Eggs	5	at 60	300
Egg-albumin	2	at 40	80
Cocoa	2 cups (16 oz.)	at 180	360
Milk	36 oz. (6 cups)	at 120 (per cup)	720
Ice-cream	1 portion	at 90	90
Broth	8 oz.	at 7	56
Malted milk	2 drams	at 120 (per oz.)	30
Total calories			5,530

A reference to these diet lists will demonstrate the following: The patient is fed once in two hours, during the day from 6 a. m. to 8 p. m.; during the night at 12 p. m. and 4 a. m.; three times a day, the usual feeding is increased in quantity and variety so as to resemble a meal. Such a meal would consist of a cereal, always eaten with milk or cream in which a liberal portion of lactose is dissolved, and a cup of milk or coffee to which is similarly added cream and lactose (and saccharose for taste, as desired). Such a meal is easily extended and much enhanced in its value by the addition of an egg, or of one or two pieces of bread and butter. Or the bread may be taken in the form of milk-toast, or as bread dipped in milk or chewed simply as bread deprived of its crust. The cereal was varied frequently, the newer partially prepared and more palatable cereals being introduced, to the great relish of the patient. The interval feedings were simple, but care was always taken to choose highly nutritious articles of food, and particularly those with high carbohydrate value. Thus, milk, cocoa, coffee, to each of which was invariably added ½ ounce of cream and ½ to 1½ ounces of lactose were given. Also orangeade or lemonade with egg-albumin could be made into drinks carrying considerable caloric value by the addition of lactose and cane sugar.

The following list of caloric equivalents of foods will assist in understanding the values of the different articles used:

TABLE 3.—CALORIC VALUES OF FOODS

		Calories
Chicken	1 oz.	50
Beef-juice broth	1 oz.	7
Beef-soup	1 oz.	7½
Potato	1 oz.	25
Apples	1 oz.	18
Butter	1 oz.	225
Milk-sugar	1 oz.	125
Milk	1 qt.	650
Milk	8 oz.	160
Cream (16-20 per cent.)	1 qt.	2,000
Cream	8 oz.	560
Cream	1 oz.	70
Egg	1	60
Buttermilk	1 qt.	350
Matzoon-Zoolak	1 qt.	600
Egg-nog (with one egg)	8 oz.	220
Cocoa (with milk)	8 oz.	180
Cereal, per portion	..	160
Custard, per portion	..	60
Ice-cream, per plate	..	90
Bread	1 oz.	75
Bread (without crust)	20 gm.	50
Butter	5 gm.	37
(Therefore bread and butter as used)	1 slice	87

TABLE 4.—AMOUNT OF DIFFERENT FOODS REQUIRED TO MAKE 100 CALORIC UNITS (FISHER) *

	Gm.	
Chicken	90	(3.2 oz.)
Beef soup	380	(2 cups)
Potato	86	(One large)
Apple	206	(almost ½ lb.)
Butter	12.5	(One square)
Milk	140	(Small cup)
Cream	49	
Egg	59	(One large egg)
Buttermilk	275	
Matzoon-Zoolak	188	
Cereal	87	(Small portion)
Custard	122	(One cup)
Cocoa	120	(Half cup)
Bread and butter	30	(Slice, large)

* THE JOURNAL A. M. A., April 20, 1907, p. 1320.

One should pause a moment to consider the protein content of the diets as they are administered. Thus, the protein content of the "average diet" (Table 1) shows a total of 76 gm., that of the "more liberal diet" (Table 2), a total of 94 gm. per day. This protein content in the diet is greater than the usual protein proportion in an average healthy man's food, much in excess of the protein minimum as set down by Rubner (60 gm.). Whether the excess of protein food administered is sufficient or not for a febrile patient will be discussed later.

From a perusal of these statements, it will readily be seen that the attempt to institute a diet of high caloric value was sustained in the main part by offering liberally three articles of food, namely lactose, cream, and bread and butter. Lactose had been suggested by Coleman and Shaffer; it is a disaccharid, almost tasteless, with a slightly bitter after-taste when taken raw; it is soluble slowly in cold solutions, readily in warm drinks. One to two ounces may readily be added to 6 ounces of milk, coffee, tea, orangeade, etc. The drink is flavored with cane-sugar; the taste of lactose is then almost completely disguised; every gram of lactose has a value of 4.1 calories. When it is well taken by the patient, there is no difficulty in administering up to 8 or 10 or more ounces a day, giving thus alone 1,000 to 1,200 calories of fuel value. The cream, which contained on analysis 16 to 20 per cent. fat, was usually well taken in amounts up to 10 to 20 ounces per diem. When one remembers that a pint of cream (16 ounces) is equivalent to 1,000 caloric units, the high food value of this article is appreciated.

Bread and butter was introduced into the dietary at first with some hesitation and trepidation; later with a freer hand. The bread, cut in thin slices (the crust removed), and liberally buttered, was found by the patient to be a most acceptable food. When sufficiently conscious, he would chew it with relish or take it sopped in his fluid drink; it was of great service in this manner in stimulating salivary and peptic secretion, assisting and facilitating the care of the mouth and teeth. It was surprising how large an amount was readily taken by the patient in the course of the day without coaxing or forcing, four to twelve or sixteen slices not being considered excessive. As a convenient and delectable form of carbohydrate and fat food, bread and butter served its purpose well. One slice of bread and butter is almost equivalent to an ounce of lactose; twelve slices have a value of over 1,000 caloric units.

Eggs were of great service as a food which could be readily combined with the carbohydrate articles and thus facilitated the ingestion, with relish, of the latter. Thus egg-nog with lactose; poached egg on toast with milk; egg and bread and butter; custards, etc., were given. Three to five eggs a day were not considered excessive and supplied the greatest part of the necessary protein ration.

It was customary to allow daily 8 ounces of bouillon or soup; this was considered expedient, not because of the nutriment in this drink, which is little, but because of its well-known stimulating action on peptic secretion.

ADMINISTRATION

It may be said, briefly and honestly, that this diet is readily taken by the patient, usually with but little coaxing. In the first stage of the illness, when the fever is at its fastigium and the mental state is one of more or less apathy, the patient must be fed every mouthful by the nurse in attendance; but a little urging and coaxing arouse the patient sufficiently to take his meal. During this stage, as will be seen from subjoined tables, we had little difficulty in administering a diet whose caloric value was 3,000 to 4,000 or 4,500 units. When the temperature is highest (104 to 105 F.) diets of 2,000 to 3,000 units are satisfactory; as the temperature declines, the higher values are noted. With the approach of normal (101 to 99 F.) and with the normal temperature of the convalescence, the highest values in the diet are reached; from 3,500 to 5,000 or even 6,000 units are attained, usually with ease.

The logical question that suggests itself at this point is, "How do the patients stand this forced diet?" Here again, we may say that the diet is well borne and, except occasionally, *without* untoward results. The observations cover about thirty cases. In only one instance did vomiting occur, and in this case after allowing a light diet for a few days, the more liberal diet was reestablished without difficulty. Occasionally there was a complaint of nausea; the nausea was always regarded as a sign of overfeeding and the amounts were diminished or the interval of feeding increased; after a day or two the original diet could again be undertaken.

As regards intestinal symptoms, diarrhea occurred in only one of our series; this followed the administration of the liberal diet and disappeared with a diet of milk only. Three days after the prompt cessation of the diarrhea, the patient was taking 2,500 calories with ease and without abnormally frequent bowel movements. This was the only case in which any intestinal disturbance was associated with the administration of the forced diet; the subsequent easily established tolerance seemed to justify the continuation of the diet as originally offered. One fact was particularly striking to me. On the older dietaries it was quite customary to find a fair proportion of the typhoid patients showing abdominal distention, moderate or to a marked degree. The usual high soap-suds and peppermint enema had been frequently needed, particularly at night. It was therefore all the more surprising and worthy of note that on this diet an evening enema was required in only a few instances; abdominal distention was rare.

RESULTS

Nutrition.—It may well be understood that with such a highly nutritious diet successfully administered throughout the course of the illness, and to all intents and purposes easily assimilated, the state of nutrition remained good. The absence of evident emaciation in the milder cases, the plump appearance and good color of the convalescing patients was conspicuous. In protracted cases, in which a severe febrile period existed with marked toxic symptoms, the general excellent nutrition and firmness of the tissues would remain unimpaired for at least the first three or four weeks. In one case with an extremely severe course, running for almost thirteen weeks, while the emaciation was eventually marked, yet during the earlier weeks the consumption of the reserve subcutaneous fatty tissues was evidently delayed by the liberality of the diet. It was only during the latter half of this period, and with the increasing low delirium, coma vigil, and complete anorexia of the patient that the emaciation and loss of strength occurred. The following case (No. 16) illustrates the fluctuations in the amounts of alimentation administered over a long period of severe toxic depression and fever.

TABLE 5.—AVERAGE DAILY CALORIC VALUE OF FOOD ADMINISTERED IN A PROTRACTED CASE

Week	Calories	Week	Calories
2d	3,900	9th	3,400
3d	4,320	10th	2,830
4th	3,800	11th	3,960
5th	3,150	12th	4,380
6th	3,200	13th	4,550
7th	3,490	14th	5,350
8th	3,300		

During the second to fourth weeks, inclusive, in spite of continuous high pyrexia, the mental condition remained bright and cheerful and 3,800 to 4,200 calories were well received. The fifth to eleventh weeks were days of coma vigil and intense prostration, the patient still amenable, however, to persuasion and passively taking her nourishment in fair quantities; it was during this period that in spite of a diet containing an average of 3,230 calories the most marked loss of flesh took place. With the resolving temperature and improved mental condition an increase of appetite was noted, and without much coaxing the patient took over 4,000 calories per day. The evident emaciation was almost immediately halted and improvement and gain were apparent even before the temperature had reached the normal.

Convalescence.—In view of the facts presented above, namely, the absence, or marked diminution in loss of flesh and general strength during the febrile period, it was usually deemed safe to allow the patient to sit up with support of pillows on the first day that the temperature reached 98.6 F.; within another day or two the patient was allowed out of bed, so that three days after normal temperature was attained one had the satisfaction of finding the patient in a chair at the bedside and with the usual complaint of the convalescing typhoid, that of hunger. The period of hospital convalescence itself was remarkably shortened. The patients usually felt well and strong enough within ten to fourteen days to request their discharge, and frequently it was only with difficulty that male patients could be persuaded to remain two weeks after the temperature had become normal.

A moderate anemia, usually between 60 and 70 per cent. hemoglobin, was the customary finding during convalescence, and this even in those cases having the fullest and most acceptable diet.

Weight.—A study of the weight figures during and after the infection, and the effect of the different diet values on the loss of weight, is interesting and instructive. The patient was weighed within a few hours after admission to the hospital in all instances except those in which the illness was so far advanced or the general condition so precarious as to make the procedure inadvisable. On the first day of normal temperature the patient was reweighed and again weighed at short intervals during convalescence.

A perusal of the tables compiled from sixteen cases studied with weight figures will demonstrate the following facts: During the febrile period in spite of high forced feeding there was practically always a loss of weight. But the reservation should be made immediately that great loss was exceptional; the customary difference during the febrile period was 1 to 5 or 6 pounds; the greater deficiencies were seen in protracted, severe toxic cases of long duration.

TABLE 6.—VARIATIONS IN WEIGHT IN CASES RUNNING FOR DIFFERENT PERIODS

Case		Duration of Febrile Period, Days	Average Temperature, F.	Average Day's Diet, Calories	Difference in Weight, Pounds
1	Y. E.	6	100.1	3,300	— 2
2	404	8	101.4	3,760	— 1½
3	A. E.	9	100.2½	3,550	+ ½
4	J. S.	10	101	2,840	— 5
5	L. H.	10	100.8	4,000	— 1¾
6	I. K.	11	101.4	4,200	— 5½
7	A. S.	13	99.3	3,500	— 1¼
8	I. B.	13	101	3,940	— 2
9	381	14	101	4,150	— 4
10	A. T.	14	101.3	3,230	± 0
11	391	17	100	3,630	+ 3
12	G.	20	101.3	3,010	—11½
13	S. K.	21	100.9	4,400	— 5½
14	384	22	101.8	3,800	— 6
15	A. D.	29	102.2	3,650	—13
16	C. F.	89	102	3,590	—30

Thus in the first eleven cases, with a febrile period under observation up to seventeen days, a loss in weight in nine instances was slight, a maximum of 5 to 5½ pounds. Two patients actually showed gain; one remained in equilibrium. In the last five cases a moderately severe loss was noted. Discussed individually, Patient 12, during a febrile period of twenty days, lost 11½ pounds, but during this time his nourishment per day averaged only 3,010 calories. This patient was an emaciated, poorly nourished man, who, from obstinacy and preconceived notions of his own, was induced to eat only with difficulty. His temperature remained at a high level on account of a complicating bronchitis and bronchopneumonia.

Patient 13, sick with fever twenty-one days, took nourishment very well (average 4,400 calories), yet lost 5½ pounds. The toxemia was marked; his general state of nutrition on admission was very poor. It is of interest to note that even 4,400 calories per day were insufficient to prevent tissue loss. Such a diet contains over 100 gm. of protein.

Patient 14, observed during relapse, ate heartily, food equivalent to 3,800 calories daily, during the febrile period. This diet contains about 90 gm. protein and represents an ingestion of about 76 calories per kilogram of weight. Yet this acknowledged superfluity of nourishment was ineffectual in staying tissue loss.

Patient 15, suffering from severe toxic fever and pulmonary complications during twenty-nine days of high temperature, lost 13 pounds, despite a diet of 3,650 calories or 73 calories per kilogram of body weight every day.

Case 16 was an unusually prolonged and severe one; week after week for no discernible cause, except the original typhoid infection, the temperature remained high with only occasional remissions. The patient at first took nourishment well, then with increasing prostration and weakness; began to show distaste for food and sank into a semicomatose delirium. The loss of flesh during this period was very evident from week to week. With the general improvement accompanying the defervescing fever, appetite improved and the nourishment was increased without difficulty. Thus the patient received an average diet of 3,590 calories or about 65 calories per kilogram daily for twelve weeks, in spite of which a large loss of weight was recorded.

During the second period of observation of these cases, or the period of convalescence, a gain in weight was uniformly observed. Thus Table 7 demonstrates the change of weight in each corresponding case of Table 6 during convalescence:

TABLE 7.—COMPARATIVE AND TOTAL LOSS OR GAIN DURING CONVALESCENCE

Case		Days of Convalescence	Food Value in Calories	Difference of Weight, Pounds	Total Gain or Loss of Weight Throughout Illness, Pounds
1	Y. E.	5	3,700	+ 2	+ 0
2	404.........	9	4,880	+ ½	— 1
3	A. W.	..	.....	......	......
4	J. S.	..	.....	......	......
5	L. H.	..	.....	......	......
6	I. K.	14	.....	+ 8½	+ 3
7	A. S.	8	3,800	+ 2	+ ¾
8	I. B.	7	5,300	+ 6	+ 4
9	381.........	6	5,000	+ 2¾	— 1¼
10	A. T.	13	5,200	+ 4	+ 4
11	391.........	..	.....	......	......
12	G.	6	4,300	+ 4	— 6½
13	S. K.	13	4,300	+10½	+ 5
14	384.........	..	.....	......	......
15	A. D.	7	5,000	+ 4	— 9
16	C. F.	21	5,250	+13	—17

In two instances a slight temporary loss of weight was observed during the first few days of convalescence. This rapidly gave place to a gain on full diets. Of the sixteen patients on whom weight observations were made, seven were discharged from the hospital showing after short periods of convalescence (one to two weeks) gain in weight; this total gain varied from ½ to 5 pounds. Eight patients showed a loss, varying from 1 to 17 pounds. One patient showed neither gain nor loss.

In short, we may say that during the febrile period with diets ranging from 2,840 to 4,400 calories, thirteen cases out of sixteen showed some, usually slight, loss of weight (in two cases this was moderate, 11½ and 13 pounds; in one case severe, 30 pounds). During the convalescent period, a uniform gain occurred in *all* instances, so that on discharge seven of the sixteen patients had more than overcome their loss, while one case remained in balance. A slight loss was noted in two of these cases in the first few days.

Complications.—Of the milder complications we note only those usually encountered in this type of disease, namely, bronchitis, bronchopneumonia (one case), thyroiditis (one case), phlebitis (one case). Among the more severe complications marked toxic myocardial degeneration was noted clinically in only one case (febrile duration thirteen weeks); acute nephritis once.

Complications during convalescence were unknown, except for two cases of axillary furunculosis which had persisted from the earlier febrile period. A case of intestinal hemorrhage in the series was of interest; in fact, the patient was admitted to the hospital moderately exsanguinated. Within forty-eight hours, under treatment with opium and ice-coil and very light fluid diet, all signs of hemorrhage ceased. This patient then gradually received the liberal diet as above described, so that within five days she was receiving an almost maximum ration. No further intestinal hemorrhage occurred, and the recovery from the anemia, even during the course of the illness, was surprising and gratifying.

Perforation did not occur in our series.

Relapses.—In regard to the mooted question of the relation of liberal diet to relapses, the following figures are offered: three relapses occurred after a typical febrile course, during which febrile period the patient had received the liberal diet; one relapse occurred within a few days of admission, the patient having been previously maintained on a strict fluid diet. Omitting this last instance of a relapse, which was independent of any unusual dietary conditions, we must consider three relapses in a total of twenty-eight cases, or 10.7 per cent. This figure is certainly not greater than that presented by statisticians for the incidence of relapse in typhoid fever under various diets (8 to 12 per cent.).[2] In all three of these cases the food had been well taken, and no unusual gastro-intestinal symptoms had been noted. In one instance a mild recrudescence of temperature was noted (this patient was also pregnant). There was no mortality in this series of observed cases.

DEDUCTIONS

Before proceeding to draw any conclusions on the subject of liberal feeding in typhoid fever, more strictly of forced carbohydrate feeding, the reservation must be made and seriously considered, that conclusions drawn from so scant a material (about thirty cases, of which sixteen only were studied with regard to weight), must necessarily be based on evidence insufficient to make them convincing. But in the light of the awakened and active interest relating to liberal feeding in infectious fevers, it was considered of sufficient value to present these figures and facts and to draw at least tentative conclusions therefrom.

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[2] Mt. Sinai Hospital Reports, No. 1. Dr. Rudisch: Incidence of relapse in total number of 974 cases = 8.42 per cent.

Meara,[3] in a recent article, has most ably summarized our knowledge of the metabolism of infectious fevers. He has considered and discussed the point of nitrogen loss in fevers and the ideas of Coleman and Shaffer in regard to protecting this loss. In his conclusion he writes: "It has been proved, then, that in some men suffering from severe acute infectious disease, the protein loss can be stayed by the administration of a large quantity of foods; but whether this fact could be wisely used as a basis of procedure is a debatable question."

It is in order to offer some points toward deciding this debatable question that these studies were made.

The conclusions offered are as follows:

1. *The diet is a practical one and is well taken by the patient.* We have entertained no difficulty in feeding to patients throughout the active febrile period, diets ranging in caloric values from 3,000 to 4,700 units. As surprising as these figures are at first sight, yet just as surprising and gratifying is the ease and success of this dietary. The food is well borne, nausea or vomiting exceptional, abdominal distention and intestinal symptoms practically unknown.

2. *The nutrition of the patient remains, in all but the most severe cases, unusually good.* More than slight loss of weight is not often noted; the drawn, emaciated, starved facies of the patient fed on a restricted fluid diet is conspicuous by its absence, and is replaced by the well-nourished condition of the body, and the hopeful and satisfied countenance of the sufficiently fed.

3. *Most cases show a slight loss in weight.* In regard to the actual weights, I must admit a disappointment, for it was hoped that with so liberal a diet all loss of tissue (muscle protein) would be spared. We must realize two conditions; first, that during the febrile period almost all the patients showed some loss of weight; and second, that during the second or convalescing period they all showed gain, a gain which in over 50 per cent. of the cases was sufficient to counterbalance the previous loss and show a net increase for the total period of observation. Shaffer and Coleman, in the course of their investigations, were able, for *short periods of time,* to maintain nitrogen and weight equilibrium on diets of caloric value equal to or not greater than those employed by us. Not only that, but in four of six cases studied by them, an actual increase of weight was demonstrated even during the active febrile period. To explain this discrepancy requires attention to the figures and facts in both sets of experiments.

Careful analysis of the figures of these authors reveals two facts. The first is that not every gain in weight is accompanied by a positive nitrogen balance in the excretions, (cf. Case 5 of their series); or, in other words, a liberal carbohydrate-rich diet may create a total enhancement of weight and yet not completely "spare" nitrogen loss in the presence of fever. Second, the protein value of the diet given by Coleman and Shaffer was in most instances higher than mine and in many instances unusually high. Thus, while the protein value of the diets in my series ranged between 70 and 100 gm. per day, that of these authors showed a variation between 75 or 80 and 120 or even 140 gm. protein in the daily ration.

Therefore, comparing the two series of experiments, I am led to deduce, first, that the maintenance of weight in the series of Coleman and Shaffer was dependent on *a liberal carbohydrate diet with an abnormally high protein proportion;* second, that, in some individual instances despite the administration of a diet whose caloric value was so high as to produce *even a gain of weight in the presence of pyrexia,* a small loss of nitrogen was unavoidable. This latter nitrogen loss was unquestionably a part of the so-called "toxic" loss of nitrogen so frequently referred to and quoted.

The data in my series of cases would particularly emphasize this latter fact, for very liberal diets were given, which seem more than enough to overcome loss of body tissue due to starvation or pyrexia, yet loss of weight is noted during the active stage of the disease, and this we can only attribute to the "toxic" disintegrating action of the infecting organism on the protein tissues of the body. That this toxic loss of nitrogen was minimized and in great part prevented, I hold is proved by the small loss in weight in even the severe cases, and the rare instances of even a moderate loss. But that it can be "prevented or compensated for" seems improbable in all but occasional favorable exceptions. A repetition of the connitions of the experiment, but with higher protein values in the daily ration (over 100 gm. per diem) would be of value in determining whether the small loss of weight which I was unable to check was actually due to insufficient *protein* nutrition.

The absence of nitrogen analyses in our observations is to be sincerely regretted, but as the study was a clinical one on the utility of the diet as suggested by Coleman and Shaffer, chemical analyses of the excretions were omitted.

The unexceptional compensatory gains in weight during convalescence are not surprising, for the cessation of the toxic process and the fever, and the liberal diet offered should tend to repair of tissue.

4. *The period of convalescence is shortened.* It was extremely gratifying to note almost immediately on the cessation of the fever, the rapid return of the strength and buoyancy of spirit of the patient. The lassitude and enervation following a serious illness was for the most part absent, and replaced by hope, good nutrition and anxiety of the patient to return to his duties.

5. *The disease seems to be better tolerated.* In my series of about thirty cases, complications were rare, and there were no deaths. Of course, in so small a series it would be unwise to attempt to draw statistical conclusions as to frequency of complications, duration of course, etc. It cannot be said that the duration of the febrile period was in any wise abbreviated, nor was the incidence of relapse materially altered. But that the severity of the symptoms was mollified, that nutrition and strength were better maintained and convalescence shortened, seems to have been satisfactorily established.

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The Relation of Chemistry to Medicine.—The life of an organism in all its activities manifests itself through and, materially speaking, consists in chemical changes in the substances that compose that organism. The study of the normal course of these changes constitutes physiologic chemistry; the study of the disturbances to which this normal course is liable in disease constitutes pathologic chemistry. Every function of the body is a manifestation of ordered chemical change. Every disease is a manifestation of disordered chemical change. By determining the nature and cause of the disorder you determine the nature and cause of the disease; and till this has been determined no rational treatment of disease is possible.—J. B. Leathes in *Canadian Med. Assn. Jour.*

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[3] The Journal A. M. A., June 17, 1911, p. 1771.

BLOOD-PRESSURE OBSERVATIONS ON PATIENTS WITH RELAXED ABDOMINAL MUSCULATURE *

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Systolic blood-pressure readings taken while the individual observed is standing vary more or less from readings obtained in the recumbent posture. Edgren, Cook and Briggs, Gärtner, Goldwater, Hill, and Brush and Fayerweather, quoted by Janeway,[1] found the pressure 5 to 15 mm. Hg lower in the horizontal position, while Hensen, Friedmann, Shapiro and von Recklinghausen, quoted by the same author, found a fall of 10 to 15 mm. Hg on standing. Janeway[1] gives the increased ratio to the standing position and Michell observed the variation in the same direction. Evidence relative to the physical condition of the individuals examined is, in most cases, wanting, though Michell's[2] examination of over 1,600 Cambridge athletes is suggestive and serves to direct inquiry toward the physical condition as a cause for the difference of opinion. The numerous factors concerned in the production and maintenance of the blood-pressure and the various influences, both mental and physical, which may alter it, make it difficult to correlate the results obtained by different observers. In a healthy individual variations in the readings occur at different times during the day, bearing some relation to the taking of food, mental states, amount and kind of work done, and the ability to withstand fatigue and to recuperate therefrom.

The observations on which this brief report is based were undertaken for the purpose of determining to what extent postural variations in blood-pressure were present in cases of enteroptosis with relaxed abdominal musculature. It had been observed that in these patients the systolic pressure usually fell from 10 to 25 mm. Hg on standing after lying; that the severity of the symptoms seemed to bear some relation to the amount of systolic fall, being more marked with a low reading, and that on the days when these individuals were feeling their best, the reading taken while standing remained close to the one obtained in the recumbent posture.

That the results of the examinations might be as accurate as the means at hand would permit, in the beginning both the Erlanger sphygmomanometer and the Faught blood-pressure apparatus were used, the auscultatory method of Korotkoff[3] being employed with the latter, and the diastolic pressure being read at the fourth phase. Later, as there was little variation in the results obtained by the two methods, we adhered to the latter as being simpler and occupying less time. In some patients whose arteries possess little tone and whose pulse-pressure is low, it is difficult to get an accurate diastolic record; we therefore omitted them from the charts as being useless in computing the averages. The figures, then, representing the pulse-pressure in Table 3 may be considered as being a trifle higher than the true conditions warrant. Determinations in the horizontal position were made repeatedly until the pressure became constant. The standing readings were taken immediately after the patient rose from the table.

HEALTHY INDIVIDUALS LEADING MODERATELY SEDENTARY LIVES

In Table 1 it will be observed that while the systolic pressure is well maintained during change of position it did not rise on standing as in the athletes examined by Michell. This is due to the fact that these subjects, though healthy, were not in their best physical condition. Since the degree of muscular tone bears an important relation to the rapidity with which the effect of gravity in the standing position is overcome, in well-trained men immediate adjustment of the circulation is effected in the changed position.

The systolic determinations, however, present only one side of the question and in order to determine to what extent the blood-propelling mechanism is efficient, consideration must also be taken of the diastolic pressure, pulse-pressure and pulse-rate. Erlanger and Hooker[4] found that the diastolic pressure rose, the pulse-pressure decreased and the pulse-rate rose accordingly on standing after lying. This is in accord with the findings given in Table 1, and with the systolic pressure there given probably represents the blood-pressure conditions present in healthy individuals not undergoing muscular training.

TABLE 1.—TYPE CASES OF NORMAL INDIVIDUALS LEADING MODERATELY SEDENTARY LIVES

Subject	Time	Position	Max.	Min.	Pulse-Pressure	Pulse-Rate
1	3:12	Reclining.	120	70	50	84
1	3:20	Standing.	120	80	40	84
2	3:00	Reclining.	120	75	45	80
2	3:20	Standing.	118	80	38	84
3	3:00	Reclining.	108	78	30	84
3	3:10	Standing.	106	88	18	88
4	2:04	Reclining.	124	80	44	71
4	2:12	Standing.	120	90	30	74
5	2:19	Reclining.	120	72	48	82
5	2:32	Standing.	115	74	36	84

Average of twenty cases:
Fall of the systolic.............. 3.1 mm.
Rise of the diastolic.............. 7.6 mm.
Fall in pulse-pressure............ 9.8 mm.
Increase in pulse-rate............ 3.0 mm.

PERSONS WITH RELAXED ABDOMINAL MUSCULATURE

In the subjects with marked abdominal muscle relaxation (Table 2), the systolic pressure always fell from 10 to 25 mm. Hg on standing after lying. The diastolic, instead of rising, either remained stationary or fell and the pulse-pressure decreased as in the normal. But this decrease in pulse-pressure was caused, not by a diastolic rise as in the normal, but by a systolic fall. It is quite a different matter if the decrease in the pulse-pressure is brought about by a fall in the systolic rather than by a diastolic rise. Pulse-pressure may be increased, decreased or unchanged, according as the systolic and diastolic pressure, separate, come together, or move to the same extent in the same direction.

In this group, the noticeable increase in the pulse-rate, while undoubtedly effectual in preventing the extreme results of change in position, was yet inadequate to overcome entirely the effect of gravity.

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* Read before the San Francisco County Medical Society, Nov. 14, 1911.

[1] Janeway, Theodore A.: The Clinical Study of Blood-Pressure, 1904.

[2] Quoted by Sir C. Allbutt in Allbutt's System of Medicine, Ed. 2, vi, 201.

[3] Gittings, J. C.: Auscultatory Blood-Pressure Determination, Arch. Int. Med., August, 1910, vi, 196.

[4] Erlanger and Hooker: An Experimental Study of Blood-Pressure and Pulse-Pressure in Man, Johns Hopkins Hosp. Rep., xii, 236.

The question now arises, is the fall in the blood-pressure on standing due to the relaxed abdominal musculature, or is it due to other factors?

If the cases of abdominal relaxation with ptosis in which symptoms were present were considered alone it might be concluded that the relaxation bore a definite causative relationship to the fall in blood-pressure. Indeed, there is an abundance of anatomic and physiologic evidence which might be used in support of such a contention. The diaphragm has long been considered as a most important adjunct to the circulation. Its chief use is in the standing position when, acting in opposition to the abdominal muscles, it forms the so-called respiratory pump and assists in lifting the blood from the abdominal veins to the right heart. In the recumbent posture the need for the respiratory pump no longer exists, the diaphragm moves slightly or not at all, the respirations become thoracic in character and the circulation of the blood is maintained by the action of the heart and vasomotor system.

From laboratory experiments Emerson[5] concluded that:

> In the animals tested it is normal to exhibit a pressure in the free abdominal cavity which is above atmospheric pressure; that whatever diminishes or abolishes the tone of the diaphragm and abdominal muscles causes a fall in the positive abdominal pressure and that whatever increases the tone of the diaphragm and abdominal muscles will cause a rise in the intra-abdominal pressure above normal.

TABLE 2.—TYPE CASES OF RELAXATION OF THE ABDOMINAL WALL

Subject	Time	Position	Max.	Min.	Pulse-Pressure	Pulse-Rate
1	2:00	Reclining.	118	85	33	76
1	2:15	Standing.	92	72	20	92
2	2:46	Reclining.	124	85	39	84
2	2:55	Standing.	104	80	24	92
3	2:30	Reclining.	130	95	35	84
3	2:40	Standing.	110	85	25	104
4	3:33	Reclining.	110	78	32	70
4	3:45	Standing.	100	70	30	90
5	2:10	Reclining.	120	95	25	84
5	5:20	Standing.	110	95	15	90

Average of twenty-five cases:

Fall of the systolic	19.5 mm.
Fall of the diastolic	6.1 mm.
Fall of pulse-pressure	8.0 mm.
Increase in pulse-rate	15.0 mm.

Arthur Keith[6] says:

> In man the pressure exerted on the abdominal contents by the abdominal muscles, maintaining one viscus against another may be estimated at from 6 to 12 mm. Hg. The muscles of the abdominal wall are active opponents of the diaphragm, and when the abdominal muscles are paralyzed the diaphragm is thrown out of action just as completely as if it were intrinsic paralysis. But directly a support is applied to the lower part of the abdomen, the epigastrium fills out and by the aid of the radioscopic screen the diaphragm is seen to be pressed up, assuming an expiratory position, and immediately eases the movements of respiration, slows and improves the heart-beat and raises the arterial pressure.

Again Emerson[7] says:

> Any marked loss of abdominal tone is recognized clinically as a contributing cause of venous stagnation in the abdominal viscera, and this means a delayed or insufficient venous return to the right heart, a diminished output and a fall in the arterial pressure, or a pressure maintained only at the expense of greater cardiac action. In general, it may be stated that a lack of normal abdominal pressure is a contributing cause of general arterial low pressure.

But there are many patients with extreme ptosis and abdominal walls absolutely atonic who suffer no symptoms referable to the disorder itself or to its effect on the circulation. It is a matter of common observation that visceral ptosis of marked degree may exist without producing a single subjective symptom. True, in these cases it is usual to find a greater systolic fall on standing than in the normal. But the diastolic is well maintained, and so long as it is, the effect of gravity is compensated and the circulatory symptoms are absent.

Interesting in this connection is the effect of arterial hypertension. Table 3 shows four cases of extreme abdominal muscle relaxation complicated with chronic nephritis. This condition was sufficient to maintain both systolic and diastolic pressures, during change of position and in some cases even to the extent observed in athletes. Injurious as the chronic nephritis may have been in other directions, it certainly served to counteract the effect of the relaxation, for the cases observed were free from subjective symptoms.

TABLE 3.—RELAXED MUSCULATURE COMPLICATED WITH CHRONIC NEPHRITIS

Subject	Time	Position	Max.	Min.	Pulse-Pressure	Pulse-Rate
1	2:15	Reclining.	150	95	55	72
1	2:25	Standing.	158	110	48	76
2	11:05	Reclining.	165	110	55	68
2	11:15	Standing.	165	110	55	74
3	11:30	Reclining.	175	90	85	64
3	11:45	Standing.	165	90	75	66
4	12:14	Reclining.	180	95	90	78
4	12:25	Standing.	174	110	64	90

Average fall of the systolic	2.00 mm.
Average increase of the diastolic	7.50 mm.
Average fall of the pulse-pressure	10.75 mm.
Average increase in the pulse-rate	6.00 mm.

It is generally agreed that the larger part of the vasomotor regulating function resides in the splanchnic circulation. Of all the parts of the vascular system, the abdominal vessels enervated by the splanchnic nerves have by far the greatest effect on the general blood-pressure. Such an effect is seen in section of the splanchnic nerves. On the other hand, constriction of this area causes the blood-pressure to rise.

The splanchnic circulation is maintained by two main factors: first, the vasomotor mechanism, and second, the action of the diaphragm, the so-called respiratory pump. The diaphragm depends for its normal action on the integrity of the abdominal muscles. If they are deficient in tone, the diaphragm remains in the inspiratory phase with a consequent loss to the circulation of the respiratory pump. Thus the whole burden of maintaining the splanchnic circulation in the standing position falls on the vasomotor mechanism and it is not until this fatigues that symptoms appear.

The association of splanchnoptosis with relaxed abdominal wall has long been recognized and the accompanying symptoms have usually been ascribed to stretching or torsion of the visceral supports or to intestinal angulation. That the lowered position of the hollow viscera is detrimental to their function seems unlikely, for an otherwise healthy intestine should be able to propel its contents with equal facility in any direction. It has been seen that visceroptosis of marked degree may exist without producing a single subjective symptom. Where, however, symptoms do arise, they are of two types: neuropathic, as syncope, vertigo, insomnia, etc., and gastro-intestinal, as indigestion, meteorism, constipation and mucous colitis. A discussion of the former group only is within the scope of this paper.

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[5] Emerson, Haven: Arch. Int. Med., June, 1911, p. 754.
[6] Keith, Arthur: Allbutt's System of Medicine, Ed. 2, iii, 867.
[7] Emerson, Haven: Arch. Int. Med., June, 1911, p. 754.

In relaxation of the abdominal musculature we find a decreased intra-abdominal pressure and a decreased power of aspiration of the heart and diaphragm which tend to permit stagnation of the blood in the visceral veins. If, then, the vasomotor system becomes incompetent the amount of blood returning to the right heart per unit of time is less than normal, the systolic output is diminished, and we have a degree of chronic anemia of the tissues. This *must* have its effect on the cerebral circulation, to changes in which some of the symptoms can be ascribed.

Leonard Hill[8] tells us:

> The intracranial pressure is purely circulatory in origin and may vary largely with the changes in the general circulatory pressure. In all physiologic conditions a rise of the arterial pressure accelerates the flow through the brain, a fall slackens it.

Erlanger and Hooker, quoted from Hirschfelder,[9] say:

> When normal men were supported and kept motionless in the vertical posture the blood-pressure fell (e. g., maximum fell from 120 mm. to 103 mm., minimum from 92.5 mm. to 86 mm., pulse-pressure from 26.7 mm. to 17 mm.), and in one case there was "pallor, yawning, a feeling of warmth, faintness, nausea," and threatened syncope. These are the symptoms of cerebral anemia common in patients with enteroptosis.

VERTIGO IN VISCEROPTOSIS

The dizziness frequently present in cases of visceroptosis is often attributed to the movable kidney, discovered on examination. In the text-book dizziness is given as one of the prominent symptoms of nephroptosis. But where dizziness is present, if the blood-pressure is taken, it will be found to show both a systolic and a diastolic fall on standing after lying.

In order to understand how the vertigo may develop in these cases it is necessary to review briefly the mechanism of space orientation. The sensations which originate in the semicircular canals probably give the fundamental perception of equilibrium. This perception is conducted by the vestibular nerve to, and prepared in, the cerebellum, but does not become a conscious sensation until it reaches the cerebrum by way of radiating fibers passing through the cerebellar peduncle and red nucleus. Circulatory conditions which cause abnormal excitation of the semicircular canals, such as cardiac diseases, arteriosclerosis, anemias, give us a contradiction between the perception from the semicircular canals and the position of the body as elaborated by the cerebrum. Thus in these cases with unstable circulation the excitation of the semicircular canals may be out of proportion to the stimuli received and consequently we have a false conception of space.

INSOMNIA IN VISCEROPTOSIS

Insomnia, present in a large percentage of these cases, we believe to be due to the fact that in the recumbent posture the blood-pressure is increased over what it is in the vertical position. This brings about the condition of the normal man when standing, one of accelerated cerebral circulation. In order to maintain the circulation in the erect position the vasomotor mechanism is tuned to its utmost capacity and adjustment in the horizontal posture is not so readily accomplished. Consequently there is an accelerated cerebral circulation for a considerable time after lying down and the onset of sleep is retarded. We have been able to produce sleep in many of these cases by raising the foot of the bed a few inches, thus increasing the pressure in the superior vena cava and thereby impeding the cerebral circulation.

TREATMENT

The treatment of these cases has been varied and unsatisfactory. Efforts with rest, supports, diets, overfeeding, exercise and surgery have too often met with discouraging results. The benefits derived from rest in bed are due mainly to the fact that in the horizontal posture the piston-like action of the diaphragm is not required either for respiration or circulation. The circulation and nutrition are improved, the patient gains in weight and has a feeling of general well-being. But as soon as the vertical position is assumed, the strain is again put on the splanchnic circulation and when this becomes fatigued the symptoms recur.

The reason that the abdominal support does not wholly relieve the symptoms is that it accomplishes only part of the work of the normal muscles. It holds the abdominal wall in a position of muscular contraction and the diaphragm in expiratory phase, for, being more or less of a fixed support, it does not relax as the normal muscles in the inspiratory phase; thus the diaphragm is unable to make its complete excursion and only part of the effect of its suction action is obtained.

The subjects of diet, exercise and surgical treatment have recently been brought to notice and will be omitted here.

If the splanchnic circulation can be made to compensate, the symptoms of cerebral anemia will disappear, but this will, however, have little or no effect on this great atony which is after all the fundamental problem. To relieve the symptoms by causing the splanchnic circulation to compensate is no simple matter; to quote the words of Mackenzie:[10]

> The question of low pressure and its treatment is an extremely puzzling one. Here again we meet the confident assertion in hypotonic conditions, give cardiac stimulants or vasoconstrictors. The matter is, however, far more complicated and I am only dimly groping after the true principles of treatment in these cases.

CONCLUSIONS

1. It may be normal to have a slight systolic fall on standing after lying in healthy individuals who are not undergoing active muscular training.

2. Patients with relaxed abdominal musculature and enteroptosis, not showing subjective symptoms, will be found to have at least the diastolic sustained in change of position and it may be assumed that the vasomotor mechanism is competent.

3. Patients with relaxed abdominal musculature and enteroptosis with circulatory symptoms will show both a systolic and a diastolic fall on standing after lying.

4. The neuropathic symptoms found in these cases are not due to the malposition of the viscera nor can

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[8] Hill, Leonard: Pathology of the Cerebral Circulation, in Allbutt's System of Medicine, Ed. 2, viii.

[9] Hirschfelder, Arthur: Diseases of the Heart and Aorta, 1910, p. 599.

[10] Mackenzie, J.: Diseases of the Heart.

they be placed among the neuroses. They are entirely dependent on the cerebral anemia.

5. The circulatory changes, while the cause of the symptoms, are not the primary etiologic factors, but are second to the great muscular atony, the cause of which is yet unknown.

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A STUDY OF SECONDARY ANEMIA IN PANAMA

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CRISTOBAL, C. Z.

In this country the only known diseases which occur with sufficient frequency to account for the grave secondary anemias are malaria fever and uncinariasis. My studies have been mainly directed to these two diseases to ascertain, if possible, which of the two is the more often responsible for secondary anemia or, when both infections are present in the same individual, which one is more responsible for blood destruction.

In the course of this study another problem has presented itself for solution. It was found that 18 to 20 per cent. of all laborers admitted to Colon Hospital were infected with malaria parasites and uncinaria, but no such proportion disclosed any evidence of severe anemia. The few of those who did disclose evidence of severe anemia apparently had no severer or more chronic infections than those of the first class.

With the idea, then, of finding the cause for this discrepancy, inquiries were made into the mode of living, the kind of food and the economic status of these anemic individuals. Where information on these points could be obtained, this pointed in three cases to absolute lack of food, frequently for one to three days at a time, and in others to the poor quality of the food. Four of the seven patients were "Zone Charity," one a recent arrival on the Isthmus. I have had the good fortune to be able to study these anemias under somewhat varying circumstances.

I have studied first, people whose living is influenced by the direction and care of the Canal Commission through the sanitary department; second, people living usually the ordinary life of the tropics, and third, the derelicts drifting in under "Zone Charity."

I have taken up malaria fever without uncinarial infection; uncinarial infection without antecedent malaria, and malaria fevers with concomitant uncinariasis, and inquired into the amount and quality of food, etc. I shall discuss these subjects in the order named and make a brief reference to the phenomenon of splenomegaly.

All of our laborers would be called anemic with 100 per cent. hemoglobin normal, for about 80 to 85 per cent. hemoglobin will be found an average among them.[1] But they maintain a good working efficiency with this average and even down to 70 per cent. hemoglobin. When the hemoglobin registers below 60 per cent. they make very little attempt to work. For the purpose of this paper, therefore, 60 per cent. hemoglobin will be considered the dividing line, and all cases below this point will be classed in the grave secondary anemias.

MALARIA FEVER WITHOUT UNCINARIASIS

The number of patients coming under our observation in the various hospitals suffering from malaria fever in its various forms and degrees of severity is very large. One cannot help having his attention called to the good general appearance of these sufferers, both as to the color of the mucous membranes and the body vigor; and also to the promptness with which they regain the normal even after pernicious attacks of malaria fever. It is true that in this work we do not observe many untreated or neglected patients with malaria, but we do observe a large number of them who will not remain under treatment a sufficient length of time to become entirely free from their infection. Hence a certain proportion of our cases are in every sense latent malarias, in that the patients go about their duties harboring parasites for a considerable time. They have recurrent attacks at various intervals, and perhaps gain new infection on the old as well. The proportion of malarial infection to our morbidity rate averages about 60 per cent. The proportion of severe anemia, that is, hemoglobin below 60 per cent., in 1,755 patients of all diseases admitted to Ward L, Colon Hospital, was about 1 per cent., or, figured on the basis of 1,053 malarial admissions, there would be severe anemia in 1.61 per cent. If this anemia could be charged to malaria as the cause, this small percentage would still excite comment, but as a matter of fact these anemias cannot be charged to malaria as a cause except as a contributing one. All of these anemias gave a history of previous malaria fever, but all the patients were infected by uncinaria. Then it may be said we have no severe anemias here due to uncomplicated malaria. I am excepting hemoglobinuria in this paper, because it is a syndrome of malaria, of too rare occurrence to be counted a factor in these anemias.

We are taught that malaria is one of the common causes of anemia in the tropics. Then the question comes, why it is that we have no grave anemia among our laborers. It is not because we have no malaria, nor is it because we have no severe infections.

I think the question can be answered in three ways: 1. Our laborers are always promptly treated at the beginning of their attacks; if not completely treated they at least get some treatment. 2. They are relatively well supplied with food. 3. It is due to a natural immunity which the individual gains after several attacks of malaria.

It is a well-established belief among the laity, and medical men as well, that when one has resided for a variable length of time in a malarious country one becomes relatively immune to malaria fever; in common parlance, one becomes acclimated or "salted." This belief seems to be borne out by sufficient facts to establish it into respectability and as a working basis.

Brem and Zeiler,[1] in 1906-7, studied the hemoglobin estimate in 359 patients with various diseases. Their study disclosed the fact that in malaria fever there was a diminution of hemoglobin to the third or fourth attack of fever, but in patients with six or more attacks there was an increase of 7 per cent. of hemoglobin over patients who had had from three to five attacks; which finding led them to conclude as follows:

> The hemoglobin curve of malarial patients varies inversely with the number of previous attacks of malarial fever until a relative immunity or tolerance for the malarial poison is developed, when a rise of hemoglobin occurs. This rise does not take place in patients infected with uncinaria.

I have not made a detailed study of the hemoglobin estimate of malarial patients without uncinarial infection, and I have confined myself to patients whose condition would suggest a hemoglobin estimate of 60 per cent. or less, or whose fever for some obscure reason was unusually resistant to treatment with quinin, and to those who gave a history of five or more attacks. Of this latter class I have four patients with five or more attacks and negative for uncinaria. The hemoglobin is as follows:

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[1] Brem and Zeiler: A Study of Hemoglobin of Colored Laborers in Panama, Arch. Int. Med., June, 1910, p. 569.

5 attacks 75 per cent.	7 attacks 85 per cent.
6 attacks 84 per cent.	12 attacks 81 per cent.

These estimates were made from twelve to twenty-four hours after the subsidence of temperature of an acute attack of malaria. Though the number of patients is small, the findings verify, in general, Brem and Zeiler's findings as quoted above. That these findings are in the main correct is self-evident, for if hemoglobin was lost with each succeeding attack of malaria fever in proportion to the gravity of the infection, with only short intervals for recuperation, it would be a matter of only a little time till all malarial subjects would be helpless from anemia.

In the latent malarias, that is, in patients who harbor parasites without manifestation of disease, the effect on the hemoglobin is open to question. It would seem, though, that, as the patient is able to maintain a reasonable balance as to health, the blood-making organs would also maintain their balance and there would be no loss in cells or hemoglobin. Moreover, the findings noted above indicate that there is not only no loss, but actual gain in latent malaria, for most of our "repeaters" are relatively latent malarias. They are the patients who refuse to remain under treatment for sufficient time to be perfectly cured and return to work with parasites still in the blood. It is true that there may be cases that are exceptions to these conclusions, but they must be extremely rare, for with a rather long observation of malaria in Ancon and Colon hospitals, I have not encountered any grave secondary anemias due to malaria alone. The grave anemias are always concomitant with hemoglobinuric fever, nephritis, or uncinariasis, most usually the latter.

Malaria fever, therefore, like any other acute infectious disease, tends to establish an immunity, but unlike most other infectious diseases, the process is a slow one, and peculiarly for malaria, it admits during this process toward immunity, any number and variety of complicating infections.

UNCINARIASIS WITHOUT ANTECEDENT MALARIAL INFECTIONS

By direction of Colonel Gorgas I was assigned to two weeks' duty on Taboga Island to study uncinariasis among the natives of Taboga village.

Taboga is a volcanic island, twelve miles from the mainland, and rises abruptly out of the sea to a height of about 1,000 feet. It is mostly free of timber, is well supplied with fresh water from springs, and contains no marsh land and no level ground except about three acres of sandy soil overlying a stratum of coral reef on its northern end.

This island is unique in being situated in the mid-tropics and yet entirely free from malaria and all other tropical infections except beriberi, an occasional case of leprosy and intestinal parasitism. The latter flourishes in greatest profusion. All the inhabitants, about 1,500, dwell in a closely packed village with no streets. The houses for the most part are square huts of two rooms with dirt floors. There are no latrines or closets for the disposal of sewage. All the excreta and waste are thrown where it suits the fancy of the individual and there left to wash into the sea by the rains. The living-rooms are occupied by day impartially by dogs, chickens and children, along with the older people, and in a few instances evidently the same arrangement obtained by night also. Cleanliness of the body and wearing apparel is universal, and the sleeping arrangements, though primitive, were in most cases clean also. It is in the preparing and serving of the food that the engulfing of filth reaches its climax. It is often a race between a chicken and a child to see which shall get the most food out of the same calabash bowl. Naturally, then, one would expect intestinal parasitism to be well-nigh universal and I found it almost so.

It was necessary to visit from house to house to get the people, and in this manner I succeeded in taking the hemoglobin estimates of 104 people with Dare's hemoglobinometer, and sixty-four of these responded with stool specimens. Eighteen of the male population gave a history of exposure to malarial infection and stated that they had had "fever" a number of times. The blood of all these was examined for malaria parasites, but in only four of them were parasites found—two estivo-autumnal, one quartan and one tertian. In all these cases with a history of malaria there was splenic enlargement, varying from percussion dulness to 20 cm. in the greatest area of splenic dulness.

In the women and children and men with no history of exposure to malarial infection, there was no splenic enlargement. Each of the 104 people was examined for splenic changes and all examinations were made with the patient in bed or on a cot.

The hemoglobin estimates were made only on those whose appearance indicated a considerable degree of, or a severe, anemia. Therefore, the findings here will not show the average hemoglobin of these people, but discloses the lowest obtainable average, though eight cases of those examined showed estimates of from 80 to 90 per cent.

There were eighty-six people with no history of antecedent malaria fever and their average hemoglobin was 66.39 per cent. The lowest estimates seen in this series were 25 and 30 per cent., respectively. In this series there were forty-nine stools examined; forty-two, or 85.71 per cent., were positive for uncinaria ova. The two showing estimates of 25 and 30 per cent. were of course positive for uncinaria.

Of the total number of stools examined (sixty-two) parasites were found as follows:

	Per cent.
Uncinaria ova	88
Ascaris ova	96
Tricocephalus dispar ova	100
Amebiasis	19
Balantidium coli, one case	
Strongyloides very frequent but not recorded.	

Several of the stool specimens were very poor for examination, and I think that if the specimens had been better the incidence of uncinarial infection would have shown as high as that of ascaris. The youngest individual in whom uncinaria ova were found was 4 years old. A careful watch was kept for ground itch, but none was seen. Hemoglobin estimates made in childhood, adult, middle age and later life were as follows:

Age	Per cent.
5 to 15 years	66.84
15 to 25 years	69.
25 to 45 years	67.5
45 to 72 years	57.83

In this series the number falling below 60 per cent. was twenty-two, or 25.58 per cent. Inasmuch as my efforts were directed to the examination of the most anemic of the population—and I do not think I missed any severe cases—it seems to me that the general average of hemoglobin would be fairly good for the whole population. And in this series with no other cause for the anemia than intestinal parasitism, the general average 66.39 per cent. hemoglobin is surprisingly high and the incidence of dangerous anemia, 25 per cent under sixty, is remarkably low. I conclude, then, that uncinariasis can of itself cause a grave secondary anemia and perhaps sufficiently severe to endanger life.

But when we consider this small number—twenty-two—of dangerous anemias in a population of 1,500 or more, in which I think it is fair to assume 85 per cent. are infected with uncinaria to a greater or less degree, such a small incidence of severe anemia is surprising, especially when compared to the anemias of Porto Rico and portions of the Old World; and there must be some contributing causes to account for these wide-spread and fatal uncinarial anemias. This study seems to disclose as the contributing cause or causes, malaria fever or food in insufficient amount or very poor in proteins, and often times both malaria and poor food.

TABLE 1.—BLOOD-FINDINGS IN SEVEN CASES OF UNCINARIAL INFECTION

Case	Malaria	R. B. C.	Hb. (Sahli) per cent.	Color Index	W. B. C.
1	+	850,000	13	.765	12,200
2	—	2,704,000	54	.99	5,700
3	++	3,476,000	70	1.+	6,000
4	—	2,924,000	61	1.04	10,000
5	++	2,704,000	55	1.07	.....
6	—	3,080,000	45	.73	7,000
7	—	1,703,000	21	.64	6,000

TABLE 2.—DIFFERENTIAL COUNTS

Case	Polynuclears	Large Lymphocytes	Small Lymphocytes	Eosinophils	Transitionals	Unclassified
1	77	2	15	3	1	0
2	41.5	10.4	40.9	0	5.2	2
6	46	14	32	0	2	4
7	36	26	26	0	6	4
*	70	7	14	7	2—	—

* Taboga case.

MALARIA FEVER WITH UNCINARIAL INFECTION

In discussing uncinarial infection without antecedent malaria, we saw in the analyses of the hemoglobin in eighty-six people that the average was 66.39 per cent., while in the remaining eighteen people in the Taboga series who gave a history of exposure to malarial infection away from the island, and to various attacks of "fever" subsequent to these exposures, the average hemoglobin estimate is only 51.55 per cent. The lowest estimates in the non-malarial cases were 25 and 30 per cent., respectively, and in the malarial cases 10, 12 and 31 per cent.

Of ward cases I have seven worked up somewhat in detail with reference to blood findings and malarial infection. Of the seven cases all gave a history of antecedent malaria. All had fever at the time of admission. Three of the cases had malarial parasites and four were negative. Cases 2 and 6 had splenic punctures and both were negative for malaria either recent or remote and for Leishman-Donovan bodies or *Histoplasma capsulatum* (Darling). One patient (Case 1) had the appearance of frank uncinarial infection, but had malaria parasites also. The remaining cases from appearances would have been classed ordinarily as malarial cachectics. Blood examinations resulted as shown in Table 1.

Differential counts were made in Cases 1, 2, 6 and 7.

In Case 1 poikilocytosis was very marked. Macrocytes, microcytes and intermediate aberrant forms were abundant. Polychromatophilia and nucleated red cells (normoblasts) were also present.

In Cases 6 and 7 macrocytes, aberrant forms, normoblasts and polychrome staining were present. In cases which have both malaria and uncinariasis the question arises as to which infection is the predominant cause for the anemia present. As far as I can gather from Manson, Schaube, Castalani-Chalmers and Craig, if the anemia is severe and the spleen is enlarged and there is a history of antecedent malaria, it is then classed malaria cachexia; if the spleen is not enlarged and uncinaria ova are present, it is classed as uncinariasis, and so on for other tropical infections. Mention is also made of lymphocytosis, eosinophilia and the color index (Rogers) as points of differentiation. A glance at Tables 1 and 2 will show that neither of these blood-findings is constant, nor dependent on any specific cause.

Rogers, quoted by Schaube,[2] offers as a point of differentiation a difference in the color index. That is, if the anemia is primarily caused by malaria the fall in the red blood-cells will be equal with the fall in the hemoglobin and the color index will remain 1; but if the anemia is due to uncinariasis, the hemoglobin falls below the red blood-cells and the color index will be low, say, 0.50.

Though the number of my cases is rather small from which to draw definite conclusions, it would seem from an analysis of them that Rogers' idea is not wholly borne out. It will be observed in my series that as long as the hemoglobin is above 50 the color index is about one, but when the hemoglobin falls below 50 the color index is low. Thus the color index appears to vary merely with the degree of secondary anemia rather than with its cause.

Following these cases further, it is interesting to note the findings with reference to the number of adult uncinaria worms harbored by them. In Case 1, 896 worms were recovered and the patient was discharged after seven months in hospital with red blood-cells, 4,336,000; hemoglobin, 50 per cent.; color index, 63. In Case 2, sixty-eight worms were recovered and the patient was discharged after fifty days in the hospital, red blood-cells, 4,760,000; hemoglobin, 90 per cent.; color index, 93. In Case 3 there were 206 worms recovered; discharged; refused further treatment; stools still contained ova. In Case 4, 117 worms were recovered; discharged; refused further treatment; stools still contained ova. Patient 5 refused treatment. In Case 6, 183 worms were recovered; discharged after twenty-eight days; red blood-cells, 4,248,000; hemoglobin, 65 per cent.; color index, 0.80. In Case 7, the stools contained many uncinaria ova. The patient was given thymol October 7 and the treatment repeated October 10. Only two uncinarias were recovered. Each thymol treatment was attended with the passage of large amounts of mucus and mucous casts of the bowel, and on account of the severe irritation of the intestinal tract thymol treatment was discontinued. Three stool examinations subsequent to treatment were negative for uncinaria ova. However, all the characteristic symptoms of uncinariasis remained present, that is, tenderness over the stomach and duodenum, with accumulation of flatus shortly after eating. Cancer or ulcer of the stomach or duodenum was now considered. An examination of the stomach contents proved negative except for total absence of free hydrochloric acid. As this examination pointed to probable carcinoma, an exploratory operation was made on November 5 by Dr. Lloyd Noland. This disclosed an enormously dilated stomach, liver enlarged but normal in appearance, a number of firm adhesions between the omentum and the gall-bladder, but no evidence of cancer or ulcer in stomach or duodenum. This case is classed especially under the head of semistarvation. The history was direct on this point, and without other treatment than good food, the anemia improved, but the pain in the stomach persisted. The slight fever is accounted for by the anemia. Repeated blood examinations and splenic punctures were negative for organisms or pigment. Search was made for malaria parasites, *Spirillum obermeieri*, Leishman-Donovan bodies and *Histoplasma capsulatum* (Darling). The patient was still in hospital at the time of making this report.

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[2] Schaube: Diseases of Warm Countries, Ed. 2, p. 429.

TREATMENT

In the treatment of this series of patients malaria was practically disregarded. Quinin was given in each case till fever subsided—usually five or six days—and then the entire treatment was directed against the uncinariasis and anemia. Most of the patients were impatient of restraint and had to be discharged before results were definite, but in Cases 1, 2 and 6, which were followed up, the result of this method was more than satisfactory.

In Case 2 I think the result was remarkable. The patient's stools were examined carefully on three separate days before any ova were found. Then thymol was given and sixty-eight uncinarias were recovered. In thirty-three days, without quinin, his hemoglobin rose from 54 to 90 per cent., the erythrocytes from 2,704,000 to 4,760,000. The spleen decreased very materially in size also. This patient had an enormously enlarged spleen and all the appearances of a malarial cachectic. Treatment for a malarial cachexia, as my experience has proved, would have been both time and treatment worse than wasted.

With this series of cases, with the exception of the treatment, I have merely arrived at a conclusion that was manifest from the beginning—that with both uncinarial and malarial infections present in the same individual, the loss of hemoglobin would be greater than with either infection alone.

INSUFFICIENT AND IMPROPER FOOD

It was not originally intended to discuss the food question in the etiology of these anemias, but as I began to analyze my cases and data it appeared that I had cases with one infection or both infections, and fairly severe, and yet they remained in a condition of fair labor efficiency and had a good hemoglobin estimate. In casting about for an explanation for the good condition of the one and the poor condition of the other, those in poor condition were always found in the poorly fed, or those unable for lack of money to procure proper food, etc.

Major Ashford in his work on anemia in Porto Rico recognized the relative importance of food or lack of food in the etiology of uncinarial anemia. His report of the Porto Rico Anemia Commission[3] discusses the food quality at some length. He found that the mountaineers lived on food almost wholly free from meats or meat-fats and at times of financial depression on the island these people subsisted mainly on bananas. He reckons the hemoglobin average of these people when he began work there at 40 per cent., with an average red-cell count of about 2,500,000 per c.mm.

On Taboga island the people are very much the same stock as the mountaineers of Porto Riço, a cross of Spanish and Indian stock. Their economic status is much better than that described by the Anemia Commission for the laborers of Porto Rico; still they live in a primitive tropical way. Their food consists principally of rice, bread, plantains, yams, yucca and fruits, though they have fish, some beef and chicken. The hemoglobin average estimate of the Tabogans is all of 66 per cent., and I found only forty people in a population of about 1,500 with hemoglobin below 60 per cent., or 2.66 per cent. of the population below working efficiency.

During the time I have been occupied at this work the admissions to my ward for all diseases were 1,755; of this number 1,051 had malaria fever and blood positive for malaria parasites, and 332 had uncinaria ova. I could not arrive at the exact relation of the two infections in the same individual, but out of 970 laborers whose cases were analyzed by Dr. E. W. Hill with blood positive for malaria, 21.62 per cent. harbored the uncinaria also. My patients being the same class as Dr. Hill's, the proportion would remain about the same. The secondary anemias in the 1,755 cases were, as I have stated before, less than 1 per cent., and these anemias were mostly in non-employees or "Zone Charity" cases, or very recent arrivals on the Isthmus, except one Martinique and one Panamanian.

In Porto Rico the average hemoglobin estimate for laborers is 40 per cent.; in Taboga, as we rise in the economic scale, it is 66.39 per cent., and finally, in canal laborers it is 85 per cent. Then in the canal laborers, if we eliminate the "Zone Charity" cases drifting into the hospitals, we have almost no anemics below a working efficiency, and I think this good record is accounted for in that the Canal Commission feeds a number of their laborers from messes and kitchens, and in all cases the laborers are given easy access to the commissaries and are paid a sufficient wage to buy good food.

This comparison of people in the economic scale and the rise of hemoglobin with the improvement of the economic condition convinces me that food is the predominant factor in the etiology of all the tropical anemias, and that poverty with poor and coarse indigestible foods is nearer the index of the secondary anemias of the tropics than disease, although without disease we should probably have no anemia in spite of poor food. Yet the good condition of the canal laborer in whom 21 per cent. constantly harbor uncinarial infection and have at the same time intermittent attacks of malaria fever, goes far to show what can be done in the tropics by improving the economic status of the individual, while at the same time instituting sanitary methods to eliminate disease.

SPLENOMEGALY

In these secondary anemias there is more or less enlargement of the spleen, this enlargement amounting to from 3 to 5 cm. below the costal margin to a spleen filling the entire left hypochondrium and at times passing over into the right side as well. The enlargement of the spleen in these anemias is always attributed to previous attacks of neglected malaria fever, although these spleens now no longer bear any resemblance to the ordinary malarial spleens. Craig[4] has suggested the possibility of some as yet unknown infection to account for them, but from my studies I am reasonably certain that the older teaching that malaria is the cause is correct. But how the soft pulpy spleen of acute malaria eventually becomes the large dry fibrosed tumor mass of these anemias is the troublesome problem. The anemia could explain it if the anemia disclosed anything characteristic, for there is much in the pathologic appearance of these enlarged spleens resembling the occasional splenomegalies of primary pernicious anemia[5, 6] and splenic anemia[6, 7] (Banti's disease), but there is nothing characteristic in these anemias so far as the blood-picture or count shows. They are simply grave secondary anemias, and secondary anemia is not necessarily attended by an enlarged spleen, as is shown in the anemia of uncinariasis without complications. In such uncinariasis there is never any enlargement of the spleen. There may, however, be numerous incidental infections, now past and gone, that have aided in the ultimate splenic changes, for these splenomegalies are almost always seen in adult life and after a history of several attacks of "fever." "Fever," though, in this country is an all-inclusive term, and by "fever" these people designate all previous illnesses in which they were conscious of a rise of temperature no matter what the cause. Hence in these histories we deal with a train of indefinite illnesses, though it is reasonably certain that most of their previous illnesses were due to malaria fever.

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[3] Ashford and Igaravidez: Report of Porto Rico Anemia Commission, Senate Doc. No. 808, pp. 12, 13, 17.

[4] Craig: Malarial Fevers.

In my Taboga work, as already pointed out, the only enlarged spleens seen were in adult males who gave a history of previous exposure to malarial infection and subsequent attacks of fever, while in the women and children with no history of illness except the anemia present, the spleen was never found enlarged. In a personal letter, Dr. E. H. Bannister of Merton Lodge, Bridgetown, Barbados, states that he never sees any enlarged spleens in Barbados except in people who have been away from the island or those from malarious countries as they pass through, for instance, Brazil.

Barbados and Taboga islands, so far as I know, are the only places in the tropics free from malaria; coincidently they are also free from natives with enlarged spleens, though not free from other tropical infections or secondary anemia. This being the case, there is no need to look further for some as yet unrecognized infection for the cause of splenic enlargement in the secondary anemias of the tropics. The malarial infection is certainly the primary cause of splenic enlargement in our secondary anemias, though various intercurrent infections may contribute toward the final changes as seen in these spleens.

CONCLUSIONS

The early writers on tropical diseases usually classed the severe secondary anemias under the head of "tropical anemia," except cases with enlarged spleen and a history of antecedent malaria fever, because of the idea that the tropical heat, etc., caused the anemia. Better observation has proved that the tropical heat does not cause an anemia, but that the anemia is secondary to several specific diseases; and later writers have attempted to class this anemia under the head of its particular cause, such as malaria cachexia, uncinariasis or ankylostomiasis, etc.

It would seem from my studies that these anemias are almost always the result of several causes combined, such as malaria, uncinariasis, and semistarvation. Therefore the term "tropical anemia" is a useful one and it should be revived to include all secondary anemias of the tropics, and malarial cachexia should be abandoned, for it usually directs our effort along the wrong lines of treatment. Moreover, uncomplicated malaria fever tends to establish a relative immunity and does not eventuate in a grave secondary anemia unless semistarvation is present.

Uncinariasis may cause a severe secondary anemia, but in most instances lack of good food is largely the contributing cause.

Malaria fever and uncinariasis in the same individual if untreated always result in a severe secondary anemia, and uncinariasis is the more responsible for the anemia when both infections are present in the same individual.

Food poor in quality and insufficient in amount is the most important contributing cause in tropical anemia, and this anemia is usually in direct proportion to the poverty of the people.

The enlargement of the spleen is primarily due to malarial infection, and the ultimate changes in the spleen are probably influenced by various intercurrent infections.

Regardless of a history of antecedent malaria, treatment in these tropical anemias should be directed toward the uncinaria no matter how few are present, and to improvement of the food-supply.

I wish to thank Col. W. C. Gorgas, Chief Sanitary Officer Isthmian Canal Commission, for permission to publish this paper.

Colon Hospital.

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5. Cabot: Osler's Modern Medicine, iv, 619.
6. Phillips: Osler's Modern Medicine, iv, 758.
7. West: Allbutt's System of Medicine, v, 758.

EARLY RECOGNITION OF TUBERCULOSIS

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I know of no subject of such vast importance to both the physician and the laity as the early recognition of tuberculosis. When we consider the enormous loss of life, health and happiness due to tuberculosis—when we consider the fact that deaths from this disease are costing our country millions of dollars every year—when we consider the fact that fully 85 per cent. of those who die could be saved if their cases had been recognized early—and when we further consider that the burden of responsibility rests on the shoulders of the general practitioner, it behooves us to put in more of our time in the study of this disease, and especially to be able to recognize it in time to save our patients. To the family physician who makes an early diagnosis of pulmonary tuberculosis, and thus gives his patients a chance to get well, which he will do in 95 per cent. of his cases, we owe a debt of gratitude that can never be repaid. We are spending, annually, thousands of dollars to educate the laity along this line. We are sending out pamphlets, giving lectures and tuberculosis exhibits, and through these means are awakening an interest in the "great white plague" that cannot fail to reduce its mortality. But with all this, the family physician is the one who first sees the case, and unless he makes an early diagnosis, his patient must suffer the consequences.

All that we are doing to educate the laity is very important, but it is high time that a campaign of education was begun along this line for the family physician. Could we but awaken an interest in this subject in every physician in the United States, and make of him an expert diagnostician of pulmonary tuberculosis, it would only be a question of a few years when we would rid the country of this disastrous disease.

In making an early diagnosis of tuberculosis, we must first realize that there is no combination of physical signs common to all cases. Percussion and auscultation may be entirely negative in the very early stages. The contour, shape and size of the chest may be anything but phthisical, and we may have only a very small group of symptoms to guide us in our diagnosis; yet, by a proper grouping of all symptoms, such as family history, personal history, predisposition, subjective symptoms and physical signs, we can usually make a diagnosis.

As a matter of diagnostic import, the family history is of importance only in that we must not forget that the theory of hereditary predisposition has been exploded. We must not forget that the patient's susceptibility to tuberculosis is not dependent on a family history of tuberculosis. What is of more importance to us is acquired predisposition; and by this I mean a susceptibility to the disease through certain causes that diminish individual resistance, such as overwork, either physical or mental, dissipation, financial reverses, despondency, etc.

Personal history takes into consideration the environment of the patient, in the home, socially and at work; the character of the work; personal hygiene; the hygiene of the home, shop or office; the contact with tuberculous subjects; the disposition of the sputum in such individuals; and also previous diseases.

The subjective symptoms of importance in incipient cases would be loss of weight and strength, disturbed nights, lack of ambition, ease of fatigue, capricious appetite, etc.

The physical signs in incipient tuberculosis are very few, and difficult to recognize. Inspection, palpation and percussion are invariably negative. The only physical signs we can rely on are obtained by auscultation. We must insist on an early physical examination. Every portion of the chest must be gone over carefully, both anteriorly and posteriorly. We must examine the patient while he is breathing naturally, during deep breathing, and while coughing. We must carefully note each and every irregular sound, no matter how slight. It is also essential to have the patient strip to the skin, and to examine both in the upright and reclining positions. Very often several physical examinations are necessary. A diagnosis should not be made until the physician is thoroughly satisfied.

The above constitutes, in an abbreviated form, the principal points in the diagnosis of incipient tuberculosis, and no physician can fail who makes a careful study of his cases and pays close attention to every little detail.

I might also mention that we have a few very important aids in the diagnosis of this disease. First and most important is the presence of the bacillus in the sputum, but we must not make a negative diagnosis just because we cannot find the germ. It clinches our diagnosis when we do find it, but is not demonstrable in all cases, and very rarely in incipient cases. We also have the tuberculin tests, of which the Moro test is the most reliable; then we have the *x*-ray examination. All of these aids may give us a negative result, and yet we may have a case of incipient tuberculosis; therefore, let us remember that while we must use every aid in making a diagnosis, yet a negative result does not always prove that tuberculosis is not present.

Let me make an earnest plea for a more thorough study of this disease and a more thorough and careful examination of every suspicious case. We owe it to our patients, and to the community at large, and to those who are devoting their time, energy and money to rid the United States of this most disastrous of all diseases —the "great white plague."

IODIN IN SMALL-POX

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It has long been known that tincture of iodin has valuable antiseptic properties, but it has never been extensively used for such purposes until recent years. When it was mentioned a short time ago as being useful in the preparation of the skin in emergency surgical cases, I was impressed with the idea that it would shorten the period of the pustular stage of small-pox. During the past year I have used 10 per cent. iodin and 90 per cent. glycerin. This is painted over the pustules two or three times a day. The results are the drying of the pustule, the absorption of the toxin, and arrest of destruction of the tissue; therefore the disfiguring due to the pock-marks has been prevented. The stay at the hospital has been shortened from twenty-five to thirty days, under the old treatment, to from eight to fifteen days. The pustules on the face may be opened with a sterile instrument and touched up with tincture of iodin. Frequently desquamation is completed in from four to six days, except a few pustules on the palms of the hands and the soles of the feet. These may be opened, touched with tincture of iodin, and the patient may then be discharged. Eighty-five patients have been treated by this method during the past year with 100 per cent. recoveries, and with an average stay in the hospital of twelve days.

3437 Mooney Avenue.

A PRACTICAL, EASY AND CHEAP METHOD OF INCUBATION

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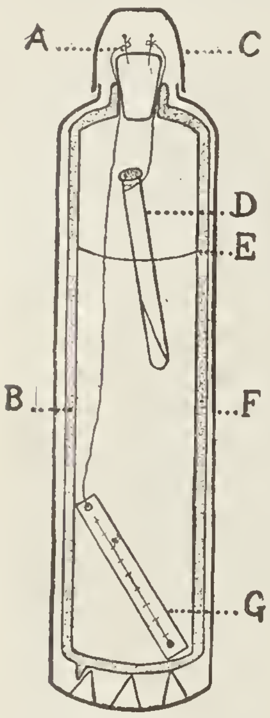
DUBUQUE, IA.

Ordinarily, the more or less troublesome gas incubators on the market are impracticable for the general run of practitioners who have not enough bacteriologic work to keep them going continuously; while the electrical contrivances, except in expert hands, give practically no results at all. It is for these reasons that I give this little sketch, thinking it may help others out of the dilemma in which I was before struck by the happy thought of using a vacuum bottle.

Although the gas incubators work well when once started, they require so much attention and work each time their occasional use is demanded that most physicians are discouraged from making any cultures at all or are obliged to send them to some central laboratory. In the latter case so much time is required for the return of a diagnosis that it is useless for clinical purposes in urgent cases. All this is apparent in the number of incubators unused or for sale by many of the most up-to-date members of the profession.

If one fills a pitcher half full of hot water, dilutes it with cold to a little above blood-heat (quickly tested by pouring some over the back of the hand, or with a thermometer) and then quickly transfers it to a vacuum bottle to keep it at or near the same temperature for a sufficient time to grow urgent cultures, such as diphtheria, much cheaper, easier and more practical results will be obtained than by the usual cumbersome methods.

A special thermometer may be passed through the cork of the bottle as in an ordinary incubator, or any cheap house thermometer may be unmounted and suspended with its scale in the water by a thread. Threads are used for suspension of thermometer and culture-tube so as not to interfere with the accurate closure of the bottle. A few pins stuck into the top of the cork serve for additional anchorage of the threads.



Schematic drawing of vacuum bottle used as an incubator. A indicates pins anchoring thermometer and test-tube; B, vacuum between mercurial surfaces; C, outer casing - cap; D, culture-tube; E, height of water; F, outer casing; G, thermometer.

Almost any of the vacuum bottles on the market will answer the purpose, providing the cork fits closely. It is necessary that the vacuum between the two mercurial surfaces be perfect and that the bottle be previously rinsed out with hot water. The loss of heat (10° F. in twenty-four hours) can be easily corrected, if one thinks it necessary, by adding a slight amount of hot water every twelve hours. It is also advisable to have the temperature at 100 F. at the beginning, in order to warm the air thoroughly in the culture-tube, and to have the usual rubber cap over the tube to keep moisture from the cotton plug and culture medium. This cap is generally found on all stock culture-tubes to prevent drying.

Since using the above method of incubation the small amount of work required and the results obtained have been very satisfactory, and I feel that its adoption will give a new impetus to cultural work. All vacuum bottles should be experimentally tried before use and any that cool more rapidly than 10 degrees in twenty-four hours are not serviceable.

1120 Main Street.

Therapeutics

MANAGEMENT OF NORMAL LABOR

"Go when you are sent for when the woman expects to be in labor," is one of the golden rules of obstetrics. It is just as important now as it was when it was spoken to his classes by Professor James W. McLane, of New York, over thirty years ago. Delay in answering the summons may mean increased danger for the patient, or the completion of delivery before the arrival of the physician, to his discomfort, and often to the detriment of the patient through lacerations due to precipitate labor or through excessive hemorrhage due to the absence of proper contraction of the uterus.

Inquiry is first made as to the time of the commencement of the pains, the frequency of their recurrence, their severity, whether there has been a copious watery discharge indicating rupture of the membranes, or whether there has been a discharge of blood, and whether the bowels have moved recently.

While the physician is sterilizing his hands and arms, the nurse should bathe the thighs and vulva of the patient in a warm antiseptic solution. Having lubricated the index and middle fingers of his right hand with some sterile lubricant, such as petrolatum, the physician inserts these fingers into the vagina and examines the cervix uteri to determine whether it is dilated, whether the pains affect the muscular fibers of the cervix, what part of the child is presenting, if the head is presenting, to determine if possible the position in which it lies, and whether any part of the placenta is attached to the lower segment of the uterus. Incidentally he learns also the condition of the perineum, whether it is rigid, dilatable or relaxed; of the vagina, whether it is moist or dry; of the pelvic walls, whether they are broad or narrow. If he is satisfied that the pains are not effecting any dilatation of the cervix and that they are not severe or frequent, he may leave the patient, to be summoned again when the pains increase in frequency or severity. If the cervix is not dilated to more than the size of a silver half dollar, if the pains are not severe and do not occur more than five or six times an hour, he may leave the patient for an hour, returning at the end of that time. He then makes another examination and notes whether any progress has been made in the dilatation of the cervix.

When the cervix has dilated to the size of a silver dollar, and the pains are coming on with considerable severity at intervals of five to ten minutes, he should not leave the patient. At this stage examinations should not be too frequent nor too protracted. The patient should be encouraged to remain out of bed and to walk about. When the pains come with severity and at intervals of from three to five minutes, the patient may be allowed to go to bed.

The bed should have been prepared by placing over the lower sheet, under which there is a rubber cloth, fifteen or twenty thicknesses of newspaper. Over this should be spread a sheet folded twice. The corners of this may be pinned through the sheet to the mattress, so that this improvised pad may be held in place and not pushed about during the efforts of the patient.

When complete dilatation of the cervix has taken place, if the membranes have not already ruptured, they may be ruptured by the physician, using either a sharp finger-nail or a blunt instrument like a probe, the rupture being effected during a pain and toward the edge of the cervix, so that the waters may not gush forth in so great a flood as to bring with them the umbilical cord causing a condition termed prolapse of the funis. As the labor advances the cervix should be pushed up over the head of the child and the folds of the walls of the vagina should be pushed upward, while the head advances. The perineum should be anointed with petrolatum or some unctuous substance so as to soften it and facilitate dilatation. As the head advances through the pelvis and rests on the perineum, effort should be made to avoid laceration of that part. It is necessary at this stage to expose the perineum so that its condition may be constantly watched. If, as indicated by the expulsion of blood from the edge of the perineum and consequent blanching of the tissues, a rupture seems imminent, the head should be held back during the progress of the pain, and the patient should be encouraged to open her mouth and to let out her breath. At the same time the head should be pressed forward under the pubic arch and the part of the head resting on the perineum should be pushed backward so as to secure flexion of the head of the child on its body.

The question of chloroform is one which long before this stage has probably been raised by the patient. During the first stage, previous to complete dilatation of the cervix, chloroform should not be given unless the pains are very severe and the cervix is very rigid. In the second stage, during the expulsion of the head, it is frequently desirable to administer a moderate amount of chloroform in order that the delivery of the head may not occur too quickly and that the intolerable pains incidental thereto may be rendered more endurable for the patient. The promiscuous administration of large amounts of chloroform during any part of the first stage or the early part of the second stage should be condemned, not only because it is likely to prolong the labor, but also because it may involve damage to the kidneys, and undoubtedly increases the danger of postpartum hemorrhage. But at the termination of labor, when the head is passing over the perineum and the pains are frequent and severe, the administration of a moderate amount of chloroform to a healthy woman can do no harm and may be counted as one of the greatest blessings of the healing art.

The final delivery of the head may generally be best accomplished in the interval between two pains. The perineum is then somewhat relaxed, and the head being in the control of the hands of the physician, it may be manipulated through the vaginal opening with less danger of laceration of the perineum than when the powers of Nature accomplish that result without the final guidance of the physician.

After the head has been delivered, the physician should notice whether the cord is about the neck of the child, and if it is, he should take prompt measures to prevent a constriction of the child's neck by drawing on the cord, if possible slipping it over the child's head, or at least loosening it enough so that the shoulders of the child may pass through it as they are delivered.

The delivery of the shoulders is usually a simple matter, but during their exit from the vagina the perineum should be protected as during the passage of the head. The hand should be placed against the perineum, the radial side being at the edge of the perineum, and this should guide the shoulders upward toward the pubic arch so as to bring as little tension as possible on the edge of the perineum.

While the body of the child is being delivered, the left hand of the physician should be on the fundus of the uterus, and should grasp it so as to encourage contraction of that organ. The child should be laid on its side, near to the mother, but sufficiently removed from the discharge of blood and liquor amnii, so that it will not suck in these discharges.

When it is certain that the uterus is well contracted, attention should be given to the separation of the child from its mother. It is universally deemed wise, at the present time, not to cut the cord too quickly, but to wait from ten to thirty minutes, or until the pulsation in the cord ceases, before the cord is cut and tied. When the pulsation has ceased, or if it does not cease, after a time judged by the physician to be sufficient, the cord is tightly tied and cut with scissors. The baby is then given to the nurse to be laid in a warm place until she finds time to wash and dress it. Meanwhile the physician stays by the patient, at frequent intervals placing his hand on the fundus uteri, to be sure that it is firmly contracted.

It is at the present time recommended as good treatment to wait for from fifteen minutes to an hour before using much force in the delivery of the placenta. This sometimes is expelled from the vagina immediately after the birth of the child, but in most instances it is necessary to use some manipulation in order to bring it away. Should the patient have a recurrence of pains, like the labor pains, but of less severity, she should be urged to hold her breath as during the delivery of the child, and bear down, while the physician presses firmly on the fundus uteri with his left hand and makes gentle traction on the cord with his right hand. If this does not suffice to effect delivery of the placenta, after waiting a few minutes, the same course may be followed again, except that this time the fingers may be inserted into the vagina and the edge of the placenta, if it can be felt, may be seized and traction made gently on it. If by external manipulation and gentle traction on the cord or the placenta itself, the placenta is not delivered in half or three-quarters of an hour, it may be necessary for the physician, having sterilized his hand and arm afresh, and having lubricated the fingers and whole hand, to insert the hand into the vagina and uterus, the left hand pressing firmly on the fundus, and detach the placenta at such situations as it may be adherent to the interior of the uterus. This can generally be effected with patience without extreme difficulty.

Ergot should never be given to a pregnant woman during labor while the child or the placenta is within the uterus. After normal labor, in the case of a primipara, it is not necessary to give it unless there are evidences of a tendency to excessive hemorrhage. In a multipara it is wise to give a teaspoonful of a guaranteed fluid extract of ergot after the uterus has been completely emptied both of the child and of the placenta. If the patient has been anesthetized during delivery, the ergot should unquestionably be given in order to counteract the tendency to postpartum hemorrhage.

After delivery of the child and placenta have both been effected, the sheet and newspapers under the patient should be removed and a clean pad placed under her. She should then be washed in a warm antiseptic solution and a napkin placed over the vulva and a bandage placed over the lower part of the abdomen. This should reach down below the greater trochanter so that it will not slip up and become loose, in which situation and in which condition it will be of no benefit to the patient. She should then be allowed to drink a little water, milk or tea, and should be permitted to rest undisturbed for several hours.

The physician should not leave the patient for an hour after the child is delivered, and not even at that time if there are any symptoms to indicate impending trouble, especially if the action of the heart is rapid and weak, or if there is an unusual amount of hemorrhage. The pulse being normal, and there being no unusual amount of hemorrhage, the patient may be left at the end of that time.

The Invention of Spectacles.—Roger Bacon knew lenses and that they were useful for near vision in the old. For optical purposes they appear to have been ground first about 1285 by a certain Salvino degli Armati, said to have died in 1317. A monk of Pisa, Alexander della Spina, who died in 1313, also has been accredited with the invention of spectacles and with the promotion of their use.—P. H. Dernehl in *Johns Hopkins Hosp. Bull.*

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[*For other information see second page following reading matter*]

SATURDAY, JANUARY 27, 1912

THE UNDERVALUED BANANA

The dictum that fruits should be eaten "in their season" finds its limitations as regards variety in the temperate zones at certain periods of the year. There is, however, one fruit which is readily available fresh in American markets at practically all seasons, although it grows best from November to April in its tropical or semitropical home. It is unfortunate that an article of diet which meets certain nutritive requirements so well and is so easily obtained at reasonable cost as the banana should be the subject of much misunderstanding among both physicians and laymen. For despite the fact that over forty million bunches are reported to have been brought to the United States last year, it is popularly stated in many quarters that the banana is difficult of digestion and may give rise to alimentary distress.

A closer consideration of the composition of the banana may serve to elucidate the situation. The fruit is brought to our northern markets green, and is ripened by artificial heat. This process can be hastened or delayed within certain limits according to the momentary demands of the retail trade. The color of the peel gives evidence of the degree of ripeness. The green banana contains, in the part exclusive of the skin, about 1.5 per cent. of protein and 20 to 25 per cent. of carbohydrate, almost entirely starch. In the ripe banana, with yellow-brown peel, the edible part contains somewhat less (16 to 19 per cent.) of carbohydrate; but that which remains is now almost entirely in the form of soluble sugars.[1] Broadly speaking, then, the ripe banana is about one-fifth sugar; the green, one-fifth starch. Most of the remainder of the edible pulp is water. Intermediate degrees of ripeness present starch and sugar in reciprocal proportions varying between the limits set above.

Inasmuch as bananas are commonly eaten uncooked, it is obvious that more or less raw starch will be ingested if the fruit is not ripe, i. e., if the skin has not begun to shrivel and darken. Raw starch may be singularly irritating to the alimentary tract of man and is at best poorly utilized, whether it be ingested in the form of uncooked potatoes, chestnuts, bananas or other native starchy foods.[2] No one would advise the use of uncooked potatoes; yet many people eschew a thoroughly ripe banana in the belief that this wholesome fruit is "rotten" when the skin becomes darkened, whereas they eagerly eat the yellow-green starch-bearing fruit at a stage of incomplete ripeness. "Green" bananas, like "green" apples, are unwholesome so long as the starch has not been adequately converted into sugars in the ripening processes. But the delicious and innocuous ripe banana should not be made to suffer in its dietetic reputation because of the ignorance of the consumer. Here is a chance for popular education.

Two other factors deserve notice in the defense of the maligned banana. One concerns the reprehensible habit of gulping down this fruit without adequate mastication. It is a pleasure to watch young children consume ripe bananas and note the physiologic correctness of their mode of eating. Unfortunate it is, indeed, that the shape of the banana permits it to be introduced into the mouth without the necessity of efficient comminution. The second misfortune is one that involves the retailer of the banana. Although this fruit is sealed by Nature in practically germ-free and germ-proof packages, most fruit-dealers are wont to tear off bananas from the stems to which they are attached. One end of the fruit pulp is thus exposed to the air and decay soon sets in. Esthetic and hygienic considerations both demand that bananas should be cut (not torn) from the bunch and should remain completely enclosed in their natural covering until served.

Experience shows that the thoroughly ripe banana (or the less ripe fruit, after cooking) is undeserving of the unfavorable reputation which it has won in certain quarters. It forms a useful addition to the dietary, richer in nutrients and far more delicious than some of its more expensive competitors.

DIAPHORESIS AND NEPHRITIS

There is an idea still somewhat prevalent among medical men that the skin acts vicariously for the kidneys, compensating for a restricted secretory capacity of the latter by a heightened production of sweat with an increased excretion of characteristic urinary constituents, especially water, urea and salts. If this behavior of the skin were an established fact, the use of diaphoretic measures in diseases complicated with insufficient renal activity would be fully justified. The extent to which the skin may vicariously assume the eliminating function of the kidneys, however, is much less than is generally supposed. Accurate observations have repeatedly shown that patients afflicted with chronic kidney lesions, particularly in forms unattended with edema, as well as those accompanied with uremic symptoms, excrete no more nitrogenous waste products or salt through the skin than do healthy individuals under comparable conditions of activity.

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[1] Bailey: Studies on the Banana, Jour. Biol. Chem., 1906, i, 355. Reich: Ztschr. f. Untersuch. d. Nahrungs- u. Genussmittel., 1911, xxii, 208

[2] Thomas: Die Banane als Volksnahrungsmittel, Rubner's Arch. f. Physiol., Supplement volume, 1911, p. 29.

The reputed "urine-sweat," which has now and then been reported to accumulate on the skin of patients with chronic nephritis and to lead to a conspicuous frost-like deposit of urinary substances on its surface, is doubtless the result of an extreme situation. Such peculiar sweats, suggestive of urea and its companion products and at times observed prior to death or in extreme collapse, are scarcely comparable with the ordinary excretion through the skin. They are probably to be interpreted as the consequences of an extreme surcharging of the circulation with uneliminated metabolic waste products rather than as an expression of any compensatory overfunctioning of the cutaneous glands. In such cases the occasionally observed urinary odor of patients is said to be not confined to the skin, but to be noticeable in the secretions of other glands in the body as well. How little, after all, the skin accomplishes in the way of eliminating excretory materials is shown by the figures obtained by Loofs.[1] The average daily cutaneous output of individuals in bed amounted to 0.25 gram of nitrogen and 0.2 gram of sodium chlorid per day in the healthy and nephritic alike. Even under conditions of so-called "low diet" these amounts are without physiologic significance in relation to the total work of the kidneys.

It is interesting to note that diaphoresis was originally introduced into the therapy of renal disorders to reduce the hydremic plethora by increasing the water output in the form of sweat. With the growing recognition that the retention of water in such conditions may be occasioned by the presence of increased quantities of products awaiting elimination, attention was in turn centered on the removal of urinary components rather than water in the sweat "cures." We have here an illustration of the modification of a theory to justify the continuance of a time-honored therapeutic practice.

PRECOCIOUS CHILDREN

Accounts in history and in newspapers and magazines of the wonderful accomplishments of certain precocious children have caused much discussion as to whether present methods of education are correct in principle and do as much as possible for the child. Examples are cited of children who are said to have mastered reading, writing, spelling, arithmetic and grammar in infancy, and a little later had taken up geometry, astronomy, physics, chemistry, mechanics and even history and political economy; in some instances, several languages, ancient and modern, have been said to be among the acquirements of these infant prodigies. It is asserted that these results are attained by proper intensive methods and beginning at an early period in the life of the individual, and that such methods employed more universally would result in the saving of years of time in the education of the young.

M. V. O'Shea[1] is skeptical as to the desirability of this hothouse forcing of children in the educational line and also as to the substantial accomplishments of these precocious children. He has attempted to obtain from those close to some of these children precise and detailed accounts of just what they had accomplished in the various branches; but nothing but general and unsatisfactory statements have been secured. He asserts that there are no reliable data of a sufficiently detailed and specific character to enable one to determine exactly what kind of ability these children possess. He believes that the real accomplishments of some of these children have been overrated, and that, put to the test, they would be found wanting in ability to interpret and apply what they have learned, and therefore not really educated. Some children, for instance, seem to be able at a very early age to read the works of profound thinkers. Such children have simply gained a certain degree of familiarity with a peculiar kind of visual object, which is an extremely mechanical sort of thing to do, requiring no very high degree of mentality. One may be able to recognize words so as to be able to pronounce them, while one's experience is far from giving one the key to their contents, and thus enabling one to read in the true sense of the word. It is a simple matter of psychology that reading for content, instead of simply for verbal recognition, cannot go far beyond the individual's experience. No one would contend that a child with no experience outside of the nursery could read understandingly the Old Testament or Milton's "Paradise Lost," and this will apply to other branches of learning as well. In mathematics for example, O'Shea ascertained by experiment that many children could, without hesitation, recite the words in problems in arithmetic and geometry which they could not interpret in terms of experience. The child who is able to enter college at an unusually early age does not necessarily give evidence of remarkable intellectual power, for college entrance examinations are "mainly verbal, conventional and symbolic; they concern the tools of knowledge, not true knowledge itself."

The accomplishments of the much-talked-of precocious children, therefore, consist essentially of a more or less mechanical memorizing of symbols and not of a true comprehension of principles. O'Shea finds by test that certain children who are precocious in familiarity with literature in foreign languages, in mathematics, etc., are distinctly inferior to typical children of their age in their understanding of the realities and especially in effective reaction on the environment in making it over into new forms or patterns or directing the forces of Nature into new channels.

The education that produced these infant prodigies, then, offers no new principles, nor do the results, however interesting, furnish a norm for imitation; they are merely, like forced monstrous blooms, the evidence of what can be accomplished by persistent and systematic direction of all the energies in one direction. O'Shea feels that the study of living beings and of natural objects and forces should furnish the principal material for a young child's education; not books but realities—not words and symbols but people and things—should constitute the earliest nourishment of the mind. The true test of education, after all, is the preparation which it furnishes for life; and it seems a sound principle that symbols ought not to be so early or so exclusively forced on the mind that they take the place of realities.

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[1] Loofs: Welche Mengen von Stickstoff, etc., werden durch die Haut von Nierenkranken ausgeschieden? Deutsch. Arch. f. klin. Med., 1911, ciii, 563.

[1] Popular Misconceptions Concerning Precocity in Children, Science, Nov. 17, 1911, p. 666.

LIMITATIONS OF ORGANOTHERAPEUTICS

The glands of internal secretion are assuming more and more importance in medicine. Attention is now being especially directed to the milder forms of hypo- and hyperactivity of these glands; this was illustrated by Kocher's brilliant lecture two years ago, when, on the occasion of his receiving the Nobel prize, he discussed conditions of mild hypo- and hyperthyroidism, and, in this country, by Cushing's recent work on dyspituitarism.[1]

The specific treatment of conditions due to insufficiency of glands of internal secretion is, of course, organotherapeutics, but we are only beginning to be able to define the conditions in which this can be successfully employed. The ability to do this in a few cases is due to recent experimental and accurate clinical work, for it is a striking fact that although organotherapeutics is one of the oldest and most wide-spread forms of therapy, not a single result of value was obtained until empiricism was replaced by rationalism.

Among the *sine qua nons*—which have, however, often been overlooked—for successful employment of an organ as an organotherapeutic agent are: that the organ should form a specific internal secretion and that this be stored in the organ in such amounts and in such form that, when administered, it reaches the circulation in quantities sufficient to meet the urgent needs of the body.

Some conception of the urgency of the body's need for the internal secretion of an organ may be obtained from a study of the effects of the removal of the organ; after removal of the pancreas, for example, diabetic symptoms appear within a few hours; from this it may be concluded that the internal secretion of this gland is urgently needed for normal life. Severe and fatal symptoms do not develop for a few days after removal of the parathyroids and suprarenals; after removal of the thyroid or of the sex glands, symptoms, referable to the loss of internal secretions, may not appear for weeks or even months. From such observations it would appear, *a priori*, that cases of thyroid deficiency would offer a more promising field for organotherapeutics than would cases of parathyroid and suprarenal deficiency, and these in turn than cases of pancreas deficiency.

The prospects for success in organotherapeutics may also be considered from the standpoint of the ability of the gland to retain or store a portion of its internal secretion. Two instances will illustrate this point: It has been shown that the normal thyroid gland of man contains an amount of the active principle sufficient for the needs of the body for several weeks, whereas the suprarenals contain, at any one time, much less epinephrin than is secreted (and presumably needed) in the course of a single day.

Although it may be considered as proved that the pancreas secretes a hormone necessary for carbohydrate metabolism, all attempts to demonstrate its presence in the gland have failed.[2] This may be due to the inability of the gland to retain an appreciable amount of the internal secretion or possibly to its being present in an inactive form. The latter is the case in respect to secretin, the hormone which is the chief normal stimulus for the external secretion of the pancreas; the mucous membrane of the small intestine contains a considerable amount of this substance, but it is inactive until it is brought into contact with a dilute acid.

Another factor to be considered is the resistance of the internal secretion to chemical manipulation, to the action of the digestive juices, etc.: the activity of thyroid is not destroyed by the action of moderately strong acids and alkalies and the drug is readily absorbed from the alimentary tract; epinephrin, on the other hand, is a relatively unstable compound and is very imperfectly absorbed when administered by the mouth.

Thus there are already a number of criteria by which the probable value of an organ as an organotherapeutic agent may be judged. Viewed from this point of view, as well as from that of careful clinical trials, not many of the 250 or more preparations of organs of animals found on the market are creditable to modern medicine or to the manufacturers exploiting them. The lists of commercial preparations include such substances as liver, kidney, brain, spinal cord and salivary glands—organs for which there is no, or but very slight, evidence, that they form specific internal secretions—and various preparations of the "internal secretion" of the pancreas, although there is evidence that none of this secretion is retained, at least in an active form, in this gland.

There are other preparations of organs (testicles, mammary glands, and probably thymus) which are known to form internal secretions, or other substances having a pharmacologic action, but where it is doubtful whether they are efficient when given by the mouth; clinical reports of success in the use of such preparations should be received with great reserve. Skepticism is not only commendable but imperative in the case of results claimed to have been obtained with preparations which do not conform to such criteria as those enumerated.

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[1] The Journal A. M. A., Nov. 23, 1911, p. 1840.

[2] The Journal A. M. A., Sept. 30, 1911, p. 1136.

FEDERAL REPORT ON INDUSTRIAL LEAD-POISONING

A bulletin containing three articles devoted to the subject of industrial lead-poisoning has just been issued by the Department of Commerce and Labor. The first, by Sir Thomas Oliver, is on industrial lead-poisoning in Europe; the second, by Dr. Alice Hamilton, on the white-lead industry in the United States, and the third, by Mr. John B. Andrews, on deaths from industrial lead-poisoning in New York, the two articles last mentioned being the first of a series of studies on this subject which the Department of Commerce and Labor proposes to make.

The report of Oliver on lead-poisoning in Great Britain, where compulsory notification of all cases is required, demonstrates triumphantly the value of governmental regulation of the lead trades. The information gathered in that country shows that in the past ten years there has been a reduction of 50 per cent. in the number of cases of lead-poisoning. Among the white-lead workers in the Newcastle-on-Tyne region (Oliver's own district) there were in 1901 ninety-six cases, and in 1910, three cases, with no reduction in the number employed. This improvement has been chiefly in the dusty trades which are carried on indoors, such as white-lead works, potteries, litho-transfers and paint factories. Lead-smelting and the painters' trades still seem to be very productive of lead-poisoning in Great Britain, and, as in the United States, the great danger to the painter seems to be the process of sandpapering which forces him to breathe white-lead dust. Other trades which are shown to be productive of lead-poisoning in Great Britain are in the United States fortunately negligible. Thus file-making is a hand industry there and a machine industry here. The making of cheap kitchen-ware with the addition of large quantities of lead to the tin coating is a bad lead trade in England, while American kitchen-ware is lead-free.

The report on the white-lead industry in the United States is not one to appeal to our pride as a progressive nation. It is admittedly incomplete as regards statistics of fatal and non-fatal cases, owing to the difficulty experienced in tracing them in a country which has no compulsory notification. Hospital records are found to be unsatisfactory because the patient's occupation is seldom given and information from physicians is found to be vague and general rather than specific. In spite of these handicaps, 388 cases were found to have occurred in this industry during the sixteen months between Jan. 1, 1910, and May 1, 1911. As the regular force of men employed is 1,600, this would mean about one case in every four men employed, which is in appalling contrast to Oliver's figures. Owing to the shifting character of the labor in this industry the above figures giving the number of men employed and the number of those poisoned are probably too low. A fair comparison, however, can be made between Oliver's statistics in the Newcastle-on-Tyne district, where three cases occurred in 1910 in a force of 1,320 men, and the figures given for an American factory that has adopted the English system of medical inspection, which show that sixty out of 170 men were under treatment for plumbism. Among 120 cases of lead-poisoning in American white-lead works, sixty-one men had sickened after an exposure of two months or less, showing the dusty conditions in the factories. The histories of sixteen fatal cases are given, one-half of which came from one factory. Nine men had encephalopathy, one fatal case coming on after seven months' work.

The report gives a picture very typical of industry in the United States, with conditions ranging from squalor in one place to magnificence in another, from intelligent care of the employees to ignorance and neglect almost incredible. Uniform legislative control is urged, not only for the sake of "compelling backward owners to adopt the same measures that their more progressive competitors have taken of their own free will, but also of educating the men in charge of the works."

Andrews' analysis of sixty cases of lead-poisoning in New York state during 1909 and 1910 shows that forty-five subjects handled paint, four were printers, three smelters, three white-lead workers, two storage-battery makers and one each employed in tinning, lead-pipe making and rubber works. The two last are very interesting from the point of view of industrial hygiene. The tinsmith died at the age of 18 years, after only one year's employment in what is looked on as a fairly safe lead trade, for he was handling solder kept at a low temperature. The rubber worker was making rubber toys and balls for children, the rubber having been treated, not with lead carbonate, but with the far less poisonous sulphate.

The Bureau of Labor has undertaken a difficult task in attempting to ascertain the extent of industrial plumbism in our lead trades, and it deserves the hearty cooperation of the members of the medical profession.

THE INCREASING USE OF CALCIUM HYPOCHLORITE IN WATER PURIFICATION

The use of calcium hypochlorite, as we have remarked before, is assuming great importance in water purification. In cases in which the water contains little suspended matter and yet in which sewage contamination is known or feared, the addition of bleach to the water is of great value. It is now sufficiently established by experimentation that the pathogenic germs likely to be contained in water or sewage are killed by 1 part per million, or even less (0.8 parts) of available chlorin. The graduation of the "dose" of hypochlorite is a simple matter; the expense is remarkably low—less than fifty cents per million gallons—and the practical difficulties of installing the disinfecting apparatus are trifling. In an emergency, portable disinfecting plants may be quickly shipped to a threatened point and put in operation within a few hours. The state boards of health of Minnesota[1] and Kansas[2] have in readiness ingenious forms of portable apparatus of this kind.[1] As has been pointed out by Phelps,[3] it should be the duty of every waterworks manager to keep on hand the necessary storage tanks and chemicals to enable him at short notice to disinfect the water-supply. No such occurrence should be possible as that lately reported at Philadelphia, where contaminated water was supplied to two wards of the city without any attempt at disinfection.

Several large cities in this country and in Canada have been using the hypochlorite treatment during the past year with quite uniformly favorable results. In Montreal the typhoid rate after the installation of the hypochlorite plant was 21, whereas the average rate for the four preceding years had been 44 and the range 33 to 68.[4] In Minneapolis, where the typhoid rate has been high for years only twenty deaths from this disease were reported for the first ten months of 1911 as compared with 159 during the corresponding period in 1910. In the month of April, 1910, twenty-four deaths from typhoid fever occurred; in April, 1911, only one death. The Minneapolis treatment of the city water with hypochlorite seems in view of such figures to have been a brilliant success. The city of Cleveland began the hypochlorite treatment in September, 1911. Although data are available for only a short period there seems to be evidence that in this case also the use of bleach has been followed by a diminution in the amount of typhoid fever. Whether or not the remarkable decrease of cases from fifty-five per month to five is wholly due to the hypochlorite treatment, there can be no doubt that the results so far reported are at least as favorable as in other cities. As shown by repeated bacterial examinations, the intestinal bacteria present in the Cleveland water-supply in past years seem to have been completely eliminated by the hypochlorite added.

On the score of public health no objection whatever can be raised to the addition of hypochlorite to drinking-water in the quantities commonly used. No injurious effect on the stomach or any other organ has been traced or can be predicated with any degree of probability. The treatment is wholly harmless.

Objections, however, have been raised on account of alleged disagreeable tastes or odors in the treated water. Aeration of the water by pouring from one vessel into another or simply allowing the water to stand freely exposed to the air quickly removes such odors. Balanced against the prevention of disease and the saving of life such objections will probably carry little weight with the average citizen.

A humorous touch is given to the matter by the imaginary grievances that find utterance, such as fancied injury to delicate fabrics, bleaching of the hair and the like. Before the chemical is added complaints that the tap water has an unpleasant taste or smell come from people who have read in the newspapers that the hypochlorite treatment is about to be instituted. It goes without saying that proper care should be exercised in adapting the dosage to the water to be treated and in assuring thorough mixing. The demonstrated advantages of hypochlorite disinfection certainly overbalance all known or fancied disadvantages.

Current Comment

FRAUDULENT PROPRIETARIES

What is a fraudulent proprietary medicine? The answer is not difficult. A fraudulent medicine is one that is exploited under false assertions regarding either its composition, its therapeutic effects or both. In pre-propaganda days it was usual to find both methods of misrepresentation freely used. False formulas were circulated with an abandon that indicated the remoteness of any likelihood of detection, while for therapeutic claims no exaggeration was too gross and no lie too crude. As the exposures of the Council on Pharmacy and Chemistry and the propaganda carried on by The Journal brought physicians to a realization of the enormity of the fraud of which they had been unwitting victims, the methods of the dishonest proprietary manufacturer were changed. Formulas that deceived by the things left unsaid succeeded those that were frankly and openly false. With the advent of the Food and Drugs Act, which prohibited false statements on the labels, formulas were eliminated from the labels or were so worded as to be meaningless. In the matter of assertions as to therapeutic effects, there has been but little change. Possibly there has been a slight tendency to abandon the "lie direct" for the "lie with circumstance," but in general the claims are well-nigh as fraudulent to-day as they were ten years ago. The article on Phenalgin that appears elsewhere[1] in this issue illustrates the type of proprietary humbug that is foisted on the medical profession under claims that are both false and vicious.

A MARVELOUS MIXTURE

Take of acetanilid 57 parts, of sodium bicarbonate 29 parts, of ammonium carbonate 10 parts and mix. You will then have an "ammoniated coal-tar product" which is such a "judicious combination of ingredients" that it may be counted on "to secure maximum anodyne and analgesic effect." Not only this: although the mixture consists of more than half acetanilid, it has no "depressing effect." More marvelous still, it "is never followed by depression." While, under ordinary conditions, acetanilid given for any length of time results in serious changes in the blood, when it is combined in this miraculous mixture "its prolonged administration does not give rise to destructive blood metamorphosis." For this reason, it can be recommended for use,

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[1] Whittaker and Childs: Engineering News, April 6, 1911.
[2] Hoad: Engineering News, Dec. 28, 1911.
[3] Phelps, E. B.: The Chemical Disinfection of Water and Sewage, Jour. Am. Pub. Health Assn., 1911, i, 618.
[4] Engineering News, Nov. 9, 1911.

[1] The Propaganda for Reform department, page 293.

"especially in the anemic." To sum up, this combination of drugs produces the "safest and most dependable of analgesics." You do not believe all this? But possibly you will believe it if you can forget what the ingredients are and remember it only under the proprietary name. All of the assertions just quoted, and many more, are made in this year of miracles, 1912, by those who sell this mixture of acetanilid, sodium bicarbonate and ammonium carbonate under the trademarked name Phenalgin.[1] And a large proportion of a presumably scientific profession "fall for it" and a multitude of medical editors stand sponsor for it!

Q. E. D.

[1] The National League for Medical Freedom is opposed to the Owen bill, which would transfer the Bureau of Chemistry of the Department of Agriculture to the proposed Department of Health.

[2] Dr. C. S. Carr, the publicity agent for Peruna, is a member of the advisory board of the National League for Medical Freedom.

[3] In *Collier's,* January 20, Samuel Hopkins Adams says, speaking of Peruna: "The proprietor of a large wholesale drug house in the Middle West tells me: 'Peruna is nowhere. We used to get a carload or even two in a month—Now we hardly handle a carload a year.'"

[4] Who wouldn't want "freedom" from oversight by a bureau whose embarrassing insistence on facts cuts down one's business to one-twelfth or one twenty-fourth of what it used to be!

Quod erat demonstrandum.

TWO WAYS OF MEETING AN EMERGENCY

A short time ago it was reported that owing to the breaking of a Philadelphia water-main unfiltered river-water had been distributed for a time to two wards of the city. As the result, an outbreak of typhoid fever has appeared in the section supplied with the contaminated water. In a single week ninety-nine cases of the disease are reported from the two infected wards and only forty-eight cases in the other forty-five wards of the city! One deplorable feature of the epidemic is that the polluted water seems to have been distributed without any adequate warning by the responsible authorities. Such a blunder is without excuse. The lesson that deaths will follow the drinking of polluted water ought surely to have been well learned in Philadelphia. Why should citizens be supplied without warning with water known to contain typhoid germs any more than with water known to contain arsenic or any other poison? A different course was pursued in Lawrence, Kansas, early in January, when the danger of a water-shortage became imminent. Full publicity was given to the situation. The date when the river-water was to be turned into the main was duly announced and citizens were warned to boil the water. In addition hypochlorite treatment was instituted in accordance with directions furnished by the state board of health. In brief, apparently no precaution was omitted either to warn or to safeguard the inhabitants of Lawrence. It is high time that public officials recognized their responsibility in such matters. Too often in the past "emergency intakes" have been opened with no public warning and sewage-polluted water distributed to hundreds of unsuspecting householders. It need hardly be pointed out that times have changed, that the general public understands more clearly than formerly the reason for water-borne typhoid, and is likely to view less leniently gross dereliction of duty by those in authority. It is to be expected that the citizens of Philadelphia will attempt to fix the responsibility for the serious events of the past few weeks.

THE DEATH-RATE IN THE CANAL ZONE

So many records have been broken in the Canal Zone, since Uncle Sam undertook to dig the big ditch, that we have become used to the sensation and no longer expect anything but remarkable doings. Whether moving dirt, building dams, draining swamps or preventing disease, the Canal Commission seems to have no thought in view but to make each day's work better than that of the day before. So we arise merely to put on record that the report of the Department of Sanitation for November, just received, shows that during that month, among 11,900 white men, women and children from the United States living in the Zone, there were two deaths from disease, one from malaria and one from cancer; there was also one premature birth. Including the latter, this is equal to an annual death-rate of 3.02 per thousand. Would any of our most advanced cities care to compete for first honors, as a health resort, with this erstwhile "pest-hole of the tropics"? Most of our cities consider themselves lucky if they can get their death-rate below 15 per thousand.

THE NEW YORK HERALD AND PROGRESSIVE MEDICINE

For several years the New York *Herald* has been taking a position in regard to medical matters that was inconsistent with the general policy on which that newspaper had built up an enviable reputation. The apparent antipathy of the *Herald* to the medical profession and, necessarily, to medicine, in the broad acceptation of the term, was so extreme as to lead to the expression of views and the promulgation of statements which were contrary to recognized and scientifically demonstrated facts. Since the New York *Herald* is one of the oldest and one of the most influential of our dailies, this position was regretted by all who were fighting for progressive, modern, preventive medicine. We read with extreme gratification, therefore, the announcement that the *Herald* will hereafter take a more enlightened position, and with this end in view has engaged Dr. James J. Walsh, of New York, as one of its consulting editorial staff. While no immediate radical change is to be expected, several items which have appeared here and there in the *Herald's* columns confirm the news of the change of policy above mentioned. It is certainly encouraging to know that the New York *Herald* will hereafter be on the side of scientific progress.

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[1] The Propaganda for Reform department, page 293.

RESUSCITATION FROM ELECTRIC SHOCK

In 1894, the *Electrical World*, one of the leading electric journals of the country, printed and distributed free to electric plants, power houses and stations, a large chart giving instructions for first aid to persons burned or shocked by electricity. These charts have been widely used and have proved of great value. The demand for this chart continuing, the *Electrical World*, in 1910, took up the revision of the chart with a number of associations of electric men, notably the National Electric Light Association, the American Institute of Electrical Engineers, the Association of Edison Illuminating Companies, the National Museum of Safety and others. The unanimous opinion of all consulted was that reliable and authoritative information on this subject was greatly needed and that many lives could be saved by a better understanding of the subject. To this end, the National Electric Light Association was asked to undertake the organization of a commission, which would command the respect and attention of both the medical profession and the electric industry. Accordingly this association, through its president, Mr. John F. Gilchrist of Chicago, asked the American Medical Association to select such a commission. This request was taken up by the Council on Health and Public Instruction, which has recently completed a commission in every way meeting the requirements of the case. As chairman of this commission the Council has selected one of its own members, Dr. Walter B. Cannon, professor of physiology in Harvard Medical School. The Council also nominated, as its representatives, Dr. Yandell Henderson, professor of physiology of Yale Medical School, Dr. S. J. Meltzer of the Rockefeller Institute and Dr. George W. Crile of Cleveland. The National Electric Light Association nominated Dr. Edward A. Spitzka, professor of anatomy of Jefferson Medical College, and Mr. W. C. L. Eglin of the Philadelphia Electric Company and an ex-president of the association. The American Institute of Electrical Engineers nominated Professor Elihu Thomson of the General Electric Company of Lynn, Mass., and Professor Arthur E. Kennelly of Harvard University. Mr. W. D. Weaver, the editor of the *Electrical World*, was asked to become the ninth member of the commission and to serve as the secretary. The electric industry, the medical profession and the public are to be congratulated on the formation of this commission. The distinguished personnel of the commission insures the acceptance of its report as authoritative, both in this country and in Europe. The commission has already held a preliminary meeting and plans are now being made for it to take up its work systematically.

THE AMERICAN PHARMACEUTICAL ASSOCIATION JOURNAL

With the object of furnishing a more direct and speedy means of communication between the American Pharmaceutical Association and its members, the association has established a monthly journal which is to be its official organ. The first number has just appeared, and the association is to be congratulated on its quality and appearance. In this first number the object and policy of the journal is set forth by the editor, J. H. Beal, and Dr. Harvey W. Wiley discusses editorially the opportunity of American pharmacy. In addition there are articles concerning plants and drugs, a discussion of the assay of alkaloids and a number of other papers on pharmaceutical subjects. In a section on education and legislation, the educational work of the Council on Pharmacy and Chemistry of the American Medical Association is discussed. It is understood that it will be the policy of the new journal to give publicity to the work of the Council, something which only two drug journals — the *Druggists Circular* and the *American Journal of Pharmacy* — have heretofore done. It is also understood that the journal will not accept "patent-medicine" advertisements. The first number contains about ninety pages of reading-matter, all of which should be interesting not only to the members of the association, but to the whole profession of pharmacy.

NUMBER OF INSANE IN INSTITUTIONS IN THE UNITED STATES

A special census of 372 institutions for the care of the insane was taken by the United States Census Bureau in 1910, and the number of insane persons in the institutions on January 1 of that year was found to be 187,454. The number admitted during 1910 was 60,603 and the number discharged was 53,880. A special census taken in 1904 showed the number in institutions to be 150,151 and the number of persons committed during that year was 49,622. In the six years from 1904 to 1910 there was an increase of 37,303, or 24.8 per cent. of the patients confined, and an increase of 10,981, or 22.1 per cent. of the number annually committed to such asylums. The number of insane in asylums per one hundred thousand of population in 1904 was 186.2; in 1910 it was 203.8. The annual commitments per one hundred thousand of population increased from 61.5 in 1904 to 65.9 in 1910, showing an increase of 4.4 in 1910. This, of course, includes only those committed to hospitals; and the increase may be due to an extension of this method of care for the insane and also to the increase in the number of institutions, which amounted to 13 per cent. Massachusetts had the largest number of insane patients in institutions on Jan. 1, 1910, amounting to 344.6 per one hundred thousand of population, while New York had 343.1 per one hundred thousand of population. These states are probably better provided with institutions than most other states and besides have patients from other states. The District of Columbia exceeds both of these states in the number of patients in institutions, for the District contains the government hospital, which draws patients from a much wider area than any of the states. The number of the insane in hospitals for the insane in the states south and west is much less than in the east. In the states west of the Mississippi River, owing to rapid increase in population largely from the eastern states, the number of insane is less because the population represents a class in which insanity is less prevalent; also provision for the care of insane in these states probably has not kept pace with the increase in population.

Medical News

ALABAMA

Personal.—Dr. George Hogan, Birmingham, recently appointed physician to the state convict camp at Flat Top, has resigned.——Dr. George H. Searcy has been appointed medical inspector of schools of Tuscaloosa.——Dr. Tucker H. Frazer, Mobile, has been appointed a member of the Alabama State Board of the American Red Cross.

Want Maneuver Camp.—At the annual meeting and banquet of the Calhoun County Medical Society in Anniston, January 2, a committee was appointed consisting of Drs. Henry M. Martin, Anniston; Abner N. Steele, Anniston; Thomas J. Brothers, Anniston; Mark J. Williams, Anniston, and Robert L. Hughes, Choccolocco, to prepare statistics on the general health of Calhoun County, to be presented to Congress with a view of securing the establishment in that county of an army maneuver camp.

ARKANSAS

Personal.—Dr. Russell G. Floyd, Eureka Springs, has reached Japan on a trip eastward around the world.——Dr. Bernard Asman, Louisville, Ky., formerly of Hot Springs, has been elected president of the Ozark Sanatorium, Hot Springs.——Dr. William H. Arrington, Crossett, was thrown from his buggy in a runaway accident and seriously injured recently.

Elections.—The following results of annual elections in county medical societies are announced: Faulkner County, at Conway, December 21, president, Dr. John E. McMahan, Kendall; vice-president, Dr. Isaac N. McCollum, Conway; secretary and treasurer, Dr. Cecil H. Dickerson, Conway.——Sebastian County, at Fort Smith, December 14, president, Dr. J. Homer Buckley; vice-president, Dr. Clark S. Wood; secretary, Dr. Erret C. Myers, and treasurer, Dr. Herbert Moulton, all of Fort Smith.——Benton County, at Rogers, December 13, president, Dr. Rufus S. Rice, Rogers; vice-president, Dr. Joseph T. Clegg, Siloam Springs, and secretary and treasurer, Dr. James A. Fergus, Rogers.——Pulaski County, at Little Rock, December 11, president, Dr. John G. Watkins; vice-president, Dr. James L. Dibrell; secretary, Dr. John B. Dooley, and treasurer, Dr. William R. Bathurst, all of Little Rock.——Phillips County, at Helena, December 5, president, Dr. William C. King, Helena; vice-president, Dr. Herbert M. Thompson, Marvel, and secretary and treasurer, Dr. Robert Orr, Helena.

COLORADO

Food Under Glass Covers.—The pure food inspector has required that all grocers doing business in the city shall keep under glass covers all food not otherwise properly protected.

State Hospital Report.—The annual report of the State Hospital for Insane, Pueblo, shows that the institution has a population of 1,150; 689 men and 461 women. The average annual cost per capita was $141.36. Of the 186 patients admitted during the year 134 were natives of the United States.

Eliminates Tuberculosis from Literature.—At the annual meeting of the Colorado Association for the Prevention and Control of Tuberculosis it was voted to omit the word "tuberculosis" from the literature of the association and to substitute therefor the words "contagious and infectious." During 1911 the association expended $5,016. Dr. Sherman G. Bonney, Denver, is president of the association, vice Dr. George Walker Holden, Denver, resigned.

Personal.—In recognition of the work of Dr. Charles A. Bundsen, Denver, in connection with the establishment of the Swedish National Consumptive Sanatorium, the King of Sweden has made Dr. Bundsen a knight of the Order of Vasa.——Dr. Edward Delehanty has been elected president; Dr. Leonard Freeman, vice-president, and Dr. William C. Bane, secretary of St. Joseph's Hospital, Denver.——Dr. Patrick V. Carlin, Denver, has recovered from his recent illness and resumed practice.——Dr. Horatio E. Abrahams, Trinidad, has been elected president and Dr. James G. Espey, secretary, Trinidad, of the Las Animas County Medical Society.

Medical Sermons.—The pastor of Unity Church, Denver, has made arrangements whereby physicians of the city will occupy the pulpit on Sunday evenings and give a series of plain talks on health and sanitation to his congregation. The first lecture was given by Dr. Edward Jackson, January 7, on "Choosing a Physician." Dr. Howell T. Pershing spoke next on "Common Sense in Medicine"; Dr. John W. Amesse on "The Conquest of the Tropics," and the succeeding speakers and topics are: Dr. William C. Mitchell on "Great Benefits of Bacteriologic Discoveries"; Dr. Josiah N. Hall on "Modern Diagnosis"; Dr. Charles S. Elder on "Mind and Body," and Dr. Henry Denison on "Internal Secretions."

New Dispensary.—A free city medical dispensary was opened in Denver, January 1, in Euclid Hall. The dispensary is open day and night, and in addition to the regular staff, the greater part of the physicians of Denver stand ready to give their assistance and help when called for.

KANSAS

Personal.—Dr. Oliver J. Taylor, Wichita, has gone to Mexico for the rest of the winter.——Dr. James W. May, Kansas City, has been elected editor of the official organ of the Kansas Medical Society.

Club Room for Medical Society.—A club room is being arranged in the Butts Building, Wichita, for the use of the members of the Sedgwick County Medical Society. The room is 20 by 40 and will be used for the weekly meetings of the society.

Society Elections.—Douglas County Medical Society met at Lawrence, January 9, and elected Dr. Samuel T. Gillespie, president; Dr. Edward Bumgardner, vice-president; and reelected Dr. Leon Matassarin, secretary, and Dr. Eugene Smith, treasurer, all of Lawrence.——Saline County Medical Society, at its meeting in Salina, elected Dr. John W. Neptune, president: Dr. Oman R. Brittain, vice-president; Dr. Oliver D. Walker, secretary, and Dr. Carroll D. Armstrong, treasurer, all of Salina.——Cherokee County Medical Society has elected Dr. Claude Lowdermilk, Galena, president; Dr. William N. Johnson, Columbus, vice-president; Dr. Albert A. Shelly, Galena, secretary and treasurer.——Reno County Medical Society at its meeting in Hutchinson, elected Dr. Clemens Klippel, president; Dr. Hunter J. Duvall, vice-president, and reelected Dr. William F. Schoor, secretary-treasurer, all of Hutchinson.

KENTUCKY

Four for One.—The city council of Lexington has adopted an ordinance abolishing the office of city physician and authorizing the mayor to appoint four charity physicians in his stead.

Losses by Fire.—The sanatorium of Dr. O. Raymond Minor, Louisville, was injured by fire to the extent of about $15,000, January 12.——The house and out-buildings on the farm of Dr. Moreau S. Browne, Winchester, were destroyed by fire, January 6.——The office of Dr. M. Beverly Berry, Maceo, was burned January 14, with a loss of about $1,500.

New Health Board Officers.—At the annual meeting of the State Board of Health held in Frankfort, January 10, Dr. John G. South, Frankfort, was elected president of the board; Dr. Joseph N. McCormack, Bowling Green, secretary (this being his thirty-third year in that position), and Dr. Arthur T. McCormack, Bowling Green, assistant secretary and health inspector.

Auditorium for Medical Society.—At the January 8 meeting of the Jefferson County Medical Society it was announced that the commission in charge of the new municipal hospital for Louisville, which is to cost a million dollars, had agreed to erect an auditorium to be used as a meeting place for the society. The announcement was also made that an endowment had been secured for the Jefferson County Medical Library.

Personal.—The mayor of Lexington has appointed Drs. N. Lewis Bosworth and Maurice Davis as members of the city board of health.——Dr. Clarence P. Burnett, health officer of Paducah, has volunteered to take charge of the bacteriologic laboratory, when established at Riverside Hospital.——Dr. Gils. E. Townsend, Bowling Green, has been elected president of the board of health of Bowling Green and Dr. Benjamin S. Rutherford, Bowling Green, health officer.——Dr. Amos G. Browning, an aged practitioner of Maysville, was assaulted and robbed in his office, January 8.——Dr. Samuel S. Watkins, Owensboro, was thrown from a buggy near that place, January 5, dislocating his knee.——Dr. George B. Spencer has been elected city physician of Carlisle.

Proposed Medical Legislation.—On "Bill Day" in the Kentucky Legislature the following bills of interest to the medical profession were introduced:

H. B. 3 and 93.—Each an act to repeal an act to establish bureau of vital statistics.

H. B. 8.—Act to regulate practice of veterinary medicine, surgery and dentistry, to establish state board of veterinary medical examiners and provide penalties for violating provisions thereof.

H. B. 28.—Act to repeal an act entitled "An act to establish a bureau of vital statistics," and to provide for immediate registration of all births and deaths.

H. B. 50.—Act providing for hospital board for management and control of city hospitals in cities of the first class.

H. B. 74.—Act to amend Section 1759 of Kentucky statutes, relating to number, qualifications, appointment and duties of state board of health, giving seven members of the board appointed by the governor the right to name the eighth member, who shall serve as secretary, taking that appointment out of the governor's hands.

H. B. 95.—Act relating to practice of dentistry.

S. B. 41.—Act to amend the law regulating practice of dentistry in this state, by preventing alleged dentists from operating under any name except their own.

New Officers for County Societies.—The following results of elections in county societies are announced: Jefferson County, at Louisville, December 27, president, Dr. Edward Speidel; vice-presidents, Drs. Herbert Bronner and Elmer L. Henderson; secretary, Dr. A. Chenoweth L. Perceful; treasurer, Dr. Clarence H. Harris; executive committee, Drs. John J. Moren, Challon G. Forsee and Walter F. Boggess, and judicial council, Drs. Frank T. Fort and Harry A. Davidson, all of Louisville.——McCracken County, at Paducah, December 27, president, Dr. Vernon Blythe; and reelected vice-president, Dr. William H. Parsons; secretary, Dr. Delia Caldwell, and treasurer, Dr. Edward B. Willingham, all of Paducah.——Scott County, at Georgetown, December 27, president, Dr. Henry V. Johnson; vice-president, Dr. John E. Pack, and secretary and treasurer, Dr. E. Callister Barlow, all of Georgetown.——Christian County, at Hopkinsville, December 19, president, Dr. Joe L. Barker, Pembroke; vice-president, Dr. Samuel H. Williams, Crofton, and secretary and treasurer, Dr. William S. Sandbach, Casky.——Daviess County, at Owensboro, December 19, president, Dr. William E. Irvin, Owensboro; vice-president, Dr. Benjamin F. Tichenor, Pleasant Ridge, and secretary and treasurer, Dr. John J. Rodman, Owensboro.——Nicholas County, at Carlisle, December 18, president, Dr. J. Cray Martin, Carlisle; vice-president, Dr. Handsford H. Buntin, Bramblett, and secretary, Dr. George B. Spencer, Carlisle.——Fayette County, at Lexington, December 12, president, Dr. Claude W. Trapp; vice-president, Dr. Josephine D. Hunt; secretary, Dr. Lee C. Redmon, and treasurer, Dr. Benjamin L. Coleman, all of Lexington.——Henderson County, at Henderson, December 12, president, Dr. James W. Cooper, Smith Mills; vice-president, Dr. William V. Neal, Henderson, and secretary-treasurer, Dr. Peyton Ligon, Henderson.——Louisville Clinical Society, president, Dr. William A. Jenkins; vice-president, Dr. Henry J. Farbach (reelected), and treasurer, Dr. A. David Willmoth.

MARYLAND

New Officers for County Societies.—At the annual meeting of the Anne Arundel County Medical Society held in Annapolis, January 9, Dr. Thomas H. Brayshaw, Glenburnie, was elected president; Dr. Jesse O. Purvis, Annapolis, vice-president; Dr. Louis B. Henkle, Jr., Annapolis, secretary, and Dr. Frank H. Thompson, Annapolis, treasurer.——Howard County Medical Society, at its annual meeting in Ellicott City, January 13, elected Dr. Frank O. Miller, president; Dr. William C. Stone, vice-president, and Dr. Henry D. Causey, secretary and treasurer, all of Ellicott City.

Personal.—Dr. Edward E. Lamkin, Nanticoke, whose right forearm was fractured in a runaway accident November 2, is recovering at the University Hospital, after an operation for wiring of the ends of the fractured bones which had not properly united.——Dr. Joseph A. Thompson, Hyattsville, who has been seriously ill, is reported to be convalescent.——Dr. Thomas H. Brayshaw, Glenburnie, has been appointed a member of the State Lunacy Commission.——Dr. Daniel Hopkins, Havre de Grace, has been appointed school commissioner of Carroll County.——Dr. Brice M. Goldsborough, Cambridge, who has been a patient at the private sanatorium of Dr. Howard A. Kelly, Baltimore, has left for Florida.

Baltimore

Personal.—Dr. Frederick H. Vinup has succeeded Dr. Robert A. Warner as health warden for the Eighteenth Ward.——Dr. Harry Adler has been elected president of the Hebrew Hospital.——Dr. Adolph Guttmacher has been elected president of the Jewish Home for Consumptives.

Testimonial Dinner to Dr. Finney.—Friends of Dr. John M. T. Finney are making arrangements for a testimonial dinner to be given February 17 at the Belvidere Hotel, as an expression of the gratification of his professional brethren, regarding his desire to remain with them. It is proposed also to create a permanent fund to be known as the John M. T. Finney fund for the advancement of surgery, the income of which shall be applied by the Medical and Chirurgical Faculty of Maryland to the securing of lectures, the purchase of books and the provision of such other means as will advance surgery.

Foreign Physicians in Baltimore.—Dr. W. Johannsen of the University of Copenhagen lectured before the Scientific Association of Johns Hopkins University on "Heredity."——Dr. H. B. Devine, Melbourne, Australia, is spending several weeks in Baltimore, attending clinics and visiting hospitals.

Health Conferences.—A series of health conferences are to be held in Baltimore next month, which will be participated in by the physicians of the District of Columbia and Maryland. Among the speakers are Dr. Abraham Jacobi, New York City, president-elect of the American Medical Association; Colonel William C. Gorgas, M. C. U. S. Army; United States Senator Owen, of Oklahoma, and Mr. Samuel Hopkins Adams.

Report of Eudowood.—The annual report of Eudowood Sanatorium for Consumptives shows that there were more patients in the institution in 1911 than in the previous year. In all three departments of the sanatorium there were 317 patients: from the first, the sanatorium department, 127 patients were discharged, of whom sixty-five were much improved in health, with an average gain of 10 pounds in weight; from the second department, the hospital for advanced cases, 110 patients were discharged, of whom sixty-two showed satisfactory progress, and in the third department, the farm colony, twenty-five left during the year and all retained their health after leaving. The farm paid a profit of $2,000 for the year and supplied the institution with vegetables, small fruits, etc., including 14,930 gallons of milk and 2,184 dozen eggs.

NEW YORK

Cold Storage Law Upheld.—On December 21 the Court of Special Sessions handed down an important decision regarding the constitutionality of the Brennan Cold Storage Law, the enforcement of which is in the hands of the state department. The Greenwich Cold Storage Company was charged with receiving foodstuffs on July 12 and failing to mark either the packages or their contents according to the requirements of the law. The plea of the defendants was that the law was unconstitutional. In summing up the court said: "None of the predicated grounds of unconstitutionality are herein applicable. There has been no invasion of the rights of the defendant or of others similarly situated; no deprivation of property; no lien for storage compensation in any wise has been affected; no noxious discriminations between articles of food is the result, and since June 15 the obligation of no contract has been and could not have been impaired." The Greenwich Storage Company was fined $400. Now that the law has been declared constitutional, other complaints which have been held up will be pushed.

New York City

Will Open New Milk Stations.—Health Commissioner Lederle has announced that twenty-eight new milk stations will be opened and ready to dispense milk by February 1. There are at present twenty-seven stations in operation; these together with the new ones will make a total of fifty-five which the Health Department will operate.

Finances of Academy of Medicine.—The annual report of the finance committee of the New York Academy of Medicine shows that thus far $110,000 has been raised by subscription from about one-fourth of the membership of the academy, to pay for the real estate purchased as a site for the proposed enlarged building. The academy hopes to raise as much again and to pay for the site in full before appealing to the public for funds with which to complete the building.

Innovation at Mount Sinai Hospital.—At the recent meeting of the directors of Mount Sinai Hospital it was decided to install refrigerating devices to cool certain wards in the summer months. The idea has been tested in the Army hospitals and in the Philippines, in the treatment of tropical diseases, but it is believed to be a new idea in connection with general hospital work. It is believed that the plan will help in the treatment of intestinal and cardiac diseases. As the work is experimental only small wards will be cooled.

To Isolate Trachoma Pupils.—Dr. William H. Park, director of the Health Department research laboratories has initiated a plan for isolating in groups children suffering from trachoma. A room is to be set apart for those affected with this disease apart from the public school building if possible. School

No. 21, in the midst of a population made up of those who have been in this country but a short time, has been selected for the purpose of trying this plan. A clinic will also be opened at this school for which the Health Department will furnish an ophthalmologist. It is acknowledged that thus far the health department has not been as successful in dealing with the trachoma problem as might be hoped.

Local Societies Hold Meetings.—At the annual meeting of the Medical Association of the Greater City of New York, January 15, the following officers were elected: president, Dr. Reynold Webb Wilcox; vice-president, Dr. Ransford E. Van Gieson, Brooklyn; corresponding secretary, Dr. Frank C. Raynor, Brooklyn; treasurer, Dr. A. Ernest Gallant; chairman for the Borough of the Bronx, Dr. Nathan B. Van Etten; chairman for the Borough of Brooklyn, Dr. Robert E. Coughlin, Brooklyn, and chairman for the Borough of Queens, L. Howard Moss, Richmond Hill.——The New York Neurological Society has elected the following officers for the following year: president, Dr. L. Pierce Clark; vice-presidents, Drs. Smith Ely Jelliffe and Dr. Edward W. Scripture; corresponding secretary, Dr. James Ramsey Hunt; recording secretary and treasurer, Dr. Edwin G. Zabriskie.

Overcrowded Hospitals.—The State Board of Charities, in making its report after inspection of public and private hospitals in this city, says that for the year ended September 30, 1911, there were 88,085 patients' cared for and that 1,669,766 days of treatment were given in public institutions. The greatest amount of congestion was found in the Metropolitan Hospital, the Kings County Hospital, the City Hospital, the Cumberland Street Hospital and Bellevue Hospital in which alone there were over 800 beds in excess of the normal capacity; in addition to this, cots and mattresses were placed on the floor between beds at times to receive the large number of patients sent in. The report shows that additional hospital buildings with a capacity of more than 1,200 beds are needed immediately and that in view of the constantly increasing demands, provision should be made for a much larger number.

Post-Graduate Opens New Building.—The new building and laboratories of the Post-Graduate Medical School and Hospital, at Twentieth Street and Second Avenue, were opened on January 11. The new building adjoins the old one and contains 480 rooms, or 130 more than the old building contains. The cost of this building was $1,500,000. On January 11, members of the hospital staff and their guests had a dinner at Delmonico's in celebration of the opening of the new building. Dr. George N. Miller presided. Among the speakers were Dr. Samuel W. Lambert, dean of the College of Physicians and Surgeons of Columbia University; Surgeon-General G. H. Torney, who spoke of the prevention of disease as necessary to mobility in the military service; Dr. Abraham Jacobi who, in the course of his talk, took a dig at Christian Science and compared the recent orders of President Taft permitting the practice of this cult in the Canal Zone to the opening of Pandora's box. "When our father in Washington, D. C., means to bless his children in the Panama zone, he opens the box of Pandora called Christian Science—Finley, Lazear, Agramonte, Reed, Carroll and Gorgas notwithstanding—and allows equal standing and facilities and justification, to you and to the quacks alike."

Museum of Safety Awards Medals.—At its annual exercises, January 18, the American Museum of Safety presented three gold medals for the greatest achievements in the last year of safeguarding life and limb in American industries and promoting safety and sanitation in daily and industrial life. The first medal was awarded to the Norton Company of Worcester, Mass., for safety devices in its manufacture of grinding machinery and emery wheels. It was given by the *Scientific American*. The second gold medal, presented by the Traveler's Insurance Company of Hartford, Conn., for the employer who did most for the protection of the lives and limbs of his workmen by means of safety devices for dangerous machines and processes, was awarded to the Pennsylvania Railroad. The third gold medal, presented by Dr. Louis Livingston Seaman for progress and achievement in the promotion of hygiene and sanitation, and the mitigation of occupational diseases, was awarded to Dr. Alvah H. Doty, who in the words of Prof. F. R. Hutton who made the presentation, "has been the watchful Cerberus at the door of the Port of New York, guarding the nation's health. It is awarded to him as the man who has achieved more than any other in securing the public health and preventing disease and providing safety for us, our industries, our homes, our children, and all we hold most dear."

NORTH CAROLINA

Will Establish Medical Library.—The New Hanover County Medical Society has decided to establish a medical library at Wilmington.

Society Elections.—The Fifth District Medical Society, at its annual meeting in Fayetteville, January 9, elected Dr. James Vance McGaugan, Fayetteville, president, and reelected Dr. Arthur B. Croom, Maxton, and Dr. Joseph W. Halford, Chalybeate Springs, secretary and treasurer, respectively. The vice-presidents of the society are the presidents of the component county societies.——Wilson County Medical Association, at its meeting in Wilson, January 4, elected Dr. John S. Harrison, Elm City, president; Dr. Wade H. Anderson, vice-president, and Dr. Henry B. West, Wilson, secretary and treasurer.

Personal.—Dr. Joseph R. Shull, Shelby, has removed to Henrietta.——Dr. Robert L. Gibbon has been appointed a member of the visiting surgical staff of the Charlotte Sanitarium.——Dr. Marvin Wells, Mebane, has removed to Cliffside and has purchased the practice of Dr. Baxter M. Haynes, who has removed to Spartanburg, S. C.——Dr. Harlan Shoemaker has resigned as surgeon to the Shelby Hospital and has located in Jersey City, N. J.——Dr. John Berry of Orange County has been appointed deputy director of the South Mountain Sanatorium for Tuberculosis, Mount Alto, Penn.——Dr. William D. Crocker, Lucama, was shot and seriously wounded during a quarrel recently.

OHIO

Medical Corps Enlarged.—Under an order of recent issue, the strength of the medical corps of the Ohio National Guard will be increased about sixty, making the full strength of the medical corps and hospital corps 335 officers and men. This conforms to the standard of the United States Army.

State Board Election.—The State Medical Board reorganized at Columbus, January 10, electing Dr. James A. Duncan, Toledo, president; Dr. T. Addison McCann, Dayton, vice-president, and reelecting Dr. George H. Matson, Columbus, secretary, and Dr. Sylvester M. Sherman, Columbus, treasurer.

Medical Library Established.—The Hamilton Medical Library Association has been organized by physicians of the city; subscriptions have been made to fifteen medical periodicals, and Dr. Edward S. Stevens, Lebanon, has presented the library with the medical library of his father. The following officers have been elected: president, Dr. Albert C. Carney; vice-president, Dr. Corliss R. Keller, and secretary-treasurer, Dr. Louis H. Frechtling.

The Afflicted.—Dr. Dempsey L. Travis, police surgeon of Cleveland, is ill with pneumonia at Lakeside Hospital.——Dr. Elliott D. Moore, New Philadelphia, sustained painful scalp wounds in a runaway accident, January 14.——Dr. Jacob F. Marchand, Canton, was painfully injured in a collision between his carriage and an automobile, January 1.——Dr. William E. Wheatley, Lorain, who has been seriously ill with pneumonia, is convalescent.

Green Crosses for Physicians.—At a recent meeting of the Mahoney County Medical Association, the green cross was adopted as the mark for automobiles and other vehicles used by physicians. A committee was also appointed to call for the enactment of a tenement house law with a view to the betterment of sanitary conditions in tenements in Youngstown. The committee is composed of Drs. Howard B. Hills, John J. Thomas, Harmon E. Blott, John H. Bloom and John S. Zimmerman, all of Youngstown.

More Money for Medical Education.—It is announced that Western Reserve University has raised the sum of $750,000 which was the condition fixed by John D. Rockefeller for his offer of an additional $250,000. The total of $1,000,000 raised in this manner is for additional endowment for the Medical School. Besides the gift from Mr. Rockefeller, $250,000, as previously announced, was given by Mr. H. M. Hanna; there were two other gifts of $100,000, one of $50,000, three of $30,000; two of $25,000 and several gifts ranging from $5,000 to $1,000. With the additional income from this donation it is planned to further devolop the medical school and particularly along the line of clinical teaching.

Medical Teachers Hold Meeting.—The annual meeting of the Ohio State Medical Teachers' Association was held in Columbus, December 26. The chief discussions were on "Autopsies as an Aid in Teaching Special Pathology"; "The Value of Didactic Teaching"; "The Relation of Physiology to Clinical Medicine"; "Some Principles of Organization to Secure Practical Results in Anatomic Teaching"; "Sectarians in Public

Hospitals," and "The Relation of Medical Colleges Toward Each Other, and Medical Education in General." Dr. John K. Scudder, Cincinnati, was elected president; Dr. Lester E. Seaman, Cleveland, vice-president; Dr. Verne A. Dodd, Columbus, secretary; Dr. Charles McGavran, Columbus, treasurer, and Drs. H. Kennon Dunham, Cincinnati; William E. Mosely, Toledo, and John J. F. C. Waite, Cleveland, executive committee.

New Officers.—At the annual meeting of the Eighth District Medical Society held in Cambridge, Dr. Stephen A. Cunningham, Marietta, was elected president and Dr. John R. McDowell, Zanesville, secretary.——At the annual meeting and banquet of the Dayton Academy of Medicine held January 12, Dr. Ralph A. Bunn was elected president; Dr. Claude N. Chrisman, vice-president; Dr. Burch C. West, treasurer, and Dr. J. Grant Marthens, secretary (reelected).——Hempstead Medical Society met January 8 and elected Dr. Charles W. Wendelken, president; Dr. William W. Smith, vice-president; Dr. Samuel P. Fetter, secretary, and Dr. Sample B. McKerrihan, all of Portsmouth, treasurer.——At the annual meeting of the Columbus Academy of Medicine, Dr. Yeatman Wardlow was elected president; Dr. Albert Cooper, vice-president, and Dr. Verne A. Dodd, secretary-treasurer.

Personal.—Dr. and Mrs. Orlando T. Maynard, Elyria, start for the Mediterranean, February 1.——Dr. Ermine H. Smallwood, Westerville, has been appointed physician at the Ohio State Sanatorium for Tuberculosis.——Dr. Webster Smith has been reelected chief and Dr. Alonzo H. Dunham secretary of the regular medical staff of the Miami Valley Hospital, Dayton.——Dr. Albert W. Binckley, Columbus, has been appointed chief medical examiner of the State Liability Board of Award.——Dr. and Mrs. William B. Van Note, Lima, have gone to Florida for the winter.——Drs. Perley H. Kilbourne, Arthur O. Peters, William B. Bryant, Charles C. McLean, Clement D. Smith, David B. Bussdicker and Lloyd H. Cox, all of Dayton, have been appointed auxiliaries to the medical committee of the Dayton Tuberculosis Society.——Dr. John W. Clemmer, health officer of Columbus, has resigned.——Dr. Clarence D. Kurtz has been appointed local surgeon of the Baltimore and Ohio Railroad at New Philadelphia, vice Dr. Byron C. Hendershott, deceased.

PENNSYLVANIA

A New Year's Greeting.—The New Year greeting sent out by Dr. Samuel G. Dixon is so good that we here reproduce it: "The varied industries on which we depend for our comforts, the wealth which enables us to enjoy them and the arts of civilization which adorn and diversify our lives, are but the fruitage of the tree whose root is health. This blessing I wish you."

Personal.—At the annual meeting of the Lehigh County Medical Society, January 9, loving-cups were presented to the four oldest members of the society: Drs. Aaron S. Miller, Saegersville; Frederick C. Seiberling, Allentown; Henry H. Riegel, Catasauqua, and William B. Erdman, Macungie.——Dr. George W. Reese, Mahanoy City, has been appointed superintendent and surgeon in chief of the State Hospital for Injured Miners, Shamokin.——Dr. Pius A. Noll, Dallastown, slipped on an icy pavement in front of his office, January 12, and fractured his right patella.——Dr. George Price, Altoona, was stricken with cerebral hemorrhage, January 3, and is still critically ill.——Dr. Mary A. McCay, Sunbury, fell on an icy sidewalk, January 9, and fractured the right femur at or near the trochanter.

Philadelphia

Beriberi Found.—Four sailors, members of the crew of the British steamer *Karema*, which arrived in Philadelphia from Calcutta, January 11, were found to be suffering from beriberi and were taken to the State Quarantine Hospital, Marcus Hook.

Personal.—Dr. Walter S. Cornell has been appointed chief of the staff of school medical inspectors.——Dr. Conrad S. Reynolds has been elected president of the Kennett Square Board of Health.——Dr. James M. Tyson was the guest of honor at the annual dinner of the York County Medical Society on January 11.——Dr. Anna E. Kramer was painfully but not seriously injured in an automobile accident on January 13.

Philadelphia Hospital Changes.—In order to secure more competent attendants for the care of the insane at the Philadelphia General Hospital, it is planned to shorten the hours of duty, which at present are from 6 a. m. to 7 p. m. and from 7 p. m. to 6 a. m. It is planned also to make the institution a training school for nurses, so that the attendants may qualify for more advanced work or for general nursing. The women attendants start with $20 a month and board, and reach, by service, a maximum of $50 a month and board. The salaries of the men attendants range from $30 to $50 a month and board on a similarly advancing scale.

Typhoid Decreasing.—While pneumonia caused nearly 100 deaths in this city during the week which ended on January 20, the new cases of typhoid fever recorded dropped from 103 the previous week to forty-eight this week. The number of deaths reported from typhoid fever during the present week was twelve.

Annual Elections in Societies.—The Polyclinic Ophthalmic Society has made a change of secretaries, Dr. D. Forest Harbridge succeeding Dr. Joseph C. McCool.——The Northeast Branch of the Philadelphia County Medical Society has elected Dr. Paul S. Bremer, president; Dr. Henry Beates, Jr., vice-president; Dr. Lee Boyd, secretary; Dr. Howard L. Geisler, corresponding secretary, and Dr. John W. Millick, treasurer.——The Physicians' Motor Club has elected Dr. S. Leon Gans, president; Drs. L. Webster Fox, John J. Robrecht and Charles A. E. Codman, vice-presidents; Dr. J. Gurney Taylor, secretary, and Dr. Lewis W. Adler, treasurer.——The Pathological Society of Philadelphia has elected the following officers: president, Dr. Allen J. Smith; vice-president, Dr. Richard M. Pearce; secretary, Dr. Oliver H. P. Pepper, and treasurer Dr. Courtland Y. White.——The Philadelphia Pediatric Society has elected the following officers: president, Dr. Theodore LeBoutillier; vice-presidents, Drs. Arthur Newlin, William N. Bradley and John F. Sinclair; treasurer, Dr. Frederick Fraley, and secretary and recorder, Dr. Maurice Ostheimer.

Health Bureau Blamed for Typhoid.—On November 28, a water main at the Roxborough reservoir burst and raw water was turned into the city main, supplying four wards for ten days, and this caused more typhoid fever in those wards than has been recorded for the entire year from the same district. From December 16 to January 13, there were reported 291 new cases of typhoid from the Twenty-First, Twenty-Second, Thirty-Eighth and Forty-Second wards, compared with 186 cases in the same wards in the entire year of 1910. There were fourteen deaths from typhoid fever in this district in that period compared with twenty-four deaths in 1910. The Bureau of Municipal Research has addressed a communication to Mayor Blankenburg charging the Bureau of Health with either gross neglect or defective method in giving proper notice to this large section of the city of the intention to pump raw water into the mains. Morris L. Cooke, the new director of public works, has taken steps to prevent a repetition of the condition which resulted from the failure of the Bureau of Health and the Bureau of Water to give proper warning to the residents of the wards affected to protect themselves against typhoid by boiling all water used for drinking or kitchen purposes. An arrangement has been made whereby the police will notify every householder either verbally or by printed notice to boil water whenever in the future it may be necessary to substitute raw water in the mains.

SOUTH DAKOTA

Personal.—Dr. Ida Stevenson, Canton, who has been a missionary in China for ten years, is reported to be ill in New York City.——Dr. Vernon Roberts, assistant surgeon at Battle Mountain Sanitarium, Hot Springs, has been appointed first assistant surgeon at the National Soldiers' Home, Dayton, O.——Dr. Rollin E. Woodworth, Sioux Falls, has been appointed superintendent of the State Tuberculosis Sanatorium, Custer.——Drs. Robert L. and Robert B. C. Murdy, Aberdeen, have been appointed district surgeon and assistant district surgeon, respectively, of the Chicago, Milwaukee and St. Paul Railway.——Drs. David L. Rundlett, Eivind Klaveness, Joseph G. Parsons, Gilbert G. Cottam and Edwin L. Perkins, all of Sioux Falls, have been selected as a committee on training school for the McKennan Hospital, Sioux Falls.

District Society Meetings.—At the annual meeting of the Mitchell District Medical Society held in Mitchell, the following officers were elected: president, Dr. Elwin F. Reamer, Mitchell; vice-president, Dr. Frederick W. Freyberg, Mitchell; secretary, Dr. Clyde S. Bobb, Mitchell, and treasurer, Dr. Floyd S. Kidd, Woonsocket.——At the annual meeting of the Watertown District Medical Society held in Watertown, Dr. Harry M. Freeburg, Watertown, was elected president; Dr. James B. Vaughn, Castlewood, vice-president, and Dr. Stanley B. Dickinson, Watertown, secretary and treasurer.——Black Hills Medical Society, at its annual meeting held in Deadwood, elected Dr. Robert J. Jackson, Rapid City, president; Dr. Frank E. Clough, Lead, vice-president; Dr. Felix E. Ashcroft, Deadwood, secretary, and Dr. James A. Crouch, Lead, treasurer.——Dr. Martin M. Grove, Dell Rapids, has been elected president of the Sioux Falls District Medical Association.

TEXAS

Asks Government Reservation for Sanatorium.—Governor Colquitt has addressed a letter to Senator Culbertson, asking him to support a bill before Congress, which turns over to the state of Texas the use of Fort Clark as a tuberculosis sanatorium.

Building for State Association.—The trustees of the State Medical Association of Texas are considering a plan for the building of a permanent home for the association, to cost about $150,000, on a site yet to be selected. There is available at present in the treasury for this purpose the sum of $10,000.

Medical Societies Reorganized.—On December 18, physicians of the county met in Palestine and reorganized the Anderson County Medical Association, electing Dr. John H. Evans, president; Dr. Rufus M. Dunn, vice-president; Dr. Edward B. Parsons, secretary and treasurer; Dr. John C. Silliman, delegate to the state association and censor, and Dr. Edward L. Rose, alternate, all of Palestine.——Hays County Medical Society was reorganized in a meeting held at San Marcos, January 1. Dr. N. Milton C. Williams was elected president; Dr. Edwin T. Powell, vice-president, and Dr. Louis L. Edwards, secretary-treasurer, all of San Marcos.

Personal.—Dr. Irving L. McGlasson, Waco, has been commissioned first lieutenant, M. C. N. G. Texas.——Dr. Harry E. Hoke has been appointed assistant health officer of Waco. ——Dr. Manton M. Carrick, Dallas, has been appointed division surgeon of the Trinity and Brazos Valley Railroad.——Dr. Daniel H. Bailey, formerly of Denison, now at the North Texas State Hospital, Terrell, is reported to be seriously ill with erysipelas.——A fire at Quinlan destroyed the office of Dr. Elijah C. Bills, with a loss estimated at $600.——Dr. Garth Riddler, assistant health officer of Dallas, who was injured in a collision between a street car and an automobile at Oakcliffe, December 10, is reported to be critically ill in St. Paul's Sanitarium.

District Society Meetings.—The semiannual meeting of the Central Texas District Medical Society was held in Waco, January 9 and 10, and Dr. Edwin Graves, Gatesville, was elected president, and Dr. H. Frank Connallay, Eddy, secretary.——The Seventh District Medical Society held its annual meeting in Austin, December 21, and elected the following officers: president, Dr. Columbus C. Black, Georgetown, and secretary, Dr. Lewis B. Bibb, Austin.——The South Texas District Medical Association held its annual meeting in Houston, December 14, and elected Dr. Oscar L. Norsworthy, Houston, president; Dr. Thomas J. Carter, League City, vice-president, and Dr. Edward F. Cooke, Houston, secretary-treasurer. Beaumont was selected as the next place of meeting.——The North Texas Medical Association held its annual meeting in Fort Worth, December 12-14. Dr. William G. Harris, Plano, was elected president; Dr. David F. Kirkpatrick, Lewisville, vice-president; Dr. Hugh Leslie Moore, Dallas, secretary, and Dr. K. Herberden Beall, Fort Worth, treasurer.

The Meningitis Situation.—It is reported by the health authorities of Dallas that the poliomyelitis situation is distinctly more favorable and that the epidemic is well in hand. Up to January 20, there had been 225 cases reported; of these 202 are said to have been actual cases of meningitis, and of these ninety-nine patients died. Of the patients 128 were white, of whom sixty-eight died, and seventy-four were colored, of whom thirty-three died. There are at present under quarantine in Dallas sixty-four houses, in some of which there are cases of meningitis and from others cases have been removed to the city hospital. Disinfection of the premises and discharge from quarantine has already commenced. The City Hospital, Dallas, was cleared of all other patients and placed in charge of Dr. A. Sophian from the Rockefeller Institute for Medical Research, as a meningitis hospital. He is said to be making from forty to forty-five injections of serum a day and is toiling almost incessantly. In proportion to the population, Waco had a more severe epidemic than Dallas. At Waco, up to the evening of January 9, there had been 105 cases, with forty-two deaths. The procedure practiced by Dr. Sophian is as follows: The patient undergoes the usual cleansing preparation, then while a careful watch is kept of the blood-pressure and pulse, from 15 to 45 cubic centimeters of cerebrospinal fluid is withdrawn, or fluid is withdrawn until the blood-pressure drops from 5 to 10 millimeters, depending on the condition of the patient. Many patients are unconscious at the time the operation is made. Following the removal of the fluid serum is injected in varying quantities, but almost always in smaller amounts than that of the fluid removed. Some cases are of very rapid progress: One girl is reported to have had the first symptoms at 7 in the morning and had died four hours later. The disease is said to have a larger mortality in white people than in negroes. It is a matter of surprise also that the majority of patients are adults. It is said that all the available serum of Rockefeller Institute has been sent to Dallas.——The Louisiana State Board of Health has consulted Dr. Rupert Blue, U. S. P. H. and M.-H. Service, Washington, regarding the desire of Shreveport citizens to continue the quarantine, which was established by that city, January 10, and asking him for statistics relating to quarantine against cerebrospinal meningitis. The surgeon-general wrote in reply: "Quarantine in New York epidemic unsatisfactory on account large number healthy carriers. Recent experience indicates that most practical measures are—provision for early bacteriologic diagnosis, isolation of those actually sick, and free distribution and use of curative serum."——At a called meeting of the Jefferson County Medical Society held in Beaumont, January 13, to discuss the prevalence and prevention of cerebrospinal meningitis, the following resolution was adopted unanimously:

> Whereas, Epidemic cerebrospinal meningitis is a disease that seldom becomes epidemic in semitropical climates; and
>
> Whereas, We have no fear of an outbreak in Jefferson County; and
>
> Whereas, General cleanliness and sanitation are conducive to good health and the prevention of cerebrospinal meningitis, as well as all other diseases; be it
>
> *Resolved*, That the mayors of the different cities in the county, in conjunction with the county judge, set aside one day as "clean-up day," to be observed by all citizens of Jefferson County.

GENERAL

Personal.—Dr. George W. McCoy, U. S. P. H. and M.-H. Service, has been designated as sanitary adviser to the government of Hawaii.——Captain Henry B. McIntyre, M. C., U. S. Army, has resigned.

Spring Meeting of Missouri Valley Society.—The spring meeting of the Medical Society of the Missouri Valley will be held at Colfax, Iowa, March 21-22, with headquarters at Hotel Colfax.

American Hospital Association to Meet.—The fourteenth annual meeting of the American Hospital Association will, it is announced, be held in Detroit, December 24-27. The association is composed of hospital trustees, managers, contributors and officers of associations founded to promote the interests of organized medical charities. Dr. Henry M. Hurd, Baltimore, is president, and Dr. John N. E. Brown, Toronto, secretary of the association.

Bequests.—The following bequests to hospitals have recently been announced:

Children's Hospital, Philadelphia, $2,000, by the late Bishop Alexander Mackay-Smith of the Episcopal diocese of Pennsylvania.

Brooklyn Nursery and Infants' Hospital, $1,000, by the late Mrs. Evelyn Ridgeway.

Jewish Hospital, Brooklyn, $50,000, by the late Abraham Abrahams.

Presbyterian Hospital, New York City, and the New York Eye and Ear Infirmary, each $20,000, by the late Emily H. Moir.

Mount Sinai Hospital, New York City, $5,000, by the late Nathan F. Straus.

St. Vincent's Hospital, New York City, $10,000, by the late Katherine I. D. Harnett.

St. Luke's Hospital and Children's Hospital, Denver, each $5,000, by the late Charles B. Kountze.

Medical Fraternity Meeting.—The twenty-sixth annual convention of the Phi Chi Medical Fraternity was held in Indianapolis, December 28-30. Philadelphia was chosen as the meeting place for 1912, and the following officers were elected: grand presiding senior, Dr. George C. Amerson, Chicago; grand presiding junior, Dr. Carl V. Sputh, Indianapolis; executive trustees, Drs. Charles D. Humes, Indianapolis, and Charles W. Hibbitt, Louisville; national extension committee, Drs. F. L. Luckie, Birmingham, Ala.; James A. Price, Atlanta, Ga., and Robert M. Ellyson, Washington, D. C.; and Western extension committee, Drs. Harry A. Tash, Ann Arbor, Mich., and Ernest Wood, Chicago.

FOREIGN

Death of Albarran.—The cable brings word of the death at Paris of the eminent surgeon, Professor Joaquin Albarran, at the age of 50. In 1906 he succeeded Guyon in the chair of genito-urinary diseases at the Paris Faculté de Médecine. Albarran was a Cuban by birth and his statue was unveiled last year in the small town where he was born. He obtained his medical degree at Madrid, but commenced his professional career as an intern at Paris where he won a gold medal in 1888 for his surgical work, the Oulmont prize in 1889, and other prizes in 1892 and 1904 for his monographs on tumors in the bladder and kidneys. He has invented and perfected several instruments and published numerous articles on subcapsular nephrectomy, asepsis in catheterization, etc.

LONDON LETTER

(From Our Regular Correspondent)

London, Jan. 13, 1912.

The National Insurance Act

The council of the British Medical Association continues to be the subject of sharp criticism for not having done better in its negotiations with the government and above all for consenting to the appointment of the medical secretary of the association as deputy chairman of the insurance commissoners. In my previous letters I have shown that excepting this appointment, it was the representative body of the association which was responsible for the policy pursued and that the council, as the executive of the association, only carried out the policy adopted by the former. In turn, the rank and file of the association were responsible for the policy, which was discussed at the meetings of the divisions of the association. Each division gave a mandate to its representative as to the policy he should support at the meeting of representatives. In reply to this defense of the council, the proceedings of the representative body are criticized and are said to have been dominated too much by "the platform." It is alleged that at an early stage of the proceedings the chairman, Dr. Maclean (who is *ex officio* a member of the council) told the representatives that they were free to vote as they thought fit and were not bound by the terms of the resolutions passed by the divisions which they represented. The verbatim report of the meeting, however, shows that this criticism is not quite fair. What occurred was this. In answer to a question by one of the representatives whether a representative can vote otherwise than he is directed by his division and can be influenced by arguments adduced to support any motion, the chairman asked whether his personal opinion on the point was requested. That being answered in the affirmative, he said, "I do suggest that the representatives are not delegates bound hand and foot and are not prevented from taking into consideration views expressed by representatives from other parts of the country." The excitement which prevails among the members of the association is unprecedented. Meetings are being held all over the country and are being attended by large numbers instead of the usual handful of active members, who are usually left by the majority to determine even most important issues. The great majority of the meetings have declared, with practical unanimity, that unless the six points are granted they will have nothing to do with the act. The council has been requested by many divisions to convene a special representative meeting to consider this emergency. Outside of the association, a new body has been formed in Manchester for the express purpose of resisting the act and is receiving great support. On the other hand, a certain Dr. Knight of Edinburgh, who is not a practitioner, but a medical coach, has sprung into notoriety by founding an association of physicians for the purpose of working the act. All news of this association is given through newspapers which support the government. Dr. Knight announces from time to time that he is making satisfactory progress and has now enough men to work the act in Scotland and the North of England (places where hostility to the act is greatest), as well as in London. But he withholds both the names and number of his adherents. He declines to give the names for fear of a professional boycott, but does not say why he withholds the number. His announcements are therefore regarded as part of that bluff which is inseparable from politics.

It may be recalled that the association formulated six cardinal points which it regarded as essential for the satisfactory working of the act. These were: (1) free choice of doctor; (2) medical benefits to be administered by local insurance committees and not by the friendly societies; (3) adequate medical representation on every authority, central or local; (4) an income limit of $10 a week for those entitled to medical benefits; (5) medical remuneration to be what the profession considers adequate, having proper duties to be performed and other conditions of service; (6) the methods of remuneration adopted by each local insurance committee to be in accordance with the preference of the majority of the profession in that particular district. Of these the first three have been obtained in the act but the second three have not, though it is quite possible for them to be obtained by local arrangement. The profession, while practically unanimous in demanding the six points, is divided into two camps on the question of tactics. One thinks the British Medical Association should have put up a better fight, and when it found that all six points would not be embodied in the act have sent an ultimatum to the Chancellor, Mr. Lloyd-George, declining to work the act. The other is in favor of working the act and endeavoring to obtain the remaining three points by local regulations. This is the official policy of the British Medical Association and has been adopted by its representative body. The association appears to have done everything possible to obtain the six points. That they have not all been inserted in the act is due to the fact that the profession is only a small factor in politics. Thus the demand for an income limit of $10 a week received no support from either of the two great political parties and had to be withdrawn as the few votes it would have received would have been damaging to the cause. The association did one thing, however, which should go a long way in obtaining the three points. It circulated an invitation to the whole profession—inside as well as outside the association—to pledge itself not to work under the act except on such terms as were acceptable to the association. To this pledge over 26,000 signatures have now been received. There are about 32,000 doctors in Great Britain, of whom it is estimated only 24,000 are available for service under the act. It is therefore concluded that the number of promises received is more than enough to make the measure a dead letter as far as medical benefits are concerned.

In the lay press a vigorous campaign against the act as a whole is being carried on and the opposition organs have not been slow to endeavor to exploit the discontent in the medical profession for party purposes. There are indications, too, inside the profession that some of the leaders of the extremist section are influenced by their political hostility to the government. The *Practitioner*, an organ of private ownership and therefore not representative of the opinion of the profession, has circulated a more extreme pledge than that of the British Medical Association—one declining to work the act if 23,000 signatures to that effect can be obtained. In this "privateer campaign" (as the *British Medical Journal* terms it) it has found a powerful ally in the *Daily Mail*, a notoriously "yellow" organ. In ths paper the number of signatures to the pledges first received were announced with a great flourish of trumpets in large headlines. On January 2 they were 15,000 but since that date they have been coming in slowly and the figures are relegated to an obscure corner. It does not seem that the requisite 23,000 signatures will be obtained. Many doctors who have signed the pledge of the British Medical Association resent the intrusion of a private journal into the movement.

The malcontents of the British Medical Association have formed a new organization called "The British Medical Reform Association." An inaugural meeting has been held in London under the presidency of Dr. F. J. Smith, who organized the meeting, reported in a previous letter to The Journal. He said that they were not quarreling with the policy of the association, but that that was an entirely different thing from the policy of the council. The new association recognizes the fact that the British Medical Association is the only organization capable of obtaining the demands of the profession and that it is impossible to repudiate the deliberate acceptance by the profession of some form of state medical insurance in the interests of the community. It desires to form an organization of members of the association to control the voting strength at meetings and place on the local medical committee and insurance committees provided for in the act those who will insist on the six cardinal points. It is intended to demonstrate to the members of the association that this body can under proper conditions secure the demands of the profession. The reform committee "will endeavor to replace those who have been responsible for the recent action of the association in respect to the insurance act by members, who it is believed, will be more in accord with the profession." It also proposes to present to the prime minister a national memorial in which the doctors will declare that if they are to accept service under the act the six points must be embodied in an amending act. In other words if the doctors enter into negotiations with the insurance authorities and accept service any arrangement which may be arrived at must be regarded as only temporary. It is hoped that the committee may work in association with the National Medical Union (another association of doctors discontented with the action of the British Medical Association and formed at Manchester).

The Threepenny (Six-Cent) Doctor

In the slum practices of London and some of the other large cities, the fee for consultation at the office and for medicine is only sixpence (twelve cents). This form of practice is generally condemned by the profession as bad for both patient and physician—for the former because it is impossible at this price to diagnose and treat the case properly; for the latter because it is lowering to the dignity of the profession. Such cheap practice by no means implies a small income. In some cases large incomes, as much as $5.000 are made. This is possible if 120 patients are seen during the day and this figure is often exceeded. The examination, of course, tends to be perfunctory and the treatment, routine. A physician practicing in the slum district of Homerton in the east end, has beaten the record by establishing a fee of threepence (6 cents). He married during the past summer and the event was depicted in the illustrated papers as the wedding of the "threepenny doctor." When interviewed by the reporters he said that his patients were very poor and that threepence was as much to them as the two guineas ($10) paid to the west-end consultants. He thus posed as a philanthropist. Recent events, however, throw some light on this "philanthropy." The doctor has grown rich. He has figured in two inquests on the same day. He was attending a child suffering from bronchopneumonia, which suddenly became worse. He was sent for but refused to go and the child died. An inquest was held, and when censured by the jury the doctor said, "I have no time to go to such cases. I have had 80,000 patients this year; mine is the largest practice on earth." In the second case he also refused to go to a child whom he was attending. He told the messenger that he could not undertake urgent cases. The child died on the same day. The doctor told the jury that he had been up the whole of the previous night and at the time he was summoned there were 300 patients waiting for him. He was then asked why if he had such a tremendous business, he had recently opened another office in another part of London. He said, "I attend to everybody to the best of my ability. If they do not want me they need not come." He was told, "You get your business because you are cheap." He replied, "My work speaks for itself. Why are all the other surgeries empty? My death-rate is a third of that of the London Hospital." A juror said, "It seems to me you take the threepence and then turn the patient adrift when you are most wanted." The jury in returning a verdict of death from natural causes censured the doctor, who then said, "I wish through the medium of the press to tell the world and Homerton that in future I shall absolutely refuse to attend urgent cases that interfere with the routine of my business."

PARIS LETTER

(From Our Regular Correspondent)

Paris, Jan. 5, 1912.

Private Clinics and Members of Religious Orders as Nurses

Some physicians of Périgueux, the capital of Dordogne, in 1910 founded a *maison de santé* with a personnel consisting of lay persons and sisters of the order of Saint Martha, an authorized nursing sisterhood. The government has just required the management to laicize their establishment. If this rule should become general it cannot fail to do great injury to all private clinics, in the greater number of which in our country members of religious sisterhoods are employed as nurses. It is with difficulty that surgeons find competent lay nurses in the large centers, but in the smaller centers this would be impossible. The physicians of Périgueux have appealed to the Association générale des médecins de France, the medical *syndicats,* etc., to defend their menaced professional liberty.

Experimental Production of Measles

Drs. J. F. Anderson and J. Goldberger have shown that measles can be inoculated into two species of lower monkeys, the *Macacus rhesus* and the *Macacus cynomolgus*, and that the virus exists in the patient's blood during the first time of eruption (The Journal, July 8, 1911, p. 113). On December 26, Drs. Charles Nicolle and E. Conseil reported before the Académie des Sciences a conclusive positive experiment which confirms the work of Drs. Anderson and Goldberger, and at the same time establishes the sensitiveness to measles of a third species of monkey, the Chinese bonnet monkey, *Macacus sinicus.* This experiment shows that the measles virus exists in the blood of patients twenty-four hours before the eruption appears. Drs. Nicolle and Conseil inoculated an adult *Macacus sinicus* in the peritoneal cavity with 6 c.c. of the blood of a child aged 9 years, showing prostration, an intense congestion of the eyes, lacrimation, coryza and a temperature of 39.2 C. (102.5 F.) without any trace of eruption. A brother of this child was at this time in the fifteenth day of a typical measles eruption and two other children of the same family showed the same symptoms as the little patient. In all three the eruption appeared twenty-four hours later and the child who was the subject of the experiment died later of bronchopneumonia. The inoculated monkey presented no other symptoms than fever and a very light prostration. The fever began after the ninth day of incubation; it attained its maximum, 40 C. (104 F.), on the second and third day and lasted only six days altogether. There was neither hypothermia nor loss of weight following.

Measles then is contagious before the beginning of the eruption, that is, at a period when it cannot be generally recognized.

Will of Professor Lannelongue

Professor Lannelongue bequeaths to the Association générale des médecins de France an annual income of $100 for unfortunate physicians or their widows; to the Université de Paris the same sum to be employed at the discretion of its council; to the Faculté de médecine de Paris the same amount for the use of needy medical students. To the Oeuvre de préservation et de réhabilitation pour les jeunes filles, which was founded by Mme. Lannelongue, he bequeaths $140,000 (700,000 francs), besides the gifts Professor Lannelongue made to it after the death of his wife. Some time before his death Professor Lannelongue gave to the government material for a museum of art which will be founded in Castera-Verduzan, his birthplace, of which place he was mayor for thirty-six years. With this, Professor Lannelongue gave the sum of $36,000 (180,000 francs) for the installation and maintenance of the museum which will bear his name.

The Use of Unauthorized Serums

In my previous letters I mentioned the prosecution against Dr. Lorot of Paris for injection of an unauthorized serum (The Journal, May 6, 1911, p. 1340, and Oct. 14, 1911, p. 1298). On this subject the Syndicat des médecins de la Seine, in its general assembly, protests on the grounds that the interest of medical science and practice demand that physicians shall not be limited in their research by the law which was made to apply to the sale of pharmaceutical products.

Praise for American Scientific Style

In an article on the value of classical instruction in the preparation of young people for the technical schools, M. Henry Le Chatelier, professor at the Sorbonne and member of the Académie des Sciences, emphasizes the importance of pure and clear style in scientific writings, and compares American and English scientific papers, saying that most of the latter are absolutely unreadable; all the American papers are clear and comprehensible, even monotonously so, as if written by the same pen. "I have more than once," declared M. Le Chatelier, "on receiving an unreadable thesis for the doctor's degree in chemistry, said to its author, 'Open the *Journal of the American Chemical Society*, select one of the papers in this publication and imitate the style of the American chemist in describing your own results.' "

Premiums Offered by Medical Journal

The *Paris Médical*, a weekly journal which has been issued for the last year under the direction of Prof. A. Gilbert, continues the deplorable practice which it introduced into French medical journalism of offering premiums to subscribers. In the list of premiums for 1912 one finds not only objects having some relation with the medical profession but also a case of perfumery, certificates for one or two dollars to apply for room rent at hotels, etc.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Jan. 5, 1912.

Personal

Professor v. Winckel, formerly director of the university gynecologic clinic at Munich, died at that place, January 1, aged 74. Some months ago he suffered an accident in falling from a chair and has been ill ever since. Probably he experienced a cerebral hemorrhage from the fall. He resigned his position four years ago but he still remained one of the foremost representatives of his specialty. His medical education was received as a pupil of the Kaiser Wilhelms Akademie für das militärärztlichen Fortbildungswesen, in the same way as Virchow, Leyden, Behring and others of our most distinguished medical men. In 1861 he became assistant at the Berlin university gynecologic clinic under the elder Martin, and in 1866 he was summoned at the age of 29 to Rostock as professor of gynecology. In 1872 he was given charge of the institute for instruction of midwives, at Dresden, and in 1883, he became professor of gynecology at Munich. His scientific works included the entire field of his specialty, and were numerous and important, including his "Diseases of the Female Sexual Organs in Photographic Reproduction" (*Lichtdruck-Abbildungen*), "Textbook of Gynecology" (*Lehrbuch der Frauenkrankheiten*) and the large "Text-Book of Obstetrics" (*Lehrbuch der Geburtshilfe*), published by him, in which he himself prepared several important chapters. As a teacher he was extraordinarily beloved. His work in organizing the clinic and in scientific societies was also of great importance, and he was a moving spirit in the founding of the Deutsche gynäkologische Gesellschaft.

Professor Uhthoff of Breslau has unexpectedly declined the appointment to succeed Michel here at Berlin, which, as I informed you, he had already accepted. His motive for this action was the labor connected with the rebuilding of the university eye clinic. He thought such a responsibility was more suitable for a younger man. Probably Professor Axenfeld, of Freiburg, who was to have been his successor at Breslau, will be called to Berlin.

The noted zoologist, Professor Weissmann, of Freiburg, will retire at the end of this semester on account of his advanced age.

Poisoning in the Berlin Municipal Lodging House

Immediately after Christmas a number of persons in the municipal shelter of this city were taken with symptoms of acute poisoning. Some of them died in a few hours. On the following days the attacks and fatalities were repeated until by December 30, 161 persons had been taken sick, of whom seventy-one had died. Originally it was supposed that the illness was due to decomposed smoked meat which had led to symptoms of botulismus. Later, however, the conclusion was reached that in most cases there had been an intoxication with wood alcohol which had been sold in the saloons in the neighborhood of the lodging house for ordinary whiskey. Such severe results from methyl alcohol have not been heretofore observed in Germany. In other countries a number of observations have been made, especially those which were published two years ago by Grosz, from the Budapest eye clinic. The examinations of our cases are not yet completed; it must still be determined whether the *Bacillus botulinus* took any part in the etiology, and why the use of methyl alcohol had such serious consequences in these cases. It is worthy of note that since it was assumed that the illness was due to spoiled smoked fish, not only the consumption of smoked meat, but also of raw flesh has markedly fallen off.

Free Diphtheria Serum

The municipal authorities of Rixdorf, a suburb of Berlin, in view of the great amount of sickness from diphtheria have determined to distribute antitoxin free of charge to all inhabitants who have an income of less than $500 (2,000 marks).

Compulsory Military Service for Women

At a meeting of the union of patriotic women's clubs (Verband vaterländischer Frauenvereine) for the governmental district of Düsseldorf, Professor Witzel, formerly director of the Düsseldorf Akademie für praktische Medizin, advocated the legal introduction of compulsory military service for women. His idea is that young women should be trained as assistants in the transportation and commissary departments, as nurses for sick and wounded soldiers and as aids for the food and clothing service. A committee was appointed for the carrying out of the idea. We make no mistake in assuming that this is a utopian scheme so far as the legislative introduction of such a service is concerned.

Specialism

The much treated question of the conditions under which a physician may designate himself as a specialist has again been discussed lately in the district medical society of Dresden (Aerztlicher Bezirksverein). The special topic of debate was how far the specialty of internal medicine and pediatrics can be separated without encroaching on the field of the general practitioner. After long discussion it was decided that the practice of internal medicine or pediatrics can not be classed as a specialty, on account of the essential difference between such a practice and the other specialties hitherto recognized, in the sense of Section 5 of the professional ordinances, and the resolution adopted by the society in April, 1905. In practice, however, it may be proper for a physician to style himself "Physician for Internal Medicine" or for "Diseases of Children" (*Arzt für innere Krankheiten bzw. Kinderkrankheiten*) instead of or in addition to "General Practitioner," omitting the usual "and Surgeon" or "Obstetrician."

It is also proper for any physician who has for six years been employed mainly in internal medicine and pediatrics, either as assistant, or in his own practice, to style himself "Physician for Internal Diseases," or "Pediatrician," or "Physician for Internal and Children's Diseases."

The claim to be a "Specialist in Internal Medicine" or "Specialist in Children's Diseases," is not justified unless the physician has served at least three years as assistant or as chief in the internal department of a large hospital or children's hospital respectively, and has devoted himself exclusively to internal medicine or pediatrics.

The Census for 1910

According to the census of Dec. 1, 1910, the population of the German empire amounted to 64,925,993 persons; 32,040,166 males and 32,885,827 females; an increase of 7.04 per cent. in the last five years. From 1900 to 1905 the increase was 7.58 per cent. In 1910 there were 102.6 females for 100 males; the population per square kilometer in 1910 was 120.04. Berlin has 32,665 inhabitants per sq. km. and Hamburg, Bremen and Lubeck, respectively 2,447.63, 1,168.24 and 301.65.

Preliminary Education for Medical Students

In the Munich Aerztlicher Verein, the local medical society, in one of the last sessions the committee on education proposed the following principles for the preliminary education of pupils who intend to study medicine: 1. First of all we express the wish for the introduction of a systematic and progressive instruction in natural sciences, extending through all classes, which shall be assisted by an abundant practical material for demonstration and exercises and in which the object shall not be the attainment of an extensive theoretical knowledge but the sharpening of the observing powers and the awakening of an inclination for scientific facts. The subject of health should find its place in this instruction in natural science. 2. Next it seems to us that an increase, even if only moderate, of the instruction in modern languages is indicated; this could be begun one or two years earlier or increased by an hour a week. Not only to the future physician, but to all students it would be of advantage, if more emphasis were placed on a greater facility in speech or at least on a better knowledge of conversational language and its peculiarities than on the philologic factors in language. 3. With reference to instruction in mathematics, we can only speak a word for the optional widening of the field of higher mathematics. Within the limits now imposed, we share the extended wish that the extensive learning of formulas be essentially reduced and, in place of this, greater attention be paid in future to the practical application of mathematics and study of conception of functions. 4. We emphasize briefly further the utility of continuing the corresponding instruction in drawing throughout the whole gymnasium or preparatory course. The present way in which drawing is taught is often only a waste of time.

In order to secure the necessary time for these changes as well as for the unconditional demand for physical development of the pupils, without overburdening them, the following points seem to us practical, without entering into the details of school technic: Instruction in the ancient languages needs, according to the judgment of conservative friends of reform in education, considerable limitation and alleviation, either in the extent of grammatical knowledge and memory work or in the methods of instruction and finally in the reading of the classics and their preparation at home. There is a similar wish for a marked reduction in the exercises of memory, especially in the study of history. With the omission of some of the hours hitherto devoted to the ancient languages and of the time at home connected with these studies, there would be, in our opinion, a sufficient saving of time for the new requirements. Moreover, those efforts deserve to be sustained, from the general standpoint of medicine and school hygiene, which aim for reduction of home work as well as for a reduction of the above-mentioned school tasks which are now accumulating to an injurious extent. Another point emphasized is that pupils should be graded according to their work as a whole, and not by their written exercises and examinations in the so-called principal studies.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Jan. 2, 1912.

Cholera in Austria and Hungary

For some time cholera was, for various reasons, not mentioned in the official reports of the Austrian and Hungarian boards of health. In Austria there was no cholera during the summer; in the other half of the empire sporadic cases appeared, but they were not officially reported. Now there have appeared in the Austrian coast district two cases after a relatively long absence of this disease. The cases were at once dealt with; their origin was traced to Italian coast boats and the small outbreak was speedily suppressed. At the same time, an official announcement from the Hungarian government states that, at last, Hungary is free from cholera. In both parts of the empire the sanitary arrangements were of such a nature that the population could rest assured that a spread of the disease was not to be expected. The mortality was nearly 50 per cent. and those who were attacked were mostly persons whose habits were not hygienic.

Goiter and Goiter-Producing Water in Austria

For several years increasing attention has been paid by the medical profession in this country to the occurrence of goiter. It has been noted that districts formerly free from it now show numerous instances of hyperthyroidism. In Vienna the number of cases of enlarged thyroid glands has more than trebled during the last twenty-five years. It was thought that the water-supply of the capital, coming from the mountains of the Styrian Alps, was responsible for the fact. Also the military authorities were interested in the problem, for numerous recruits had to be rejected from compulsory military service on account of goiters. Especially in the southern provinces of Austria extensive studies by military surgeons led them to believe that goiter was caused by contagion. The various degrees of iodism, cretinism, myxedema, and Graves' disease could be well explained by this hypothesis. In Tyrol the head of the department of health also investigated the question. In his opinion, which he illustrated recently in a lecture before the Gesellschaft der Aerzte at Vienna, he also adheres to a hypothesis of contagion. But, opposed to these suggestions, the adherents of the drinking-water theory have always claimed that there must be an agent in the water which caused the pathologic changes in the thyroid gland. Researches by Professor von Wagner, in the Carinthian Alps, have resulted in the discovery of a well, the water of which caused goiters in rats and other animals. Quite recently another well was discovered not far from Vienna, the water of which caused the appearance of goiters, not only in household animals, but also in the people who drank it regularly. In the clinic of Professor von Eiselsberg experiments were made and it was found that if the water was boiled, its goiter-producing quality was destroyed. It also became known that, in certain parts of the Tyrolean and Italian Alps, recruits wishing to escape military service drink from certain springs and thus produce enlargement of the thyroid. Afterward, if the aim is attained, they drink ordinary water, after which the enlargement disappears. Experiments conducted by Dr. Graf, not yet published, show that the causative agent is an albuminoid body which can be destroyed also by other means than by boiling the water. The question is an important one, for there are about 17,000 persons in Austria suffering from exaggerated forms of thyroid disease—idiocy, cretinism and myxedema—and there are certain districts where the entire population has been destroyed or driven away by the prevalence of these conditions. Goiter is distributed chiefly in mountainous districts but is frequent also in the lowlands. A special committee of the Vienna medical society has now taken the investigation into its hands.

Christmas Celebration by the American Colony in Vienna

Owing to the number of American citizens in this city—including statesmen, medical men, business people, students and "pleasure travelers"—the American ambassador and an eminent member of the Viennese American colony invited their countrymen to a friendly Christmas evening. At both these places numerous members of the American Medical Association of Vienna were present, and home songs and real American dinner pleasures made the guests feel at home. As a rule the feeling of national connection is very strong among the Americans here and numerous Americans have been observed pursuing winter sports in the outskirts of the capital this winter. The only drawback to the Austrian customs at this time is the fact that from Christmas to January 6 no less than seven holidays are observed here, meaning a loss of 50 per cent. of two weeks' clinical and scientific work.

Marriages

WILLARD ORVILLE DAISEY, M.D., Omar, Del., to Miss Elsie Mae Collins of Frankford, Del., December 21.

S. CLARENCE BRUMBAUGH, M.D., Bryn Mawr, Pa., to Miss Ida Iola Rheam at Philadelphia, January 7.

GEORGE J. GOODSHELLER, M.D., Marion, Kan., to Miss Gertrude Pope of Elkhart, Ind., January 16.

MAJOR ARTHUR W. MORSE, M.C., U. S. A., to Miss Charlotte Barnier of Manila, P. I., November 29.

PAUL E. LINEBACK, M.D., to Miss Bessie Ingham, both of Des Moines, Ia., December 31.

JOHN MOCKLER CONROY, M.D., to Miss Agnes Jane O'Connor, both of Chicago, January 15.

FRANTZ H. HARMS, M.D., Chicago, to Mrs. Elsie Junk Reed, at Waterloo, Ia., January 9.

DANIEL J. DAVIS, M.D., to Miss Bessie D. Evans, both of Cincinnati, January 10.

O. RAYMOND MINOR, M.D., to Miss Goldie Purdom, both of Louisville, January 8.

Deaths

Johann Flintermann, M.D., one of the most prominent German physicians of Michigan; died January 15, after an operation for hernia, aged 71. Dr. Flintermann, after his graduation in medicine at the University of Göttingen in 1864, passed the state examination at Hannover in 1865 and then spent two years in postgraduate work at the University of Berlin. He came to Detroit in 1867 and at once became prominent in the medical activities in the city. He was one of the organizers and an early member of the Detroit Board of Health, was once president of the Detroit Medical Library Association, and vice-president of the Detroit Academy of Medicine, and was at the time of this death, president of the Detroit Society of Neurology and Psychiatry. He was for many years a member of the American Medical Association and of the Michigan State Medical Society, and of late an honorary member of the latter organization and a member of its executive board and of the medico-legal committee. He was taken ill January 8, with acute intestinal obstruction due to hernia of long standing and was taken to Harper Hospital, where operation was performed the next day, but on account of his age he failed to rally, and died six days later.

James McKee, M.D. Bellevue Hospital Medical College, 1869; a member of the American Medical Association; one of the most prominent practitioners of North Carolina; for six years secretary of the Medical Society of the State of North Carolina, and a trustee of Rex Hospital, Raleigh; dean emeritus of Shaw University; superintendent of the Central State Hospital for the Insane for twelve years; a Confederate veteran; died at his home, January 9, from angina pectoris, aged 68.

Frank E. Bundy, M.D. Harvard Medical School, 1862; formerly a member of the American Medical Association; contract surgeon in the Army during the Civil War; for two years a member of the Boston School Board; for more than forty years a member of the staff of St. Elizabeth's Hospital and for many years its president; died at his home in Boston, January 6, four days after a surgical operation, aged 73.

Ralph Edward Starkweather, M.D. College of Physicians and Surgeons, New York City, 1869; a member of the American Medical Association and for several years assistant secretary of the State Board of Health; died at his home in Evanston, Ill., January 22, from the effects of injuries sustained in a fall on an icy sidewalk in front of his residence four days before, aged 69.

Amos Burr Straight, M.D. College of Physicians and Surgeons, Baltimore, Md., 1891; a member of the Medical Society of the State of New York, and one of the best-known practitioners of Western New York; formerly a clergyman of the Methodist Episcopal Church; died suddenly at his home in Hornell, January 9, from heart disease, aged 45.

Traugott Friedrich Moritz Roediger, M.D. University of Jena, Germany, 1859; Bellevue Hospital Medical College, 1875; for fifty years a practitioner of New York City; a member of the Medical Society of the State of New York, and one of the founders of the German Hospital; died at his home, January 12, from senile debility, aged 78.

Edward S. Wood, M.D. McGill University, Montreal, 1883; a member of the American Medical Association; a specialist of the diseases of the eye and ear, of St. Paul, and oculist to St. Joseph's Hospital; secretary of the first State Board of Medical Examiners of Minnesota; died in his apartments in St. Paul, January 9, aged 50.

Lauren Fletcher Ellsworth, for more than sixty-five years a practitioner of Ohio and Iowa; a member of the Iowa legislature in 1872 and 1873; local preacher of the Methodist Episcopal church for many years; died at his home in Monroe township, Mahaska County, Ia., November 16, from senile debility, aged 88.

Ezra Puckett, M.D. Vanderbilt University, Nashville, Tenn., 1893; a member of the American Medical Association; formerly a practitioner of Henrietta, Tex., but for a year a resident of Wichita Falls, Tex.; died in St. Joseph's Infirmary, Fort Worth, Tex., January 10, from disease of the kidney, aged 42.

John William Crawford, M.D. Harvard Medical School, 1867; formerly a member of the Massachusetts Medical Society; from 1864 to 1886 a member of the board of health of Lawrence, Mass., and in 1890 mayor of that city; died at his home, January 6, from nervous breakdown, aged 65.

John W. Brown, M.D. New York Homeopathic Medical College, New York City, 1868; for twenty-five years a practitioner of Augusta, Kan., and later a resident of Los Angeles; died in the California Hospital in that city, January 9, after an operation for appendicitis, aged 72.

Thomas J. Kisner, M.D. Indiana Eclectic Medical College, Indianapolis, 1888; died at his home in San Francisco, January 10, from the effects of cyanid of potassium, believed to have been self-administered with suicidal intent, while despondent, aged 80.

Harry Straub Sherrer, M.D. University of Pennsylvania, Philadelphia, 1899; formerly a member of the American Medical Association and the American Academy of Medicine; died suddenly at his home in Bangor, Pa., January 10, from heart disease, aged 36.

George Crawford Daniel, M.D. Medical College of Virginia, Richmond, 1864; ordinary of Madison County, Ga., for more than twenty years; senator from the eleventh district in 1898; died at his home in Danielsville, November 12, from diabetes, aged 72.

Edwin Baker Moore, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1878; New York University, New York City, 1881; a practitioner of Harlan, Ia., since 1878; died in that city, January 4, from pneumonia, aged 61.

Henry Clay McGee, M.D. University of Nashville (Tenn.), 1907; of Hollister, Okla.; was found dead recently in a hotel in Frederick, Okla., from the effects of poison believed to have been self-administered with suicidal intent.

Whitman E. Clark, M.D. Hahnemann Medical College, Chicago, 1873; local surgeon of the Lake Shore and Michigan Southern Railway at Three Rivers, Mich., died at his home, January 2, from cerebral hemorrhage, aged 60.

Joseph R. Pollock, M.D. Hahnemann Medical College, Philadelphia, 1871; formerly a member of the homeopathic board of medical examiners of Texas; died at his home in Fort Worth, January 3, from heart disease, aged 62.

William H. Archibald, M.D. Baltimore (Md.) Medical College, 1895; for ten years resident physician at the New York City Hospital; died suddenly at his home in Jeffersonville, N. Y., January 2, from heart disease, aged 45.

Valentine Gardner, M.D. University of Cologne, Germany, 1848; for more than sixty years a practitioner of Mount Clemens, Mich.; died at the home of his daughter in that place, December 30, from senile debility, aged 90.

James A. Hopkins, M.D. Jefferson Medical College, 1858; a member of the Delaware State Medical Society, and at one time state senator, and school and town commissioner; died at his home in Milton, January 10, aged 78.

William T. Larimer, M.D. Jefferson Medical College, 1879; for many years a practitioner and school director of Allegheny, Pa.; for three years a resident of Altoona; died in Pittsburgh, January 2, from heart disease, aged 60.

Thomas J. Kilmer, M.D. Eclectic Medical College of the City of New York, 1875; founder of a sanatorium and dispensary in Schoharie, N. Y.; died at his home in that city, December 26, from heart disease, aged 78.

Charles Warren Taylor, M.D. Harvard Medical School, 1884; a member of the Massachusetts Medical Society; formerly a member of the board of health of Lowell; died at his home in that city, January 5, aged 52.

Franklin P. Hill, M.D. Jefferson Medical College, 1876; a member of the Medical Society of the State of Pennsylvania; died at his home in Berwick, January 1, from cerebral hemorrhage, aged 58.

F. J. Yager (licensed, years of practice, Kentucky, 1893); for sixty-three years a practitioner of that state; died at his home in Campbellsburg, January 10, from senile debility, aged 93.

Wilson Peter Kistler, M.D. Bellevue Hospital Medical College, 1867; a veteran of the Civil War; a dermatologist of Allentown, Pa.; died at his home, January 8, from pneumonia, aged 68.

James Gordon Jackson, M.D. University of Michigan, Ann Arbor, 1888; of Muskegon, Mich.; died at his summer home, "Westmeath," North Muskegon, Mich., January 10, from heart disease.

Hubert Huber, M.D. University of Heidelberg, Germany, 185—; for nearly sixty years a practitioner of Ohio; died at his home in Ottawa, December 1, from senile debility, aged 83.

Herbert Josiah Santee, M.D. Medico-Chirurgical College of Philadelphia, 1908; intern at the Palmerton (Pa.) Hospital; died January 5, in that institution, from typhoid fever, aged 28.

Brown Fred Swift, M.D. Rush Medical College, 1895; formerly a member of the American Medical Association; died at his home in Chicago, January 19, from pneumonia, aged 42.

Thomas Marion Deitrick, M.D. Medical College of Virginia, Richmond, 1866; a Confederate veteran; died at his home, "Ellerslie" near Lorraine, Va., January 3, aged 71.

James B. Bertolette, M.D. Cleveland (O.) College of Physicians and Surgeons, 1868; died at his home in Leetonia, O., December 30, from cerebral hemorrhage, aged 72.

J. Scott Ward, M.D. Louisville (Ky.) Medical College, 1889; a member of the American Medical Association; died at his home in Clovis, N. Mex.; December 20, aged 46.

Joseph W. Edwards, M.D. Rush Medical College, 1854; a veteran of the Civil War; was found dead in his office in Toulon, Ill., January 13, from heart disease.

Luther Wesley Miller, M.D. Washington University Medical School, St. Louis, 1876; died at his home in Creston, Ia., December 31, from heart disease, aged 62.

William Heavenridge, M.D. Central Medical College, St. Joseph, Mo., 1898; formerly of Hannibal, Mo.; died at his home in Canon City, Colo., December 27.

Virginia Frances Bryant, M.D. Boston University School of Medicine, 1884; died at her home at Nahant, Mass., January 4, from malignant disease, aged 54.

James McEntee, M.D. Detroit Medical College, 1885; a member of the Michigan State Medical Society; died at his home in Mount Pleasant, January 10.

Amos Camp Hall, Jr., M.D. Hahnemann Medical College, Chicago, 1889; died at his home in that city, January 14, from pneumonia, aged 51.

J. L. Cooke, M.D. University of Southern California, Los Angeles, 1905; died at his home in Banning, Cal., December 10, aged 35.

S. W. Murtishaw (license, Ark. 1903); for thirty-one years a practitioner of Jacksonville; died at his home, January 1, aged 69.

Richard Philip Alleyn, M.D. Laval University, Quebec, 1874; died at his home in East Angus, Que., January 5, aged 57.

John W. Quillian, M.D. Atlanta (Ga.) Medical College, 1873; died at his home in Gainesville, Ga., January 5, aged 65.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

PHENALGIN

An Ethical (?) Proprietary Exploited Under Fraudulent and Lying Claims

"Phenalgin is a synthetic coal-tar product"—thus ran the advertisements some years ago, when the medical profession was willing to take—or was compelled to take—the word of the manufacturer of proprietary remedies at its face value. Then the Council on Pharmacy and Chemistry was brought into existence. One of the first pieces of work done by the Council was the publication of the results of a number of analyses of headache powders. Phenalgin was among them. Analysis showed that Phenalgin was not a synthetic but a simple mixture of the following ingredients in the proportions given:

Acetanilid	57 parts
Sodium bicarbonate	29 parts
Ammonium carbonate	10 parts

The Etna Chemical Company, which puts out this product, was considerably disturbed by the Council's exposure. It "came back" at the American Medical Association with the slogan "Phenalgin is just what we have always said it to be." What, up to that time, the Etna Chemical Company had "always said" Phenalgin to be, was:

1.—Phenalgin is a synthetic.

2.—Phenalgin is the only preparation of the kind.

3.—Phenalgin is non-toxic.

"PHENALGIN IS JUST WHAT WE HAVE ALWAYS SAID IT TO BE."
—*Etna Chemical Co. in 1905.*

"Phenalgin is a synthetic coal-tar product."
—*Etna Chem. Co. in 1898.*

"Unlike the coal-tar synthetic, phenalgin is a stimulant rather than a depressant."
—*Etna Chem. Co. in 1910.*

TEMPUS OMNIA REVELAT!

These, in brief, were the three things that Phenalgin had been asserted to be. Each statement has been proved to be a definite and unequivocal falsehood. Phenalgin is not and never was a "synthetic." Phenalgin is not and never was the only acetanilid mixture containing carbonate of ammonia. Phenalgin is not and never was in any sense of the word non-toxic. Phenalgin, in short, possesses the properties—both good and bad—that are common to acetanilid. It is a mixture that the merest tyro in pharmacy could dispense and for which any sophomore medical student could write a prescription without stopping to think. Acetanilid sells at 8 cents an ounce wholesale; Phenalgin at $1.00 an ounce, wholesale.

All these facts and many more were given to the profession by the Council on Pharmacy and Chemistry in The Journal more than six years ago—before even the Food and Drugs Act came into effect. After that law became operative, the Etna Chemical Company was compelled to say something on the label that it had never said before, namely, that Phenalgin contained 50 per cent. acetanilid. But the law not only required them to add a fact to their label, but it also compelled them to remove a falsehood. When the pure food law went into effect, Phenalgin was labeled a "malaria germicide." It is not a malaria germicide and never was a malaria germicide, and the Etna Chemical Company dared not risk taking the question into court so it removed the statement.

Unfortunately, the Food and Drugs Act exercises no control over the lying statements that may be made for drugs elsewhere than on the label. So it is that physicians within the last two or three weeks have received a booklet on Phenalgin containing the following assertions for this acetanilid mixture:

> "Without the slightest harm, injury or depressing effect."
> "Is never followed by depression."
> "Its prolonged administration does not give rise to destructive blood metamorphosis."
> "Is of great value in the treatment of neuralgia (especially in the anemic)."
> "Freedom from the deleterious action or habit-forming tendencies of the opiates."
> "It aids in destroying the malarial parasite."
> "Safest and most dependable of analgesics."

It will be seen by this that while the Food and Drugs Act has forced a certain degree of truthfulness on the Phenalgin labels, the advertising matter is as fraudulent and as untruthful as ever it was. It is true that the assertion that it is a synthetic is no longer made, possibly because the medical profession has been so thoroughly enlightened on the much-overworked "synthetic" fraud that the falsehood is no longer profitable. In other respects, the assertions are just as false as ever. It is said to have no depressing effect—and yet it is acetanilid. It is said to produce no habit—and yet it is acetanilid. It is said to have no injurious effect on the blood—and yet it is acetanilid. It is said to be the safest analgesic—and yet it is acetanilid. How long will the medical profession continue to be hoodwinked by means of such transparent falsehoods?

The Phenalgin concern takes much credit to itself because on the cartons in which the bottles of Phenalgin come, it is stated that the product is "for dispensing purposes only." Yet, as a matter of fact, practically any layman can go to any drugstore and obtain this product, for the druggist appraises this spectacular piece of Pecksniffian virtue at its face value—a joke. Why, if intended only for physicians, would it be necessary to include with every bottle a circular naming the diseases for which this acetanilid mixture is supposed to be good—"headache," "colds," "lumbago," "scanty menstruation," "pain in any part of the body"—and why is the name of the product and of the firm making it, blown into the bottle?

To sum up then, Phenalgin is as big a humbug as Peruna ever was. It is sold to-day under claims that are just as false as those used six years ago. The Etna Chemical Company is perpetrating a stupendous fraud on the medical profession to-day and it is doing it not only through the agency of the United States mail, but with the aid and support of the following medical journals—and others—in which the Phenalgin advertisement appears:

Medical Record
New York Medical Journal
Pediatrics
Lancet-Clinic
American Journal of Surgery
International Journal of Surgery
American Medicine
American Journal of Obstetrics
Medical Century
Pacific Medical Journal
Dietetic and Hygienic Gazette
Medical Standard
Eclectic Medical Journal
Am. Jour. of Clinical Medicine

It is conceivable that in some cases it is not easy for those editors and publishers of medical journals who insist on relying on their own judgment, to satisfy themselves that certain preparations are not worthy of being advertised. No such difficulty occurs in the case of Phenalgin. Here the issues are clear cut. The product is exploited under claims that are both false and vicious and their falsity and viciousness are perfectly evident to any freshman medical student. The only charitable explanation of the appearance of the Phenalgin advertisements in the medical journals listed is that the editors and publishers have not given the subject the attention it deserves and to which their readers are entitled. Perhaps it would help if their attention were called to the matter by their subscribers.

MR. BLIGHT EXPLAINS

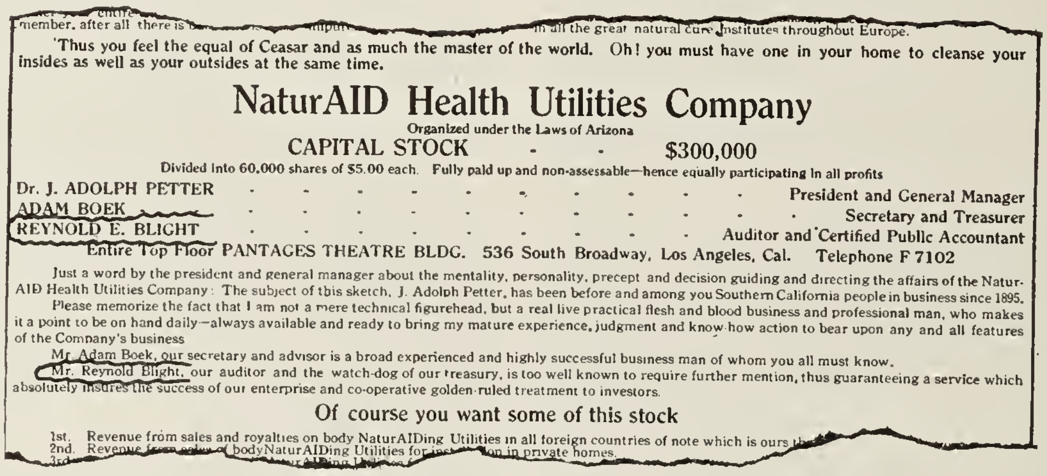
The Relation of an Officer of the League for Medical Freedom to the NaturAID Fake

Information regarding certain officers of the National League for Medical Freedom was published in The Journal, Dec. 23, 1911. One of the individuals there referred to was Mr. Reynold E. Blight of Los Angeles, about whom we made the following statement:

> Blight's name appears in connection with the "NaturAID Health Utilities Company," which does a mail-order business in curing "rupture, fallen womb, all deformities, malformation, floating kidney, large abdomen, constipation, all stomach troubles and all male and female weaknesses." Blight's name is also used by this concern in its attempts to sell its stock to the public.

Some days later, a telegram was received from Mr. Blight denying that he had ever been connected with the NaturAID Health Utilities Company and asserting he knew "nothing of the affairs of this concern", was "not interested in any way in its business" and that The Journal article was the first intimation he had had that his name was being used by the company. Later, a letter came from Mr. Blight elaborating the statements contained in his telegram. With the letter was a copy of a letter purporting to come from the NaturAID concern. The latter acknowledged the misuse of Mr. Blight's name and stated that all of its "literature" carrying the name had been destroyed.

So much for the explanation. Our statements regarding the connection of the Chairman of the Southern California branch of the National League for Medical Freedom with this quack institution were based on circulars that were sent broadcast by the NaturAID concern. These, as will be seen by the accompanying photographic reproduction of a part of the circular, proclaimed Reynold E. Blight the "watch-dog" of the "treasury" of the NaturAID Health Utilities Company.



member, after all there is

in all the great natural cure Institutes throughout Europe.

'Thus you feel the equal of Ceasar and as much the master of the world. Oh! you must have one in your home to cleanse your insides as well as your outsides at the same time.

NaturAID Health Utilities Company

Organized under the Laws of Arizona

CAPITAL STOCK - - $300,000

Divided into 60,000 shares of $5.00 each. Fully paid up and non-assessable—hence equally participating in all profits

Dr. J. ADOLPH PETTER . . . . President and General Manager
ADAM BOEK . . . . Secretary and Treasurer
REYNOLD E. BLIGHT . . . . Auditor and Certified Public Accountant

Entire Top Floor PANTAGES THEATRE BLDG. 536 South Broadway, Los Angeles, Cal. Telephone F 7102

Just a word by the president and general manager about the mentality, personality, precept and decision guiding and directing the affairs of the NaturAID Health Utilities Company: The subject of this sketch, J. Adolph Petter, has been before and among you Southern California people in business since 1895.

Please memorize the fact that I am not a mere technical figurehead, but a real live practical flesh and blood business and professional man, who makes it a point to be on hand daily—always available and ready to bring my mature experience, judgment and know-how action to bear upon any and all features of the Company's business

Mr. Adam Boek, our secretary and advisor is a broad experienced and highly successful business man of whom you all must know.

Mr. Reynold Blight, our auditor and the watch-dog of our treasury, is too well known to require further mention, thus guaranteeing a service which absolutely insures the success of our enterprise and co-operative golden-ruled treatment to investors.

Of course you want some of this stock

1st. Revenue from sales and royalties on body NaturAIDing Utilities in all foreign countries of note which is ours
2nd. Revenue bodyNaturAIDing Utilities for on in private homes.

It seems, then, that for the past six months or more, individuals, who are strangers to Mr. Blight and to the NaturAID concern and who live in widely separated parts of the country, have known that Mr. Blight's name was being used to sell stock in a quackish concern. Mr. Blight, however, although living in the town in which this quack concern is located, remained in ignorance of this fact until it was called to his attention by a journal published in the interest of a profession with which he is not connected and issued 2,000 miles from where he lives. If the statements sent in by Mr. Blight are correct, the NaturAID Health Utilities Company has been trying to sell stock in its fakery under false pretenses—a criminal offense, we believe, in the State of California. Yet the chairman of the Southern California branch of the National League for Medical Freedom apparently considers the alleged misuse of his name in this connection of so little import that he is willing to let bygones be bygones on the promise that the NaturAID concern will be good in the future.

AYER'S CHERRY PECTORAL

The Old Silence Clause and the Newest Formula

In the editorial on "The Conspiracy of Silence" (The Journal, Jan. 6, 1912), reference was made to what has been called the "silence clause" that "patent-medicine" manufacturers used to insert in their advertising contracts.

We have received a letter of protest from the J. C. Ayer Company, taking exception to two points raised in our editorial. First, the company claims that it has not used the "silence clause" for nearly six years and second, it holds that our suppositions case of a child dying from an overdose of Ayer's Cherry Pectoral was an exaggeration because the preparation "contains no anodyne whatever."

On the first point, it need merely be stated that the editorial so evidently and patently referred to conditions that are past so far as the "patent medicine" world is concerned that by no stretch of imagination can it be made to refer to present conditions. In fact, the whole theme of the editorial was a comparison between the relation of "patent medicines" to newspapers in the past and the relation of "ethical proprietaries" to medical journals in the present.

With reference to the question as to the dangers of poisoning in a child from an overdose of Ayer's Cherry Pectoral: The J. C. Ayer Company is one of the few concerns that publishes formulas for its "patent medicines." This it has done for about seven years. Three months ago—to be exact, Sept. 29, 1911—a Chicago physician, in answer to an inquiry, received from the J. C. Ayer Company the formula for its Cherry Pectoral. Among the ingredients said to be present in this preparation was "heroin, 1/6 grain" in each fluid ounce. When the company's attention was called to this fact their only reply was that their preparation had contained no heroin for two years.

We are pleased to give the Ayer company credit for having removed a dangerous drug from a preparation intended for self-medication. At the same time, the incident calls attention once more to the variability of composition of proprietaries, whether of the "patent medicine" or the "ethical" kind. Previous to 1905, Ayer's Cherry Pectoral contained, in addition to other ingredients, morphin and alcohol.

At that time the public was being enlightened on the dangers of narcotics in "patent medicines." Morphin was a "scare word" to many people. When the Ayer Company decided to publish the composition of its remedies it revised and practically reorganized the formula for its Cherry Pectoral. Terpin hydrate was added, some of the drugs previously used were omitted and *heroin was substituted for morphin.* The alcohol was retained. As public opinion on the "patent-medicine" question became still more crystallized and, as the campaign was taken up by the various temperance organizations, alcohol also became an unpopular ingredient for these preparations—especially as the Food and Drugs Act required its presence to be declared on the label! A little later we find that Ayer's Cherry Pectoral, according to its re-revised formula, contained no alcohol. The heroin was still retained. Further education on the part of the public led to an appreciation of the fact that heroin was merely a morphin derivative. Still later, then, we find the re-re-revised formula for Ayer's Cherry Pectoral contains no heroin. How long it will be before this "patent medicine" reaches the innocuousness of hydrant water will probably depend on the state of public opinion. Formulas may come and formulas may go, but a nostrum goes on forever—or at least so long as the newspapers will carry its advertisements!

These things are not said in criticism of the J. C. Ayer Company. It is altogether admirable that "patent-medicine" manufacturers should eliminate dangerous habit-forming drugs from their preparations. The thought occurs, however, that if the composition of a "patent medicine" which is sold under an open formula should undergo such radical changes in a comparatively short time, what is happening in the case of those products whose composition has never been made public and whose manufacturers make no pretense of "playing fair" with the public?

FORMAMINT

The Profession to Be Worked Again

Formamint Tablets are widely advertised and extravagantly exploited to the laity in Great Britain. Large and expensive advertisements appear in the English magazines and newspapers and the tablets are pushed under the most preposterous claims. The preparation is put out, we understand, by the same concern that exploits Sanatogen. The medical profession of this country is now being circularized and advertisements are appearing in medical journals. They already appear in the *Medical Record, New York Medical Journal* and *American Journal of Clinical Medicine.*

It seems then that this is another product which, for the time being at least, is to be a "patent medicine" on the other side of the Atlantic and an "ethical proprietary" on this. Doubtless the distinction will be a temporary one and as soon as American physicians have furnished the requisite number of testimonials and have recommended it to a sufficient number of their patients the advertisements will be quietly dropped from the American medical journals and the advertising pages of newspapers and magazines will be called into service.

Association News

ADDITIONAL APPOINTMENTS ON COMMITTEES

Dr. John B. Murphy, President of the American Medical Association, has made the following additional appointments on committees for the Association year 1911-1912:

Scientific Research

Ludvig Hektoen, Chairman	Chicago
Graham Lusk	New York City
Eugene L. Opie	St. Louis

Committee to Advise With the National Red Cross

A. T. McCormack, Chairman	Bowling Green, Ky.
Frank K. Ainsworth	San Francisco
Henry L. E. Johnson	Washington, D. C.
Charles A. L. Reed	Cincinnati
Miles F. Porter	Ft. Wayne, Ind.

Committee to Consider the Mode of Commemorating the Completion of the Panama Canal

Isadore Dyer	New Orleans, La.
H. Bert Ellis	Los Angeles, Cal.
Jefferson R. Kean, U. S. A.	Washington, D. C.
Presley M. Rixey, U. S. N.	Washington, D. C.
Albert L. Brittin	Athens, Ill.
Amos Graves	San Antonio, Tex.
J. Leaming Wiggins	East St. Louis, Ill.

The following changes have been made in the committees already announced (The Journal, Sept. 30, 1911):

Nomenclature and Classification of Diseases

Cressy L. Wilbur, Chairman (Vice Alexander Duane, resigned)	Washington, D. C.
Frank B. Mallory	Boston

Committee on Scientific Exhibit

(Three members appointed to complete the committee)

W. M. L. Coplin	Philadelphia
Frank B. Mallory	Boston
D. S. Lamb	Washington, D. C.

Committee on Anesthesia

Yandell Henderson, Chairman (Vice George E. Brewer, resigned)	New Haven, Conn.
Thomas S. Cullen	Baltimore

Correspondence

The Army Canteen

To the Editor:—I read with great interest the correspondence from Col. L. M. Maus (The Journal, Jan. 13, 1912, p. 130) giving his view of the Army canteen.

The government expends many millions every year to train soldiers. If the soldier is simply for garrison duty in the home land it is of little importance whether or not he has a canteen, but if we are training soldiers to go into the field, at home or abroad, to fight, we should keep beer and other "booze" out of the garrison. The soldier who has acquired the "light" beer or wine habit is frequently an ideal garrison soldier and just as often absolutely useless when in the field. He misses his beer or wine, talks about it, is discontented; homesickness and nostalgia develop and he is worse than useless as a soldier. He cannot throw off the habit of years. It is absolutely impossible, of course, and would be ridiculous to think of carrying the beer and wine that is advocated for the canteen to the seat of war.

This at least has been my experience with soldiers in the field in time of war in Egypt, the Soudan, India, South Africa, and the Philippines.

P. J. H. Farrell, Chicago.

To the Editor:—I note that Dr. W. W. Keen of Philadelphia (The Journal, Dec. 16, 1911, p. 2010, and Dec. 30, 1911, p. 2155), is endeavoring to bring the influence of the medical profession to bear on Congress to pass the Bartholdt bill, to bring back the canteen into the Army with the alleged view of promoting temperance and thereby lessening venereal diseases among soldiers. He intimates that he may be misrepresented, abused and even have his motives attacked. As to his motives, he need not fear. The medical profession will give him credit for the sincerity of his opinion, but not for the correctness of that opinion. Suppose we should grant that the canteen is a benefit to the Army; this good is as nothing when put in the balance with the evil moral influence that its establishment is bound to have on the people at large. He has narrowed his consideration of the question to the Army and forgotten the nation of which the Army is only a very small part.

The brewers are for this bill heart and soul and the canteen should not be reestablished for this reason. The bill before Congress was introduced by Mr. Bartholdt, who comes from the exceedingly wet city of St. Louis—one of the citadels of beer. Mr. Bartholdt's political welfare is very much in the hands of the beer interests of his city. He has to work for and not against those interests. As a business proposition, brewers want to sell as much beer as possible and will naturally do that which will promote this business; they are not against the canteen but for it. They would like to see the government go into the business of selling beer in the Army, as that would be a declaration that beer is a temperance drink and its influence would be to increase the sales on the outside. The brewers, Mr. Bartholdt and some of our strictly temperate medical confrères are working side by side; these last are unconsciously pulling the chestnuts out of the fire for the brewers. In war, do not do what the enemy wants you to do.

The drinking habit should not be taught to those who are free from that habit. Yet that is what we shall be guilty of when we reestablish the canteen. Many young soldiers do not drink on entering the service. They have not yet formed the alcohol habit; if, however, they find beer in the canteen they are likely to jump to the conclusion that if Uncle Sam has gone into the business of selling beer on his premises, it must be very respectable and improving to drink; then comes moderate drinking which is very likely to be increased with all the attendant evils. Temptation should not be placed before the soldier.

Dr. Keen states in his letter that the late Dr. James Nevins Hyde of Chicago told him that he was treating seven physicians at that moment for accidental syphilitic infection. That is a great number in the practice of a single individual to be accidentally infected, and very likely all were infected by civilians and not by soldiers; yet Dr. Hyde did not think of asking the city of Chicago to establish canteens to keep her citizens from drinking too much.

In Dr. Keen's circular to Congress is the following quotation: "In 1901, a committee of seven, under the auspices of the Medical Society of the County of New York, made an investigation into the prevalence of venereal disease, and concluded that there were not less than 243,000 cases of venereal diseases treated in one year in that city." That is an appalling number in comparison to the number in the Army. Our Army has 60,000 men scattered over our possessions and if the venereal infection rate was 8.46 per cent. in 1897, increasing to 19.7 per cent. in 1910, that would mean about 12,000 cases in the Army in 1910. Compare 12,000 cases in the Army with 243,000 cases treated in one year in New York City only. Where does the peril to the wives and children of our land come from? Is it from the 12,000 soldiers or from 243,000 civilians in New York City and a like proportion in the thousands of towns and cities of our country? I have not heard that anyone has asked for canteens in New York City or made any other move to save the wives and children of those 243,000 civilians. The number of cases in the Army is a mere bagatelle to the number outside.

If we compare 60,000 civilians with 60,000 soldiers, age for age, I believe that we shall find venereal disease as prevalent outside the Army as in it. Here is another quotation from the previously mentioned circular: "The statistics collected in 1908, by the President's Homes Commission, show that out of 274,611 patients treated in the city hospitals of Washington there were 27,947 cases of venereal disease." This is over 10 per cent. of the hospital admissions. Is there not every reason to believe that two or three times this number were at the same time treated outside of those hospitals? Why not ask the commissioners of the District of Columbia to introduce some regulated canteens in Washington to promote temperance and thereby save the "wives and children"?

A few of our leaders in medicine are desirous of promoting temperance among soldiers. Why not advocate a law heavily fining anyone for selling alcohol to a soldier in uniform? Many railroads forbid their employees from drinking, or boarding in houses where intoxicants are sold, and thus they effectually control their men. Cannot Uncle Sam with his strong arm do as much for his soldier boys as the railroads do for theirs? No one will object to the government's furnishing the soldiers with entertainment rooms; that should be done, but the government should not go into the business of selling alcohol. The people of this land will not consent to it and they will be fighting it to the "crack of doom"; they believe in taking temptation away from the young instead of placing it before them.

Dr. Keen does not drink himself or give others drink; his example is powerful; I admire him for this; I wish all physicians would set such an example for their communities. The medical profession is in a position to bring about a great temperance reform with its attendant lessening of venereal disease if its members will open their eyes and seize the opportunity. If Dr. Keen with his influence aided by a hundred of the leaders in our profession would come out and teach the people that the predominant action of alcohol is anesthetic and depressing; that its use as a medicine has practically been done away with; that it does infinitely more harm than good; the day would soon come when Dr. Keen could, as he said in his letter, "nail up the doors of every saloon and put on them placards 'To Rent For Some Decent Business'." The present efforts to do something for 12,000 soldiers and nothing for the hundreds of thousands—perhaps better say millions—of civilians makes one feel that some of our medical friends are "saving at the spigot and wasting at the bunghole."

Every member of the profession who believes that no kind of alcoholics should be sold in the canteen should, as a patriotic duty, write immediately to his representative and senator and to any one in either branch of Congress whom he may know or be able to influence, and especially to the Committee on Military Affairs of the House and also to the chairman of the same committee in the Senate, urging them not to permit the sale of beer in the Army canteen. Write now. Do not delay.

J. Ambrose Johnston, M.D., Cincinnati.

Medical Education and Obstetrics

To the Editor:—I was much interested in Dr. Williams' article, "Medical Education and the Midwife Problem in the United States" (The Journal, Jan. 6, 1912, p. 1). I especially noted the sentence, "After eighteen years' experience in teaching what is probably the best body of medical students ever collected in this country, ... I would unhesitatingly state that my own students are unfit on graduation to practice obstetrics in its broad sense, and are scarcely prepared to handle normal cases." If this is true at the Johns Hopkins, it would seem that Dr. Williams is himself responsible for an unfortunate state of affairs, for he admits that he has the care of the instruction of good students, and to my knowledge, he has a fair-sized ward, and two years are, or were, allowed to perfect the students in this art. In my opinion the whole trouble lies in the fact that too much time is consumed in the theoretical, and not enough given to the practical portions, which are in the end of such paramount importance. These subjects are dismissed with too few lectures and clinical conferences. Hours are given to preparing slides and studying the microscopic appearances of the pregnant uterus, the development of the ovum and such subjects; and what, pray, was the use of all this if it did not lead in the end to the production of a man far more efficient than a midwife?

Many of the students that Dr. Williams says are scarcely competent to treat a normal case could write very learnedly on such subjects as "Peter's ovum," the development of the decidua, syphilis in the new-born, etc., but when it comes to rendering efficient service to the patient, who is not at all interested in the above, they fall down.

This misappropriation in the apportionment of time in the teaching of clinical obstetrics is reprehensible, and it would seem that Dr. Williams should hold himself blameworthy for persisting for eighteen years in a method of teaching which still evolves students who are, according to Dr. Williams, "unfit on graduation to practice obstetrics in its broad sense, and are scarcely prepared to handle normal cases." Dr. Williams confesses that he has had good students, and it would seem that if he has not succeeded in turning out men who can render efficient service in more than normal cases, he must be an unpractical teacher, or else obstetrics must be such a difficult art that the man who could tackle it successfully would have to be born, and not made; if this is the solution of the problem, the question arises: What is the use of carrying the body of medical students through the slough of obstetrical despond? What is all this labor for? Since it does not lead, according to Dr. Williams, to the production of competent obstetricians, one is forced at any rate to admit that it has proved to be an efficient time-consumer and memory-tester. But we have hopes of better things. Very abundant practical drills, and repeated quizzes on the practical side are imperatively demanded. We want practical theorists, and not theoretical practitioners. Topsyturviness, the all-prevailing evil in modern medical education, calls for correction, if medicine is to continue to be "that branch of knowledge which has to do with the efficient care and treatment of the sick and infirm," and obstetrics is a most worthy branch of the healing art in which to inaugurate the new policy of "sane methods in the instruction of medical students."

B. B. Browne, Annapolis, Md.

[The above was submitted to Dr. Williams, who replies:]

To the Editor:—I have read with interest Dr. Browne's criticism of my article. It seems to afford substantial proof of the correctness of my contention that my own students "are scarcely prepared to handle normal cases." His indictment is in many respects justifiable, and it was in great part owing to my recognition of the conditions of which he complains that the article was written.

With few exceptions, even the best medical schools in the country are not adequately equipped for practical instruction in obstetrics, and their lying-in wards do not even compare with those of the smallest German universities in equipment, number of patients or properly trained assistants. This is due to several factors: lack of means, lack of appreciation by medical faculties of the importance of obstetrics and the lack of properly trained teachers. Where the latter exist, they recognize the shortcomings of their department, and, realizing the impossibility of giving sufficient practical training to develop competent obstetricians, are forced to be content with making their course in great part a matter of mere medical culture.

The conditions at the Johns Hopkins Medical School illustrate the state of affairs generally existing in our better medical schools. Here we have a small and poorly equipped service, housed in a portion of a building originally constructed as an isolating ward, with accommodations for little more than one-third of the number of patients necessary for the instruction of our comparatively large classes, so that with the best will in the world and the greatest care in the utilization of the material, it is barely possible for each student to witness five deliveries.

Under such conditions, it is impossible to give each student more than a very general idea of the practical side of the subject. Consequently, all that I can hope to do is to teach that a broad field exists with whose rudiments they are scarcely acquainted, and I am content to have the students go away knowing that babies are usually born through the vagina and are sometimes suckled by their mothers, and I am especially delighted to learn that some remember in after years that they had ever heard of an early ovum, the decidua or fetal syphilis.

J. WHITRIDGE WILLIAMS, Baltimore.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

PROTEID PERCENTAGE IN MILK

To the Editor:—Is there any method worked out by which it is possible to estimate the percentage of proteids in milk by coagulating them with a reagent and throwing them down in a percentage tube of a centrifuge? C. MAYFIELD, Hutchinson, Kan.

ANSWER.—The following is the method of Woodward:

The milk is placed in two small separatory funnels or milk burettes, holding 5 c.c. each, and allowed to remain in the incubator for from eighteen to twenty-four hours. At the end of this time the fat of the milk will have risen to the top in the form of a thick, viscid layer, leaving the proteid and the sugar in solution below. The tubes are allowed to cool and the milk is drawn off into small Esbach tubes, a sufficient quantity of the reagent added, and the tubes centrifuged for a few minutes until the height of the precipitate remains constant. The amount of albumin may then be read off from the graduations on the tube in parts per thousand. It is evident that the method is only approximate, as the errors of the Esbach method are very considerable.

CAMPHORATED OIL IN PULMONARY TUBERCULOSIS

To the Editor:—On page 1808 of THE JOURNAL, Nov. 25, 1911, is a brief abstract of an article on "Camphorated Oil in Pulmonary Tuberculosis." I would like to learn more about this. What kind of oil was used with the camphor? When 24 or 30 gm. were injected in twenty-four hours, was it all given at one injection, or, if not, how many, and the size doses? In what parts of the body were the injections made? What was the object of these injections, to sustain the heart or to act in some other way?

J. A. BURNETT, Marble City, Okla.

ANSWER.—Volland's idea in injecting camphorated oil in pulmonary tuberculosis is to sustain the heart permanently. He says that camphor is coming into its own again after too long neglect, especially in acute infections, pneumonia in particular. Volland's first communication on the subject was published in the *Therapeutische Monatshefte*, February, 1906, while in his latest communication in the same periodical, October, 1911, he confirms and reiterates his early statements. He says that in his extensive experience he has never witnessed any harm from the injections, any local or general reaction or signs of intoxication. The introduction of the needle and of the oil is liable to be painful to some. A transient blister formed in one case in which 300 injections had been made under the skin of the front of the thigh. Volland injects about 1 c.c. morning and evening or two such doses at one time in some cases. In others he injects three doses at once, or two morning and evening, thus, 0.4 gm. camphor in the twenty-four hours. In one case with recurring hemoptysis, the hemorrhage ceased when the camphorated oil was injected every two hours, night and day, and the pulse dropped from 130 to 80 by the second day. The Kampferoel of the German Pharmacopeia is made by warming 1 part camphor in 9 parts olive oil in a stoppered flask, until dissolved, and then filtering.

INEXPENSIVE MASSAGE CREAM

To the Editor:—Kindly give a formula for an inexpensive massage cream. R. T. WILLIAMS, Detroit.

ANSWER.—For many years the so-called "cold cream" of the character of the U. S. P. unguentum aquæ rosæ was mainly used as a skin application, but recently the tendency has been to use more or less "greaseless" cosmetics. These creams are of two general types: (1) the "casein type"; and (2) the "stearic acid type," the former widely known as "massage cream" and the latter as "vanishing cream". As examples of these preparations the *Druggists Circular*, January, 1910, published the following (the average user will, of course, wish to prepare only a fraction of the quantity):

"1. Skimmed milk	1	gallon
Powdered alum	1	ounce
Boric acid	3	drams
Glycerin	3	ounces
Oil of bitter almond	20	minims
Oil of rose geranium	10	minims
Carmin solution		enough

"Heat the milk to about 170 F. Dissolve the alum in 4 pints of hot water and add it to the milk slowly, with constant stirring. Continue the heat and stirring until precipitation is complete. Let the mixture stand until cool, pour off the clear liquor, add to the precipitate 1 gallon of water, stirring and breaking up the magma as much as possible. Allow this to stand until the precipitate separates, then pour off as much as possible of the water, collect the precipitate on a cheesecloth strainer, squeeze out all the water possible, then dry the precipitate without artificial heat between sheets of blotting paper. Place the casein in a large mortar, add the glycerin, in which the boric acid has been dissolved, and beat and rub the casein until it is perfectly smooth and soft. Let the mass stand for six hours, pour off the water that separates, then beat in the oils and carmin, adding a little more glycerin if necessary to bring to the proper consistence."

"2. Stearic acid	12	ounces
Glycerin	12	ounces
Water	24	ounces
Potassium carbonate	4	drams
Borax	1½	drams
Powdered tragacanth	4	drams
Perfume		enough

"Place the glycerin in water bath, heat to 150 F., and add the tragacanth previously rubbed with a little alcohol. Then add the stearic acid, continue the heat until the acid is melted, and add the borax and potassium carbonate, dissolved in hot water. Stir until the mass begins to set, and add the perfume."

FULGURATION IN CANCER

To the Editor:—In this department of THE JOURNAL (Dec. 30, 1911, p. 2157), fulguration in the treatment of cancer is described as "a treatment by burning with an electric spark."

Those who have followed the work of Dr. de Keating-Hart in Paris and those who witnessed his demonstrations at the New York Skin and Cancer Hospital, or listened to his lectures in this and other cities during his recent visit to this country, know that he emphasized over and over that when the long spark of the high-frequency and high-tension current is employed according to his method, to which he has given the name "fulguration," there is no burning of the tissue. He repeatedly stated that if burning takes place actual harm is done. In order to prevent this the electrode is kept in constant motion and a current of cool, sterilized air passes through the electrode and blows over the surface being treated. There is no change in the color of the tissues fulgurated with the exception of a slightly darker yellow taken on by the fat. This change is always a signal for discontinuing the treatment.

Dr. de Keating-Hart also repeatedly emphasized the difference between the application of the high-frequency current by means of the short spark as ordinarily used and that of the long spark which he employs. The former, according to his theory, stimulates cancer cell activity, whereas the latter, by its action on the trophic nerve-supply of the tissues constituting the soil of cancer, tends to prevent further development or recurrence.

Fulguration is being carefully tested in various centers abroad, and at the New York Skin and Cancer Hospital, where the de Keating-Hart apparatus has been installed. A full report of the work at the hospital will be published in due season. It is but fair to Dr. de Keating-Hart, the originator of the method, and to those who may be interested in it that the foregoing error be corrected.

WILLIAM SEAMAN BAINBRIDGE, M.D.,
Secretary, Committee on Scientific Research, New York Skin and Cancer Hospital.

The Public Service

Medical Department, U. S. Army

Changes during the week ended Jan. 20, 1912.

Stallman, George E., dental surgeon, reports for temporary duty at Fort Clark, Tex.

Sherwood, Charles E., acting dental surgeon, reported for duty at presidio of Monterey, Cal.

Fisk, Owen C., lieut., ordered before an army retiring board at Washington, D. C., for examination.

Schmitter, Ferdinand, captain, orders to Fort Clark, Texas, revoked, and instead will proceed to Fort Groble, R. I., for duty.

Straub, Paul F., major, ordered to report to the examining board at the Army Medical Museum Building in this city for examination to determine his fitness for promotion.

Wallace, George S., M.R.C., relieved from duty at Fort Sam Houston, Tex., and ordered to Fort Clark, Tex., for duty.

Straub, Paul F., major, relieved from duty, general staff, this city, to take effect March 13, and will then proceed to the Philippine Islands for duty.

Phalen, James M., captain, will proceed to Albany, N. Y., to deliver an address on the work done in the Army with typhoid vaccines at the meeting of the Homeopathic Medical Society of New York, Feb. 12 and 13, 1912.

Ingalls, Raymond E., dental surgeon, ordered to proceed from temporary duty at Fort Missoula, Mont., to Boise Barracks, Idaho, for temporary duty.

Feely, James F., acting dental surgeon, reports for temporary duty at Fort Hancock, N. J.

Tetrault, Charles A., M.R.C., reported for temporary duty at Fort Adams, R. I.

Waterhouse, Samuel M., major, granted three months' leave of absence, with permission to go beyond the sea.

Mason, George L., dental surgeon, reported for temporary duty at Fort Des Moines, Iowa.

Brewer, Isaac W., M.R.C., ordered to Fort Porter, N. Y., for temporary duty.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended Jan. 17, 1912.

White, J. H., surgeon, granted one month's leave of absence, without pay, from Jan. 15, 1912.

Ebert, H. G., P. A. surgeon, relieved from duty in the Philippine Islands and directed to proceed to San Francisco and report his arrival to the bureau.

Grimm, R. M., asst. surgeon, detailed to prepare and present a stereopticon lecture on tuberculosis at the farmers' conference to be held at the Georgia State Industrial College, Savannah, Ga., Feb. 22, 1912.

Blue, Rupert, surgeon, promoted by the President and confirmed by the Senate to be surgeon-general.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

THE CHOICE OF A PROFESSION BY HIGH-SCHOOL PUPILS

Throughout its entire existence, and especially during the last ten years, the American Medical Association has been interested in and working for an elevation of the standard of medical education, in order that the personnel of the profession might be kept at as high a point as possible. Much has been accomplished in raising the standards of admission to medical schools and improving the quality of the instruction therein. Little attention, however, has, so far, been paid to the problem of informing pupils and parents regarding conditions in various professions and callings, so that a boy in high school can choose his future calling and prepare for it with some knowledge of the conditions of his life work. The value and importance of such knowledge will be seen at a glance.

Evidently, this problem has been recognized abroad as well, and steps have been taken to solve it. In a recent issue of the *Berliner Tageblatt* appears an article on the choice of a profession, by Dr. Henry Schmidt, in which are described the efforts made at Lüneburg to fill this gap in the educational system. Dr. Schmidt says that it has frequently been noted that high-school graduates leave the selection of their future profession largely to chance.

To correct this evil the superintendent of the gymnasium at Lüneburg has arranged series of lectures to the upper classes in his school, explaining the work of the different professions and the personal qualities required for success, as well as the amount of time, labor and expense required to prepare for a career in each. The parents of the children are invited to attend and take part in the discussion. The first address was delivered by the superintendent, who discussed the relative advantages of professional versus mechanical pursuits, and the cost of preparation versus compensation. The value of a classical education in business and technical callings was also considered, as well as the qualifications for scientific work, the advantages of an official career, etc. The superintendent emphasized the expensive character of a modern professional education and advised students against beginning a career with a load of debt. The demands, prospects and conditions of the various professions were discussed by a lawyer, a minister and a teacher. In the discussion which followed it was found that parents had vague ideas as to the time and expense required to train a son for professional work and especially as to the length of time before a young man could hope to become self-supporting. It is planned to continue this series of lectures in Lüneburg as the trial clearly demonstrated their value. Dr. Schmidt expresses the hope that statistics may be compiled and published on this subject, so that young men may select their calling with a full knowledge of the limitations and possibilities. Other professional men, including a physician, a statistician, a university professor, an army officer, merchants, chemists and political office-holders have offered to speak. The first lecture demonstrated the value of the plan, as many students changed their plans entirely, owing to the information received.

While the idea of vocational guidance in secondary schools and colleges is not a new one in this country—it has in fact, we believe, been applied in a more thorough and practical fashion in Boston than in Lüneburg—it has not yet received the general recognition it deserves. If young men knew better the requirements and conditions of various callings, they could plan their future to far better advantage than at present. While this is true of all professions it is particularly true of the practice of medicine. Many a boy has decided to become a physician and has been sent by his parents to a medical school with no conception of the expense, the time and the labor required to secure an adequate medical training. Many a poor boy has toiled hard for years to secure his medical training and has gone heavily in debt, thinking that his trials would be over as soon as he secured his diploma and that he would have plain sailing as soon as he "hung out his shingle," only to learn, when too late, that the hardest financial trials were yet to come and that it might take years for him to secure a comfortable income. It is impossible to say how many young physicians have been forced into quackery and charlatanry, or into the slimy path of the abortionist, by financial difficulties which they did not expect.

The enlightenment of the public on this question is of the utmost importance. It is the duty of educators and other professional men to see that students and parents are informed so that the young men who select a professional career may do so with a full knowledge of the facts.

Practical Limitations in Medical Education.—In a medical school, as in other institutions of technical education, the emphasis must be placed on what has been confirmed by experience, on what is well known and established. To point out repeatedly what is known, or where lie the boundaries between our knowledge and our ignorance, may be an interesting intellectual exercise, but it does not alleviate the sufferings of the sick or help to meet any immediate practical emergency. Nevertheless, it is our ignorance of disease and its conditions that limits absolutely our effective grappling with many of the most distressing afflictions of mankind, says W. B. Cannon in *Science*.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

General Subject for the Month: Diseases of the Blood and Ductless Glands

Sixth Month—First Weekly Meeting

ANATOMY AND PHYSIOLOGY OF THE BLOOD

Blood plasma, blood serum and defibrinated blood. Reaction of blood, cause, method of determination. Specific gravity, method of determination, variations, causes.

Red Corpuscles: Structure. Stroma. Hemoglobin, form in corpuscle, percentage of corpuscle. Globin, hematin, hemochromogen. Combination of hemoglobin with gases. Origin of red corpuscles, changes in bone marrow. Destruction of red corpuscles, facts for and against spleen, probable site.

White Corpuscles:

I. Leukocytes. Varieties; (a) transition forms, (b) polymorphonuclear, (c) mast cells. Normal number, physiologic leukocytosis. Functions of leukocytes: (1) phagocytosis, (2) aid in absorption of fats and peptones, (3) aid in coagulation of blood, (4) help supply proteids of blood-plasma.

II. Lymphocytes. (a) Small, (b) large lymphocytes.

Blood Plates: Size, shape, possible functions.

Blood Plasma: Chemical composition, proteins, extractives, salts, enzymes. Coagulation of blood. (1) Fibrinogen, (2) prothrombin, (3) calcium salts, (4) thrombin, (5) fibrin. Retardation of coagulation. Antithrombin.

Physiology of the Spleen

Histologic structure of spleen. Nerve supply. Rhythmic contractions. Theories of function: (1) formation of red corpuscles, (2) destruction of red corpuscles, (3) production of uric acid, (4) production of enzyme.

Physiology of Bone-Marrow

Histologic structure of red marrow. Nucleated corpuscles, non-nucleated cells. Changes in marrow after hemorrhage.

Physiology of Lymph Gland

Histologic structure. Origin of lymphocytes.

REFERENCE BOOKS FOR THE SIXTH MONTH

Text-Books on Practice of Medicine.
Hunter: The Severest Anemias.
Osler's Modern Medicine, vol. iv.
Bramwell: Anemia.
Buchanan: The Blood in Health and Disease.
Cabot: Diseases of the Blood.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Iowa: Capitol Bldg., Des Moines, February 6-8. Sec., Dr. Guilford H. Sumner, State House.

Kansas: National Hotel, Topeka, February 13. Sec., Dr. H. A. Dykes, Lebanon.

Nebraska: State House, Lincoln, February 14-15. Sec., Dr. E. Arthur Carr, 141 S. 12th Street.

New York: January 30-February 2. Chief of Examinations Division, Mr. Harlan H. Horner, Albany.

Michigan October Report

Dr. B. D. Harison, secretary of the Michigan Board of Registration in Medicine, reports the written examination held at Lansing, Oct. 10-12, 1911. The number of subjects examined in was 14; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 10, all of whom passed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
College of Physicians and Surgeons, Chicago	(1911)	79.7
Rush Medical College	(1911)	77.7
University of Michigan, Dept. of Med. and Surg.	(1911)	80.3, 81.2
University of Michigan, Homeopathic College	(1911)	81.2, 86.7
Detroit College of Medicine	(1911)	76
Johns Hopkins University	(1911)	89.3
Trinity Medical College, Ontario	(1898)	90.6
University of Paris, France	(1911)	81.7

Delaware December Report

Dr. Henry W. Briggs, secretary of the Medical Council of Delaware, reports the written examinations held at Dover and Wilmington, Dec. 12-14, 1911. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 7, all of whom passed. Six candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Howard University, Washington, D. C.	(1911)	82.9
University of Maryland	(1908) 87; (1911)	84.4
New York Homeo. Med. Coll. and Hosp.	(1911)	89.7
Medico-Chirurgical College of Philadelphia	(1911)	84.9
University of Pennsylvania	(1894)	79.9
Hahnemann Med. Coll. and Hosp., Philadelphia	(1911)	87.2

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Howard University, Washington, D. C.	(1909)	Dist. Colum.
University of Maryland	(1890) (1906) (1911)	Maryland
University of Pennsylvania	(1903)	New Jersey
Jefferson Medical College	(1904)	Penna.

Pennsylvania December Reports

The Medical Council of Pennsylvania reports the written examinations held at Philadelphia and Harrisburg, Dec. 12-15, 1911. The number of subjects examined in was 7; percentage required to pass, 75. At the examination held by the State Medical Society of Pennsylvania at Philadelphia, the total number of candidates examined was 67, of whom 60 passed and 7 failed. The following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined.
University of Colorado	(1897)	1
Georgetown University	(1911)	2
Howard University, Washington, D. C.	(1909) (1911, 2)	3
College of Physicians and Surgeons, Chicago	(1905)	1
University of Louisville	(1911)	2
Coll. of P. and S., Baltimore	(1910, 2) (1911, 2)	4
University of Maryland	(1903) (1910)	2
Maryland Medical College	(1911)	1
Johns Hopkins University	(1907) (1909)	2
Woman's Medical College of Baltimore	(1904)	1
Long Island College Hospital	(1901)	1
University of Buffalo	(1911)	1
University of Pennsylvania	(1910, 3) (1911, 2)	5
Woman's Med. College of Pennsylvania	(1909) (1911)	2
Temple University, Philadelphia	(1911)	4
Medico-Chir. Coll. of Phila	(1910, 2) (1911, 10)	12
University of Pittsburgh	(1910, 2) (1911, 6)	8
Jefferson Medical College	(1909) (1910) (1911, 5)	7
University of Toronto, Ontario	(1910)	1

FAILED

College	Year Grad.	Per Cent.
University of Louisville	(1911)	64.7, 73.2
Baltimore University	(1899) 73.6; (1900)	63.3
Leonard Medical School	(1911)	71.6
University of Berlin, Germany	(1902)	23.9
National University of Greece	(1907)	68.8

At the examination held by the Homeopathic Medical Society at Philadelphia, the total number of candidates examined was 5, all of whom passed. The following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined.
Hahnemann Med. Coll. and Hosp., Chicago	(1909)	1
Dunham Medical College, Chicago	(1902)	1
Cleveland-Pulte Medical College	(1911)	1
Cleveland Homeopathic Medical College	(1890)	1
Hahnemann Med. Coll. and Hosp., Philadelphia	(1910)	1

At the examination held by the Eclectic Medical Society at Harrisburg, the total number of candidates examined was 15, all of whom passed. The following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined.
Bennett Medical College, Chicago	(1911)	1
Baltimore University	(1895)	1
Maryland Medical College	(1910, 3) (1911, 4)	7
University of Naples (1899) (1901) (1907) (1910) (2 without year given)		6

Book Notices

SCIENTIFIC FEATURES OF MODERN MEDICINE. By Frederic S. Lee, Ph.D., Dalton Professor of Physiology, Columbia University. Cloth. Price, $1.50. Pp. 183. New York: Columbia University Press, 1911.

"Scientific Features of Modern Medicine" is the general title of the Jesup lectures delivered at the American Museum of Natural History, New York, in February and March, 1911. The series consisted of eight lectures here published in book form. Professor Lee has the happy faculty of being able to present dry scientific subjects in a manner to be understood and appreciated by the average intelligent layman. In this series of lectures Professor Lee's object was—and he eminently succeeded—to present those phases of modern medicine which illustrate its genuine scientific character, and to emphasize the radical difference between the empiricism of the past and the progressive scientific principles on which modern medicine now rests and is developing. The first lecture is devoted to a brief sketch of the physiology of the human body; the next to its pathology, disease and modern methods of diagnosis; the third lecture considers the methods or principles of treatment. This leads up to the two most interesting and important of the lectures, that on "Bacteria and Protozoa and their Relation to Disease"; and that on the "Treatment and the Prevention of Infectious Diseases." It is in these two lectures that Professor Lee shows what practical results have come from the application of modern scientific methods in the treatment of certain diseases. The remaining lectures are on the "Problem of Cancer and other Problems," "Modern Surgery," the "Rôle of Experiments in Medicine," and the "Public and the Medical Profession." While the book is primarily for laymen, it will be found of interest to physicians and an encouragement to those who are striving to keep up with the rapid progress medicine is making to-day.

SYPHILIS FROM THE MODERN STANDPOINT. By James McIntosh, M.D., Grocers' Research Scholar, and Paul Fildes, M.B., B.C., Assistant Bacteriologist to the London Hospital. Cloth. Price, $3 net. Pp. 227, with illustrations. New York: Longmans, Green & Co., 1911.

This book represents one of the most advanced outposts of those valiant warriors of science who are ready to attack any problem of clinical medicine with laboratory ammunition alone. Its clinical basis, as far as appears, rests "on clinical observations [presumably as voluntary onlookers] at the hospital St. Louis and others," and "the material attending Dr. Sequeira's dermatologic clinic [at the London Hospital] in addition to cases under the medical and surgical staff in the general wards of the same and other hospitals" [here presumably also as irresponsible attendants]. In other words, we have two bacteriologists, with exuberant laboratory assurance, who write on syphilis as a human disease, with an experience with the disease such as is attainable by any medical student who will go to Paris and London and spend a while as a voluntary attendant in some of the clinics for skin diseases. We have long known that some laboratory men have a contempt for familiarity with diseases as they manifest themselves in living human beings, but we confess to the feeling that common courtesy demands before one writes on a given disease he at least should have a first-hand acquaintance with it.

This laboratory cock-sureness is the hopeless mistake of the book. While realizing acutely the possibility of mistakes in clinical observations—which is, alas, too true—the authors fail to realize that laboratory observations, too, are human and liable to error; so that . . . "this book . . . is intended to be based, not on probability, but certainty, ..." And so they make the diagnosis of a chance depend on "certainty" by demonstrating the *Spirochæta pallida* with the dark-ground illuminator, although on the opposite page they publish an illustration of the *Spirochæta pallida* under dark-ground illumination, which would certainly lead an observer into confusion if he used it as a picture of the pathognomonic organism. In the same way, while deploring the clinician's human liability to err, so that "we have been compelled to view the writings of many admirable (but presumably unreliable) observers with suspicion," they exact that the Wassermann findings be looked on as final, forgetting that they too are necessarily made by human, if "scientific" hands, and so are open to suspicion of fallibility—to say nothing of the fact that the test is one that requires for its accuracy the most exact system of controls, and is most open to mistake if these are not always scrupulously carried out; so much so that at the present time a large proportion of so-called Wassermann findings are worthless—not through fault of the test, but of its performance.

The chapters that have to do with laboratory subjects are useful summaries of current facts. The considerations of the *Spirochæta pallida*, of the histopathology of syphilis, of the Wassermann reaction—all of which are dealt with with considerable fulness—are good, except when the authors try to go beyond their field and offer opinions on the clinical aspects of syphilis. The consideration of salvarsan is neither full nor representative of present opinion, but in the rapidly changing state of that subject this is not to be wondered at.

On the whole the book is unfortunate, as contributing to the tendency, already too common, to disregard all we have learned of the most carefully studied disease and to sail off blandly into the unknown, under the sole guidance of recent, epoch-making but incomplete observations. The book adds nothing to what is already known, but considerable to what is not.

DER HARN SOWIE DIE UEBRIGEN AUSSCHEIDUNGEN UND KÖRPERFLÜSSIGKEITEN VON MENSCH UND TIER. Ihre Untersuchung und Zusammensetzung in normalem und pathologischem Zustande. Ein Handbuch für Aerzte, Chemiker und Pharmazeuten Sowie zum Gebrauche an Landwirtschaftlichen Versuchsstationen. Herausgegeben von Carl Neuberg, Universitätsprofessor und Abteilungsvorsteher am Tierphysiologischen Institut der Königl. Landwirtschaftlichen Hochschule Berlin. Parts 1 and 2. Paper. Price, 58 marks. Pp. 1823, with illustrations. Berlin: Julius Springer, 1911.

This is a most comprehensive work in two large volumes of nearly a thousand pages each. The author's aim, as expressed in the preface, is to combine in a handbook everything which relates to the chemical examination of these products. He has even gone further and included physicochemical microscopic and colorimetric methods. The first volume is devoted entirely to the urine; the second to the blood, bile, milk, feces, lymph and other body fluids. The work is technical in character and reviews in detail practically every recognized method of analysis of the various substances considered. While the origin and nature of many of the constituents of the body fluids, secretions, excretions, etc. are discussed, the clinical side of the subject is very lightly touched on. The work, therefore, is one for the advanced laboratory worker, who will find in it an almost endless fund of information.

MICROBIOLOGY. For Agricultural and Domestic Science Students. Edited by Charles E. Marshall, East Lansing, Mich., Professor of Bacteriology and Hygiene, Michigan Agricultural College. Cloth. Price, $2.50 net. Pp. 724, with 128 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

This text-book, the product of several hands, is characterized by a remarkable unity of thought and expression without repetition; besides, it does not show the common weakness of emphasizing some features unduly while other features of importance are scarcely mentioned. Laboratory features of microbiology receive only necessary mention, and no space has been given to laboratory exercises. In Part I are considered the morphology and culture of molds, yeasts, bacteria, protozoa and a brief general discussion of what is known of so-called invisible organisms. In Part II are discussed nutrition and metabolism; physical and chemical influences and mutual influences, such as symbiosis, metabiosis and antibiosis. In Part III the microbiology of air, water, sewage, soil, milk and of special industries, such as preparation and preservation of foods, food poisoning, alcohol, vinegar, serums and vaccines are fully discussed. The microbial diseases of man, animals and plants and the control of infections are taken up in the concluding chapters. The arrangement is an admirable one, the text abounds in useful tables and good illustrations and it is all good reading, probably because the prime motive in the preparation of the book was to furnish reliable information to the agriculturist, the economist and others. The author, being himself an agriculturist, naturally presents strongly that phase of the subject. While this is not a text-book for the student of medicine, at the same time he can secure much information from it which may prove exceedingly useful as correlated knowledge.

Text-Book of Ophthalmology. By Dr. Ernst Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized Translation from Twelfth German Edition by Alexander Duane, M.D., Surgeon Ophthalmic and Aural Institute, New York. Fourth Edition. Cloth. Price, $6. Pp. 989. Philadelphia: J. B. Lippincott Co., 1911.

This popular book has apparently lost none of its attractions in this fourth American edition. About sixty pages of text and a number of illustrations have been added. indicate Professor Fuchs' extensive experience and good judgment in the field of ophthalmology. The added pages deal in particular with the pathology, symptomatology and therapy of eye diseases as well as with the physiology of the ocular apparatus.

The translator's task has been well performed, and Dr. Duane's own contributions serve, on the whole, to bring the work into conformity with what may be regarded as American views of ophthalmic science and art. While it is true that the general principles that underlie the surgery of the eye are universal, yet certain ocular diseases peculiar to or more frequently encountered in this country than in Europe require exposition by domestic authorities. Furthermore, these views have been properly and carefully presented by the translator under his own signature. With the remainder of the text they constitute a safe guide for the student, both special and general.

The book is much beyond the average in type, illustration, paper and binding.

Life, Death and Immortality. By William Hanna Thomson, M.D., LL.D., Author of "Brain and Personality," etc., Consulting Physician to the Roosevelt Hospital, New York. Cloth. Price, $1 net. Pp. 117. New York: Funk & Wagnalls Co., 1911.

A distinguished German physiologist, Professor Verworn, recently lecturing in this country, is reported to have said, "The phenomena of human consciousness cease with the life of the cerebral cells. Hence our individual soul is no more immortal than our individual body." Such an *ex cathedra* utterance unsupported by any possible scientific demonstration is not in accordance, we believe, with the best scientific and philosophic thought of the day or of any time. Dr. Thomson's little work is an attempt to prove the opposite view from the facts of our personality and individual consciousness supported by the universal belief and revelation. He also brings in scientific facts which he thinks bear on the subject. In this he is perhaps open to a little criticism. For example, his statements that multicellular life began with the Cambrian period and that the majority of biologists reject the Darwinian theory are rather too unqualified. His book, however, is well conceived and the arguments are clearly and readably stated. We believe that the opinions Dr. Thomson advances will be much more in accordance with those held by the great majority of our profession than those which are credited to Professor Verworn.

The Physician's Visiting List for 1912. Leather. Price, $1.25. Philadelphia: P. Blakiston's Son & Co.

This handy visiting list is issued in several styles to accommodate the requirements of various practitioners. It is well made, well bound and contains the usual valuable pages of data for reference.

Ophthalmic Year-Book. Volume 8. Containing a Digest of the Literature of Ophthalmology with Index of Publications for the Year 1910. By Edward Jackson, M.D., Professor of Ophthalmology in the University of Colorado, Thomas B. Schneideman, M.D., Professor of Ophthalmology in the Philadelphia Polyclinic, and William Zentmayer, M.D., Attending Surgeon to the Wills Eye Hospital, Philadelphia. Cloth. Pp. 455, with 26 Illustrations. Denver: Herrick Book and Stationery Company, 1911.

This is the eighth annual volume of a useful and carefully compiled abstract of the year's activities in ophthalmology. The scope of the year-book has been somewhat widened since its earlier issues and now includes illustrated biographic sketches of recently deceased ophthalmologists, the titles of all text-books, monographs, journal articles, papers and discussions published in transactions of various societies, as well as a properly prepared digest of such ophthalmic literature as has any reasonable claim on our attention. The Year-Book is well indexed so that one may quickly refer to any subject; these subjects are not only placed under authors and subject-headings but both are given in alphabetical order. Finally, the book is well made and the printer has left little for the most censorious to criticize.

Clinical Diagnosis. A Text-Book of Clinical Microscopy and Clinical Chemistry for Medical Students, Laboratory Workers and Practitioners of Medicine. By Charles Phillips Emerson, A.B., M.D., Late Resident Physician, The Johns Hopkins University. Third Edition. Cloth. Price, $5. Pp. 724, with 126 Illustrations. Philadelphia: J. B. Lippincott Co., 1911.

This book is so well known that the present edition needs no extended description. It is brought up to date by additions and corrections, and, as in previous editions, the author describes only methods which have been tried and proved valuable, not those still under criticism and judgment. This is one of the most complete text-books on the subject; not only is it a valuable reference book in the laboratory but much of it can be read with interest because of the valuable opinions of the author in regard to the conclusions which can be drawn from clinical laboratory methods of investigation.

The House-Surgeon's Vade-Mecum. By Russell Howard, M.B., M.S., F.R.C.S., Surgeon to Poplar Hospital, London. Cloth. Price, $2.10 net. Pp. 511, with 142 illustrations. New York: Longmans, Green & Co., 1911.

In the limited sphere of 500 pages is contained an immense amount of information on aseptic surgery, shock and asphyxia, hemorrhage, sepsis, amputations, emergencies of all kinds as encountered in general hospital practice, the treatment of fractures, dislocations, injuries, inflammations, and what not. Of course, details are merely suggested, but much of that is often padding. The book is full of good things, the advice it contains is good and of a character to help the young intern and some who are older.

Medicolegal

Power of State Board of Health to Prohibit Bathing in Pond from which City Water-Supply is Taken —Court Takes Notice of Germ Theory of Disease

(State vs. Morse (Vt.), 80 Atl. R. 189)

The Supreme Court of Vermont holds valid a regulation promulgated by the State Board of Health which provided that no person should bathe or swim in Berlin Pond or its tributaries or outlet, the city of Montpelier taking its water-supply from the pond, which had an area of about 360 acres. Nor was it necessary for a member of the board actually to erect the notice; this might properly be intrusted to another. The suggestion was also without merit that conditions were shown to be such that other sources of contamination existed left untouched by the regulations of the board, more serious than those here involved. The fact that others were befouling these waters afforded no excuse or defense to the defendant, who at the time in question was the lessee of a certain cottage, the land connected with which lay along and included a part of the shore of the pond.

Granting that a riparian owner has a right to the reasonable use of the water of such a pond, the court does not think that it can be said that it is always and under all circumstances a reasonable use of such waters to bathe therein. Reasonable use varies with circumstances. If bathing in a pond from which a city takes its water-supply contaminates, or in circumstances reasonably to be apprehended may contaminate, such waters thereby endangering the health of the community, it cannot be said that the riparian owner is making a reasonable use of his incidental right. Such use in such circumstances may be prohibited in a valid exercise of the police power. The owner's rights are not then "taken" in a constitutional sense; or, if this statement savors too much of refinement of reasoning, as some suggest, the "taking" is not such as the constitution prohibits.

Regulations for the protection of the public health are looked on with favor. Every reasonable presumption is made in favor of their validity, and "every intendment is indulged to sustain them." This presumption attaches to each element essential to their validity. So their reasonableness is presumed.

The court is not satisfied, and cannot say, that the regulation prohibiting bathing in Berlin Pond was a palpable violation of the defendant's rights; nor can it from the record, aided by facts of which it may take judicial notice, say that such prohibition was unnecessary or unreasonable. On the contrary, it takes notice of the germ theory of disease, and that the human body may give off germs dangerous to the public health, and that, should these reach the intake of the water-supply, they might, as suggested by the State Board, spread contagion throughout the city. Wherefore, the court's conclusion is that, on principle and authority, the action of the State Board of Health was not only a wise, but a valid, exercise of the police power, lawfully delegated to the board, and that the defendant's conviction of violating the regulation must stand.

Death from Pulmonary Tuberculosis Eight Months After Injury—Certified Copy of Death Certificate as Evidence

(*Healy vs. Hoy* (*Minn.*), *132 N. W. R. 208*)

The Supreme Court of Minnesota affirms a judgment for damages for the death of a man who, while working as a plumber, was injured and died some eight months thereafter of pulmonary tuberculosis. The court says that there was evidence tending to show that at the time of the accident the man was 43 years old, weighing 188 pounds, in sound health, and a big, robust man. As a result of the accident his scalp was torn, a portion of the frontal prominence of the skull shaved off, a blunt instrument driven through the mastoid bone, breaking it, and leaving a severe wound in the back of his head, and the fifth nerve severed. He also sustained a severe shock and concussion of the brain. These injuries caused disuse of the lower part of his face, a difficulty in opening his mouth, and an inability to masticate his food. He was confined to the hospital one month, but was disabled until the time of his death, and steadily lost in weight. There was opinion evidence on behalf of the plaintiff by physicians to the effect that the cause of the existence of tuberculosis in the man was the injury he received at the time of the accident, whereby his vital forces were seriously impaired. On the part of the defendant there was opinion evidence tending to show that pulmonary tuberculosis often attacks men of robust health and kills them, and a probability that this man had pulmonary tuberculosis before the accident. The court considers that the evidence was sufficient to sustain a finding that his injuries were the proximate cause of his death. The question of proximate cause is often obscured by technical learning, but in its last analysis it is ordinarily a question of fact for the jury, to be solved by the exercise of good common sense in the consideration of the evidence in each particular case.

The court also holds that a duly certified copy of an original death certificate on file in the office of the State Board of Health is competent evidence tending to show the cause of death. The certificate in this case showed that the cause of death was pulmonary tuberculosis. It was the legal duty of the attending physician to make the death certificate and to state therein the cause of the death. It was so made; hence the original certificate was admissible in evidence, independently of any statute. The Minnesota statute as to what disposition shall be made of the original death certificate is not entirely clear; but it may be fairly construed as requiring that the original certificate shall be sent to the State Board of Health and that it becomes a part of its official records and documents, of which its executive officer, its secretary, is the custodian. Such is the practical construction of the statute by the board of health. The copy of the death certificate here in question was certified as a true and correct copy of the original record of death on file in the office of the State Board by its executive officer under its official seal. The trial court did not err in overruling the defendant's objection to the admission of the certified copy.

Rights in Dead Bodies and of Kin to Damages for Wrongful Autopsies

(*Darcy vs. Presbyterian Hospital* (*N. Y.*), *95 N. E. R. 695*)

The Court of Appeals of New York reverses a judgment which affirmed one that dismissed, as not stating a cause of action, a complaint alleging that, immediately after the death of her son, the plaintiff demanded of the defendant his body, and sent an undertaker for it, but that the defendant hospital refused to deliver it until it caused the coroner to send his physician to make an autopsy on the body, and that after the plaintiff had refused her consent to such autopsy. The court says that it must be conceded that in some jurisdictions it has been held that since there can be no property in a dead body a personal representative of a decedent cannot maintain an action for damages for the wilful or negligent mutilation of the body, although he may sue for injury to the wearing apparel. But in Larson vs. Chase, 47 Minn. 307, in which the most elaborate consideration of the question in the courts of this country appears, after an examination of the authorities both in this country and in England, the conclusion is reached that, while no action can be maintained by the executor or administrator on the theory of any property right in a decedent's body, the right to possession of a dead body for the purpose of preservation and burial belongs to the surviving husband or wife or next of kin, in the absence of any testamentary disposition; and this right the law will recognize and protect from any unlawful mutilation of remains by awarding damages for injury to the feelings and mental suffering from the wrongful acts, although no pecuniary damage is alleged or proved. The rule adopted in the Minnesota case fully meets the approval of this court, and consequently the plaintiff, it holds, being the mother and the nearest surviving next of kin to the decedent, was entitled to maintain this action for damages and to recover damages for her wounded feelings and mental distress.

The court further holds that the complaint in this case stated a cause of action, inasmuch as the New York statutes prohibit and make a misdemeanor an unauthorized autopsy, and there was nothing in the allegations of the complaint that indicated that the decedent died in a suspicious manner, or that there was reasonable ground to suspect that his death had been occasioned by criminal means or the act of another. If, however, on the trial of the case the defendant should be able to show that decedent died in a suspicious and unusual manner, and that there was reasonable ground to suspect that his death was occasioned by criminal means, it was the defendant's duty to notify the coroner, and it then became the duty of that officer to investigate, either in person or by his physician, the clinical history of the case, and, if he then had grounds to suspect criminal agency had caused death, to hold the body for autopsy. But these were matters of defense.

Liability of County on Special Contract for Employment of Alienist

(*Williamson vs. Snohomish County* (*Wash.*), *116 Pac. R. 675*)

The Supreme Court of Washington reverses a judgment rendered in favor of the defendant county on a demurrer to the plaintiff's complaint, in an action to recover from the county $950 on a contract for the plaintiff's services as an alienist in connection with the trial of a homicide case involving the defense of insanity. The complaint stated, among other things, that it was necessary in the homicide case for the prosecuting attorney to have the aid of an experienced alienist in acquiring necessary information to prosecute the case intelligently and to become a witness therein, and, under special authority from the board of county commissioners, contracted with the plaintiff therefor, the plaintiff to receive as compensation for his services $100 for the first day that he should be in attendance on the trial of the homicide case, and $50 for each day thereafter, which had been for many years the regular and customary fee for such services.

The Washington statute provides that "The several boards of county commissioners are authorized and required . . . (5) to allow all accounts legally chargeable against such county not otherwise provided for, and to audit the accounts of all officers having the care, management, collection or disbursement of any money belonging to the country or appropriated to its benefit; (6) to have the care of the county property and the management of the county funds and business. . . . ." It seems to the court that the power of the county commissioners to authorize the incurring of such an obligation as here involved is as clearly inferable from these statutory provisions as is their authority to incur expenses in the conduct of the county's business in numerous other matters, in which it is conceded they have such authority, though not specifically provided for by statute.

The court cannot agree with the contention that this contract does not involve county business, but relates to judicial business only. It does not involve the payment of any court officer's salary or the expenses of maintaining the courts. It does not involve the payment even of statutory witness fees, although it incidentally involves a witness' compensation, yet much more than that, for it is evident that the services contracted for and rendered by the plaintiff were more than that of a mere witness, and more than that which could have been coerced from him by a subpoena.

Every lawyer of experience in the practice knows that there are many things necessary to be done in the proper and effectual preparation and trial of causes, which involve the incurring of expense, besides the mere compensation of attorneys and statutory witness fees. These things are as necessary in securing the proper protection of the public rights in criminal prosecutions as well as when private rights only are in litigation. If the expenditure of county funds were limited in aiding prosecutions under the criminal laws only to the payment of attorneys and statutory witness fees, many of the most important cases could not be prosecuted to the courts in such manner as effectually to protect the rights of the public.

Fruits, Candies, Etc., Exposed for Sale May Be Required To Be Protected from Flies and Dust

(*Ex parte Bacigalupo (Minn.), 132 N. W. R. 303*)

The Supreme Court of Minnesota holds that an ordinance which reads: "All berries, cherries, dates and figs exposed for sale in any store, shop or building shall be protected from flies, and all fruits, berries and candies exposed for sale outside of the building, or in any wagon or cart, shall be protected from both flies and dust"—is not an unnecessary interference with private rights, and is not an unreasonable requirement, or impossible of performance, and is not in restraint of trade, or contrary to the provisions of either the state or federal constitution.

The court says that if the legislative authorities have the power to regulate the sale of cottolene, baking powder, farm and dairy products, to control butchers, the business of pharmacy, to enforce vaccination of school children, to regulate the smoke nuisance, and compel street car companies to sprinkle their tracks for the protection of the public health, then no question should arise as to the legislative power to protect fruits and candies from being exposed where they will accumulate the germ-laden dust of the streets or permit contact with flies.

The fact that the enforcement of the ordinance may require some radical change in the method of conducting a business does not necessarily furnish a defense to its enforcement. A privilege long countenanced does not always amount to a personal right. It is a very convenient and perhaps effective method of advertising fruit to display it in front of a store or on the street, in the view of the passer-by; but if, by its accumulation of dirt and germs, the health of the consumer is menaced, then certainly the police power may be invoked to take reasonable steps to abate this source of breeding disease, and, if necessary, may entirely deprive the vendor of fruit of the privilege of exposing it in the open air. The ordinance is a movement in the right direction. It speaks for health and cleanliness, and every right-thinking person ought to be in sympathy with a movement of this kind.

Properly construed, the ordinance is not designed to be burdensome, and it ought to be possible to provide some method of adequate protection without depriving exhibitors of the right to display their goods in the open. It may not be possible to protect fruit completely from dust, unless it is isolated in such a manner as to keep out the air; and, of course, that would result in the deterioration of the fruit, if kept confined too long. A fair meaning of the provisions of the ordinance is that fruit kept on exhibition on the outside of a building shall be no more exposed to dust than when it is kept on the inside of a building. The ordinance contemplates that every reasonable precaution should be taken to protect fruit from dust and flies when exposed in the open, and at the same time not result in its deterioration for lack of air. If experiment determines that this result is not possible without shortening the time to which fruit shall be confined, then such inconvenience as may result from it must be assumed by the fruit vendor.

The ordinance under consideration was bitterly criticized because its provisions included all fruits, such as oranges and bananas, which it was claimed required no protection. While, no doubt, a distinction may be drawn between such fruits and others, such as berries, it is not for the courts to say that even oranges and bananas should not be protected against the accumulation of dust and the approach of flies. Surely even those fruits are much more wholesome and less dangerous in scattering germs when kept free from flies and dust.

Something may be said in opposition to the enforcement of such restrictions in the case of wholesale or commission houses, where boxes are opened and exposed for the temporary purpose of displaying the contents to prospective purchasers. But here again the court cannot interfere and declare the ordinance void, for uncertainty, or as an infringement on the personal rights of such merchants, merely because it will create an inconvenience in their method of conducting business. If experience shows or develops the fact that the enforcement of the ordinance seriously interferes with the conduct of the business of those merchants, redress must be sought with the legislative power, and not with the courts.

The court's conclusion is that the ordinance is not unreasonable, is not impossible of performance, and is not in restraint of trade, or in conflict with any provision of the state or federal constitution.

Privileged Communications with Reference to "Same Subject"

(*Struble vs. Village of De Witt (Neb.), 132 N. W. R. 124*)

The Supreme Court of Nebraska holds that when part of a confidential communication between physician and patient is put in evidence by one party, the other party may give the whole communication "on the same subject," under the provisions of the code of that state. But the trial court must determine whether the evidence offered is on the same subject, and its ruling will not be regarded as erroneous unless there is a clear abuse of discretion. For example, in this case, where the plaintiff claimed that a fall on a defective sidewalk caused a subsequent miscarriage, her attending physician, as a witness for the defendant, was asked whether, at any one of his visits after her injury, he had any conversation, or anything was said, as to any previous miscarriages. This question was objected to on the ground that it related to a privileged communication, while the defendant contended that it was not a privileged communication because the plaintiff had herself testified to conversations with the physician in regard to her injury, and the condition that resulted therefrom, and as to his treatment and directions. The trial court took the view, however, that the matter inquired into by the question was not the "same subject" of conversation testified to by the plaintiff, and that it was not necessary to explain that conversation. The Supreme Court does not think that this was such an abuse of discretion as to require a reversal of a judgment rendered in favor of the plaintiff, as considerable latitude must be allowed a trial court in such matters.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

January, LXV, No. 409, pp. 1-196

1 Some Factors in Operative Technic and Management Which Make for Success or Failure. W. B. Chase, Brooklyn.
2 History of Iodin Methods of Skin Sterilization. J. E. Cannaday, Charleston, W. Va.
3 *Significance of Delayed Operation in Treatment of Ectopic Gestation. E. Marvel, Atlantic City, N. J.
4 *Treatment of Ectopic Pregnancy. C. A. Stillwagen, Pittsburgh.
5 *Lithopedion. W. S. Bainbridge, New York.
6 *Teaching Obstetrics. H. Schwarz, St. Louis.
7 *Aseptic or Antiseptic Hands in Obstetric Practice? Which and Why? D. H. Stewart, New York.
8 Relation of Gastrocolic Displacements to Certain Intrapelvic Conditions in Women. C. A. L. Reed, Cincinnati.
9 An Obstetric Accident. H. S. Lott, Winston, N. C.
10 Etiologic Factors in Exceptional Children and Their Prevention. M. Nenstaedter, New York.
11 Backward Child vs. Feeble-Minded Child. M. P. E. Groszmann, Plainfield, N. J.
12 Progressive Methods of Dealing with Juvenile Delinquency. N. B. Neelen, Milwaukee, Wis.
13 Syphilis as Factor in Abnormal Development of Children. E. W. Dittrich, New York.
14 Condition of Nose, Throat and Ear as Factor in Exceptional Development. O. Glogau, New York.
15 Clinical Studies of Exceptional Children. E. B. McCready, Pittsburgh.
16 Speech Defects in Children. J. M. Fletcher, Worcester, Mass.
17 Value of Physical Activities in Treatment of Atypical Boys. G. Meylan, New York.

3. **Delayed Operation in Ectopic Gestation.**—It is Marvel's conviction that delayed operation imposes unjustifiable penalties on the patient. The significance of delayed operation is exhibited in greater loss of blood, possible loss of life occasioned by hemorrhage, increased shock depression, recurrent hemorrhage producing worse condition than first, operation fraught with greater difficulties, more extensive pathology, increased discomforts measured by time and intensity, crippled organs with deficient functions and protracted invalidism.

4. **Treatment of Ectopic Pregnancy.**—One of the patients whose case is cited by Stillwagen sought relief from excessive vomiting of pregnancy. Examination revealed pregnancy of about four months' duration. To the right of the pregnant uterus a mass was distinctly palpable. By vaginal examination could be felt what seemed to be the bones of a fetal head. The history was elicited that six years ago her menses had ceased, her abdomen enlarged and that she experienced all the subjective symptoms of pregnancy. After six months, however, the menstrual function was reestablished and all other symptoms gradually disappeared. With this history and the physical examination a diagnosis was made of lithopedion complicating pregnancy. At operation the mass was found to be encapsulated and was almost entirely covered by right broad ligament. There were a few intestinal and omental adhesions. Removal was easily accomplished. The fetus corresponded in size to a five or six months' pregnancy. The abdomen was closed without drainage. Convalescence normal. Vomiting ceased promptly. The remaining months of her pregnancy were uneventful and she is at present passing through a normal puerperium.

5. **Lithopedion.**—In Bainbridge's case the lithopedion had been carried for at least fourteen years. The woman had not missed a menstrual period from the time of its establishment after the birth of the last child, twenty-four years before, so that the lithopedion had presumably been carried for that length of time. There was apparently no connection between the lithopedion and a miscarriage which took place before the last pregnancy. It would seem, therefore, that the lithopedion was the result of a superfetation at the time of the last pregnancy. A small scar, found in the left tube just where the head lay, led to the conclusion that perhaps a tubal pregnancy occurred simultaneously with the uterine pregnancy, that this tube ruptured at an early stage and that extratubal development continued up to about seven months, calcification of the extratubal fetus taking place after that time, the intrauterine fetus going on to full term in a normal manner.

6. **Teaching Obstetrics.**—For the successful teaching of obstetrics, Schwarz says four things are absolutely necessary, namely, qualified teachers, well prepared students, reasonable place and space in the curriculum and the necessary equipment. The minimum obstetrical equipment which, he says, ought to be required of every medical school is as follows: A. Control of sufficient obstetrical material to make it possible for every member of the senior class to receive a reasonable training in the examination of pregnant women. To be present and to assist at the delivery of at least five women and personally to deliver under an instructor not less than two cases, so that for a senior class of fifty the school should furnish a minimum of 100 confinements a year. B. Equipment for a thorough manikin course. C. A small but well selected collection of specimens, pelves and teaching apparatus. D. A clinical laboratory. E. A small working library consisting of a few text-books and laboratory guides.

7. **Aseptic or Antiseptic Hands in Obstetric Practice.**—Briefly, Stewart's paper contends that the vagina is a sterile canal and to reach it we pass through a contaminated ring, the vulva. To do this by introducing an aseptic finger means contamination of both finger and canal. To introduce an antiseptic finger means the contamination of neither. Therefore the antiseptic finger or hand is the best for obstetric purposes.

Lancet Clinic, Cincinnati

December 30, CVI, No. 27, pp. 671-696

18 Mucous Glands of Bile Ducts and Gall-Bladder. B. Holmes, Chicago.
19 Hemorrhage in Typhoid. W. F. Boggess, Louisville, Ky.
20 Ancient Physicians and House Doctors. T. C. Minor, Cincinnati.

January 6, CVII, No. 1, pp. 1-26

21 The Social Evil. G. F. Lydston, Chicago.
22 *Operative Treatment of Gonorrheal Epididymitis; Sixty-Three Cases. F. R. Hagner and H. G. Fuller, Washington, D. C.

22. Abstracted in The Journal, Nov. 4, 1911, p. 1557.

Archives of Ophthalmology, New York

January, XLI, No. 1, pp. 1-96

23 Advantages of Preliminary Capsulotomy Especially in Immature Cataracts. H. E. Smith, Norwich, N. Y.
24 *Noguchi's Cutaneous Luetin Reaction and Its Application in Ophthalmology. M. Cohen, New York.
25 Detailed Report on 358 Cataract Extractions Performed at Jullundur, Punjab, India, in October, 1909, at Col. Henry Smith's Clinic; with Complete Statistical Tables. D. T. Vail, Cincinnati.
26 Mixed Tumor of Lachrymal Gland. G. H. Knapp, Cincinnati.
27 Individual Differences of Normal Ciliary Body. . C. Hess, Würzburg.

24. **Noguchi's Cutaneous Luetin Reaction.**—In forty-six out of sixty cases, or 76.66 per cent. tested by Cohen, the cutaneous reaction corresponded either with clinical evidence and Wassermann together or with one of them separately; and in fourteen out of sixty cases, or 23.5 per cent. the cutaneous test did not correspond with clinical evidence and Wassermann together. He concluded, therefore, that the luetin test, which is performed by injecting intradermatically a sterile emulsion containing killed *Spirochaetæ pallidæ* obtained from pure culture, will probably prove to be a valuable aid in the diagnosis of syphilis. Thus far the test has been absolutely harmless in 170 cases which were inoculated during the past five months. There having been no reactions in 94 per cent. of cases considered nonsyphilitic and only mild and atypical reactions in the remaining 6 per cent., the test appears to be of considerable negative value. In the present experimental stage of the study of the luetin test, a positive reaction is strong presumptive evidence of the existence of syphilis. The luetin test was positive in ten cases regarded clinically as syphilitic in which, presumably because of previous antisyphilitic treatment, the Wassermann was negative.

New York Medical Journal

January 6, XCV, No. 1, pp. 1-52

28 Vertigo from Standpoint of General Practitioner and Otologist. E. B. Dench, New York.
29 Hygienic and Economic Features of East River Homes Foundation. H. L. Shively, New York.
30 Primary Degeneration of Pyramidal Tract. A. Gordon, Philadelphia.
31 Relative Merits of Spa Treatment of Heart Troubles at Bad-Nauheim and in America. L. F. Bishop, New York.
32 Treatment of Stomach Diseases at Carlsbad and Wiesbaden. H. G. Watson, New York.
33 *Saratoga Springs, History; Origin; Chemical Constituents; General Therapeutic Action. D. C. Moriarta, Saratoga Springs, N. Y.
34 *Saratoga Springs; Specific Clinical Indications. G. F. Comstock, Saratoga Springs, N. Y.

35 Hypertrichosis; Its Treatment With Roentgen-Ray. S. Stern, New York.
36 *Comparative Study of Wassermann and Weil Cobra Venom Reactions for Syphilis. H. J. Schwartz, New York.

January 13, XCV, No. 2, pp. 53-104

37 *Effect of Tuberculin Treatment on Leukocytic Picture. M. Solis-Cohen and A. Strickler, Philadelphia.
38 Evolution of Operating Table; Additional Data. W. S. Bainbridge, New York.
39 Case of Thoracic Tumor and Aneurysm of Descending Thoracic Aorta, Treated With Salvarsan. G. R. Satterlee, New York.
40 *New Muscle Resection Operation for Squint. R. G. Reese, New York.
41 Urasol (Acetylmethylendisalicylic acid) in Rheumatism. L. Ott, Philadelphia.
42 Combination of Autopsy Tray and Warming Stage to Facilitate Bleeding of Rabbits from Postauricular Vein. G. A. Rueck, New York.
43 Present Status of Gonococcus Infection. R. M. Rawls, New York.
44 Ocular Manifestations Associated with Some Forms of Chronic Cyanosis. T. B. Holloway, Philadelphia.
45 Periamygdalar Suppuration. N. Settel, New York.
46 Deep Penetration of Thigh by Crochet Needle. F. Griffith, New York.

33. **Saratoga Springs.**—The origin of the springs at Saratoga has been discussed at various times by learned chemists and geologists, often with totally diverse theories. To Moriarta's mind, the important feature in the discussion is the origin of the carbonic acid gas. There is free carbonic acid gas in the Saratoga water and Moriarta says it is rational to conclude that water first charged with this gas flows over or through the earth or rocks having carbonates of the alkaline earths exposed; and that they are thus converted into bicarbonates and dissolved and taken up because of the excess of gas in the water. A wonderful feature of these waters is that the chemicals should occur so uniformly. The character of the water is probably determined by the particular chemicals existing in the channels of earth through which, or over which this carbonated water finds its way.

The trouble with the mineral springs at Saratoga began some fifteen years ago, when commercial industries began collecting the gas from the spring waters, condensing it, and shipping it for the market. To meet the demands for the gas, deeper pumping was resorted to, and as the demand continued to increase, larger plants were built and more powerful pumps were installed. Finally, deep water gang pumps were set up, pumping in all 1,000 gallons a minute, continuously night and day, the gas collected, the water wasted. The water wasted at these gas plants has been repeatedly analyzed, and the chemicals have been found to exist always in the same relative proportion, though not the same in quantity as in the original analysis; the few grains' difference a gallon in the total salts is due, in Moriarta's opinion, to the lesser quantity of gas in the water when obtained hundreds of feet below the surface of the earth. Naturally, water 500 feet below the earth's surface would not contain the same amount of gas in solution as if the water were flowing at the surface. The legislature has now prohibited the pumping of water from these wells to secure the gas. Recent analyses of the spring waters show that they have the same qualities as formerly. With the genuineness of the mineral waters certified to by the state, Moriarta says there can be no further question concerning their therapeutic value, and now that this basic essential is settled, Saratoga Springs compares favorably with any of the European spas.

The bathing in mineral waters at Saratoga is quite as effective therapeutically as at any foreign spa, judging from the chemicals and gas shown by the analysis of the waters. Nevertheless, it has never taken on the popular or social side at Saratoga, as abroad, because the mineral water bathing facilities are limited and lack the elegance and luxury of appointment of the foreign pavilions. Moriarta suggests that physicians sending patients to Saratoga for their health should emphasize to such patients the necessity of following a regulated regime, for there has been in his patients an almost universal tendency toward excesses in drinking the mineral waters and alcoholic beverages, as well as toward overindulgence in rich and highly seasoned foods.

34. **Saratoga Springs: Specific Clinical Indications.**—Comstock says that the Saratoga mineral springs are divided for therapeutic purposes into the alkaline saline group. They vary in strength and some of them contain sufficient iron to be of value medicinally. There are also sulphur springs. To obtain the best results in using waters it is obvious that no hard and fast rules can be laid down, but it is essential that they should be drunk at the spring itself to get them at the temperature at which the waters leave the earth, and in their freshest state when they are not only more efficacious but more palatable.

A proper discrimination must be made in prescribing the waters, for like any drug they may produce harm as well as good, and it is only in those cases to which an individual water is adapted and properly taken, that we can expect to see the wished-for result. Indiscriminate drinking, especially indiscriminate mixing, has done much harm in causing severe headache, loss of appetite, intestinal irritation with diarrhea, and a feeling of general malaise. Comstock cites instances to illustrate what the water can do for certain patients.

36. **Cobra Venom Reactions.**—A study of Schwartz' tables reveals that the Wassermann reaction is much the more sensitive in the early untreated stages of syphilis. In the primary stage the Wassermann test gives a positive reaction in 73.9 per cent. of the cases, the Weil only 54.3; in the early active cases, with little or no treatment, the Wassermann test is positive in 96.8 per cent., the Weil in 67.1; in the early latent cases, with little treatment, the Wassermann test is positive in 90 per cent., the Weil in 75 per cent.

In the later untreated stages of the disease the opposite condition obtains, namely, the Weil test is more sensitive than the Wassermann. In the late active cases, with little or no treatment, the Wassermann test is positive in 77.5 per cent., the Weil in 81.6; in the latent untreated cases the Wassermann test is positive in 34.7 per cent., the Weil in 76.3. In the treated cases the Weil reaction is much the more sensitive throughout. In other words, the Weil reaction persists much longer after mercurialization and therefore offers a further diagnostic and therapeutic test. Schwartz has compared the two reactions in very few cases of syphilis treated with salvarsan but so far the results obtained have been the same as those obtained in cases treated with mercury. The Weil reaction seems to be specific for syphilis, with the sole exception of carcinoma. The Wassermann and Weil reactions do not run parallel, but are complementary to each other—one proving sensitive under conditions where the other fails. Schwartz, therefore, considers that the application of the two tests, both in the diagnosis and therapeusis of syphilis, is highly important.

37. **Tuberculin Treatment.**—Continuing their studies of the leukocyte picture in tuberculosis, the authors now report on the effect of the tuberculin treatment on the leukocytes as noted by them in six cases of pulmonary tuberculosis. They believe that it is possible that the effect on the blood-picture will show what cases are suitable for tuberculin treatment and whether the dose employed is correct, insufficient or excessive. The age of the patient, the stage of the disease and the amount of lung involvement may be factors in the effectiveness of tuberculin therapy and in the changes in the proportions of the leukocytes that result from it. In all their cases there was an increase in the proportion of multinuclear cells with one and two nuclei during tuberculin treatment; in two cases, however, being preceded by a fall. In four of the six cases the lymphocytes were increased during tuberculin treatment, a slight intermediate fall, however, occurring in one after three months on the same dosage. Tuberculin given by the mouth in very small doses, very gradually increased, apparently produces an alteration in the proportions of the different forms of leukocytes.

40. **Muscle Resection Operation for Squint.**—The essential features of Reese's operation are as follows: 1. The line of incision is 6 millimetres from the circumcorneal vascular zone, thereby avoiding any marked reaction. 2. The free dissection of the muscle from all tissues of the globe makes the operation a myectomy. 3. The sutures are put in the scleral stump, avoiding traumatism by not sewing the sclera proper. 4. The manner of placing the middle suture precludes the possibility of its pulling out. 5. The "bridle" seen in advancements is avoided; motility is not limited and a better cosmetic effect

is given. 6. The muscle is sutured to its original insertion and not to the corneal margin. The same result is eventually obtained in advancements, as the belly of the muscle becomes attached to the original insertion. 7. The motility is increased in every case. 8. The manner of placing the forceps insures the holding of all the fibers and the groove on its blade indicates the middle of the muscle.

St. Louis Medical Review

December, V, No. 12, pp. 353-384

47 Man as Geologic Species in Western Hemisphere. A. S. Ashmead, New York.
48 Hypodermatic Hydrotherapy; Report of Cases. L. Weiss, Newark, N. J.
49 Appendicular Implications. J. J. Link, St. Louis.
50 Nausea of Astigmatism. A. S. Core, Chicago.
51 Bright's Disease. W. Blair, Glensfork, Ky.
52 Observations on Inguinal Hernia. L. Sexton, New Orleans.
53 Clinical Pathology of Idiopathic Erysipelas and Treatment. J. D. Bloom, New Orleans.

American Journal of Diseases of Children, Chicago

January 3, No. 1, pp. 1-68

54 *Studies on Infant Nutrition. A. M. Courtney, New York.
55 Calcium Metabolism in Infantile Tetany; Report of Case. H. Schwarz and M. H. Bass, New York.
56 Report of Brain Cases. W. J. Butler, Chicago.
57 *Splenomegaly (Gaucher). M. S. Reuben, New York.
58 *Treatment of Pertussis with Vaccine. E. E. Graham, Philadelphia.
59 Resuscitation of Asphyxiated Infants by Insufflation Method of Meltzer and Auer. E. Plauchu, Lyons, France.

54. **Infant Nutrition.**—Careful analyses and experiments have led Courtney to the conclusion that the "hard" or "casein" curds represent remnants of food, principally of protein nature, that have escaped being digested. The exact mechanism of their formation as yet cannot be ascertained and they should be regarded as a peculiarity appearing in course of imperfect conditions of digestion. The curds are not pathognomonic of any definite pathologic condition. The loss of food occasioned by their formation and the impairment of the general nutrition resulting from it is insignificant. In attempting to correct the state of digestion one should be guided by the general rules of infant feeding, paying only secondary attention to the appearance or disappearance of curds from the stools.

57. **Splenomegaly.**—Reuben reports the history of a family, four members of which suffer from a type of splenic enlargement usually designated as that of Gaucher. Father and mother are both living and well; there is no tuberculosis in the family; nor could any luetic history be obtained. The mother has given birth to four children, and has had no miscarriages or stillbirths. Anna, the oldest child, is 11 years old. Lilly died in 1909 at the age of 8; Freda is 9 years old, and Max, the youngest, is 4 years old. Wassermann reaction of mother negative.

58. **Treatment of Pertussis.**—Of the twenty-four cases reported by Graham, which were treated with a specific lymph vaccine, seven were apparently not benefited by the treatment, the disease evidently pursuing its usual course in about 29 per cent. Seventeen patients, or about 71 per cent., were apparently benefited by the treatment. Graham believes the dose could, and should, be increased beyond 40 million, especially for severe cases; 60, 80 or 100 million will probably be a more efficient dose. The result obtained in these twenty-four cases warrants, in his opinion, a more extensive trial of the vaccine. The vaccine was prepared by growing the Bordet-Gengou bacillus.

Journal-Lancet, Minneapolis

January 1, XXXII, No. 1, pp. 1-28

60 Smallpox and Chickenpox. H. W. Hill, Minneapolis.
61 Removal of Lens in Its Capsule in Cataract Cases. H. A. Beaudoux, St. Paul.
62 Angiomata of Antrum of Highmore. E. F. Reamer, Mitchell, S. D.
63 Cervical Rib. M. S. Henderson, Rochester, Minn.
64 Rolling Down of Retracted Tendons Following Accidental Division. A. C. Strachauer, Minneapolis.

Journal of Medical Research, Boston

December, XX, No. 2, pp. 263-408

65 Pure Cultures of Amebæ Parasitica in Mammals. A. W. Williams, New York.
66 *Identity in Dog and Man of Sequence of Changes Produced by Functional Activity in Purkinje Cell of Cerebellum. D. H. Dolley, Chapel Hill, N. C.
67 *Relative Importance of Bovine and Human Types of Tubercle Bacilli in Different Forms of Human Tuberculosis. W. H. Park and C. Krumwiede, New York.
68 *Reaction Curve in Glycerin Broth as Aid in Differentiating Bovine from Human Type of Tubercle Bacillus. M. Grund, New York.
69 *Fatty Compounds as Factor in Etiology of Appendicitis. B. V. Anthony, Cincinnati.
70 Regeneration of Renal Epithelium in Intact Cat Kidney. W. deB. MacNider, Chapel Hill, N. C.
71 *Calcification and Ossification. H. Gideon Wells, H. F. Holmes and G. R. Henry, Chicago.
72 Case of Cerebellar Abscess with Isolation of Micrococcus Cereus Albus. H. T. Karsner, Philadelphia.
73 Absorption of Albumin Without Digestion. E. V. N. Van Alstyne and P. A. Grant, New York.

66. **Purkinje Cell of Cerebellum.**—Dolley agrees with Marinesco that the chromatic substance is the immediate source of energy, in his term, a kinetoplasm. But the chromatic substance is not merely an independent cytoplasmic derivative, however highly it be esteemed as a "superior" protoplasm. The elaboration and discharge of chromatin and its transmutation into the energy of work represent in themselves the integral activities of the nerve cell. To this end the whole cell integrates; this is its single response to any stimulus. Anatomically, specialization would seem to be a more elaborate and delicate mechanism to accomplish the same thing more rapidly and more efficiently. The liberation of the energy from this source manifests itself, whether directly or through a more indirect influence, as the work of the cell, its functional expression. Certainly, the discharge of chromatin is the basis of function and in its successive stages the index of functional capacity.

67. **Bovine and Human Types of Tubercle Bacilli.**—The results of the examination of various cases showed conclusively that infection with bovine tubercle bacilli in New York City and its vicinity is essentially a disease of children and a serious menace to life in infants. Because of this, the authors decided to examine additional material, especially from fatal cases of tuberculosis in children. These additional cases have given results closely approximating those already published and, therefore, serve to verify the reliability of these figures. They conclude that bovine tuberculosis is practically a negligible factor in adults. It very rarely causes pulmonary tuberculosis or phthisis, which causes the vast majority of deaths from tuberculosis in man and is the type of disease responsible for the spread of the virus from man to man. In children, however, the bovine type of tubercle bacillus causes a marked percentage of the cases of cervical adenitis leading to operation, temporary disablement, discomfort and disfigurement. It causes a large percentage of the rarer types of alimentary tuberculosis requiring operative interference or causing the death of the child directly or as a contributing cause in other diseases. In young children it becomes a menace to life and causes from 6.33 to 10 per cent. of the total fatalities from this disease.

68. **Reaction Curve in Glycerin Broth.**—Broadly speaking, Grund says, the reaction curve in glycerin broth divides tubercle bacilli into two types. The bacilli which possess a low degree of virulence for rabbits and the power to grow well on glycerin media in the early generations, produce one type of reaction curve, while those which are virulent for rabbits and which, in the early generations grow slowly and with difficulty on glycerin media, form the other type of curve in glycerin broth. There is no constant relation between irregularities of culture and virulence on the one hand and irregularity of the glycerin reaction curve on the other. Some viruses which culturally and in virulence showed nothing unusual have given very atypical curves, while perfectly normal reaction curves were produced by viruses which from cultural and virulence tests could not be called quite typical. The glycerin reaction curve is undoubtedly a valuable corroborative evidence of a division of tubercle bacilli into two types. Its value is lessened, however, by the number of irregular and atypical reactions encountered, while as a practical aid in determining the type of an individual virus, it is also much handicapped by the length of time required.

69. **Fatty Compounds in Appendicitis.**—Anthony agrees with Owen T. Williams that one of the factors in the cause of appendicitis may be the laying down of soaps and other insoluble fatty compounds in the mucous membrane and submucosa of the appendix. As judged by the staining reactions of Scharlach R., nile blue sulfate, silver nitrate and osmic acid

applied to a set of forty-eight appendices by Anthony, fatty acids and calcium soaps predominate in the acute and chronic forms of appendicitis, while only neutral fats and slight amounts of fatty acids occur in the controls. In this series the presence of calcium soaps and fatty acids seems to increase with the age of the patient, especially between twenty-five and fifty years.

71. **Calcification and Ossification.**—The authors conclude that the calcification of renal epithelium and tube casts which is experimentally produced by temporary anemia and by certain poisons, is probably analogous to calcification of tissues with lime salts direct from the blood. These epithelium and tube-cast deposits contain no demonstrable carbonate and seem to contain calcium only as phosphate. When the necrosis and calcification involve the interstitial tissues, carbonate can be demonstrated; here the calcium probably comes from the blood rather than from the urine. Permanent ligation of the ureter alone leads to slight deposition of calcium. Ligation of the ureter usually decreases the amount of calcification which is produced by temporary anemia or poisoning, but whether by decreasing urinary secretion or by circulatory disturbances, is not determined. Demonstrable deposition of calcium may be present as early as thirty-six hours after a temporary anemia of one hour. Permanent ligation of the renal artery causes extensive calcification of the kidney within a few days; ligation for seven weeks led to a deposition of .162 gram CaO in a kidney, so that about 25 per cent. of the dry weight of the kidney was calcium phosphate. Thrombus formation with marked calcification of the thrombus can take place in six days.

Journal of South Carolina Medical Association, Charleston

December, VII, No. 12, pp. 431-462

74 Eight Cases of Pulmonary Tuberculosis Treated by Injecting Nitrogen into Pleural Cavity. M. E. Lapham, Highlands, N. C.
75 Old Tuberculin as Factor in Diagnosis of Obscure Eye Troubles. C. Torrence, Union, Tenn.
76 Woman Physician. S. Brunson, Elloree, S. C.

Journal of Arkansas Medical Society, Little Rock

December, VIII, No. 7, pp. 179-216

77 Etiology and Pathology of Appendicitis. J. P. Runyan, Little Rock.
78 Symptomatology and Diagnosis of Appendicitis. W. V. Laws, Hot Springs.
79 Medical and Surgical Treatment of Appendicitis. O. Gray, Little Rock.
80 Headaches of Ocular and Nasal Origin. J. G. Watkins, Little Rock.

Buffalo Medical Journal

December, LXVII, No. 5, pp. 243-304

81 One Hundred Radical Mastoidectomies. G. F. Cott, Buffalo.
82 Statistic Studies of Cures of Inebriety. T. D. Crothers, Hartford, Conn.
83 Vicious Union of Shaft of Femur. E. L. Bebee, Buffalo.
84 Treatment of Chronic Gonorrhea. C. W. Bethune, Buffalo.

January, LXVII, No. 6, pp. 305-364

85 Cancer of Gastro-Intestinal Tract. W. J. Mayo, Rochester, Minn.
86 *Use of Intra-Articular Silk Ligaments for Fixation of Loose Joints in Residual Paralysis or Anterior Poliomyelitis. B. Bartow and W. W. Plummer, Buffalo.
87 Silver Iodid in Urethritis and Cystitis. J. A. Gardner, Buffalo.

86. **Silk Ligaments.**—The material employed by Bartow and Plummer for the artificial ligament used in this connection was the parafined silk tendon, prepared in the manner suggested by Lange for tendon elongation. Number 20 Corticelli twisted silk was the size used for both knee and ankle in the earlier operations. Its tensile strength, after operation, was roughly estimated to be sufficient to sustain a direct strain of 125 pounds. For the fixation of the feet in very young children we have recently used No. 14 size with satisfactory effect and greater ease of introduction. In those cases also a very strong Kelly's trachelorrhapy needle has been used to introduce the silk, in place of the hand drill, greatly simplifying this detail in the technic. The authors are very enthusiastic over the results they have obtained in their cases. They believe that this procedure has a place of value among the numerous methods in use for the fixation of paralytic joints. It does not, like arthrodesis, involve mutilation of the joint, and does not, like the latter, cause ankylosis. It appears practicable also to employ it in complete paralysis of the leg and foot groups in children of ages unsuitable for arthrodesis. As it produces only limitation of movement, the possibility of regeneration occurring in some of the impaired muscle groups would not be interfered with as in a joint which had been completely ankylosed. There is little to apprehend from the introduction into large joints of an aseptic foreign substance like the silk ligament. While this procedure would occasionally be available in place of tendon transposition and tendon elongation, it appears probable that it may, to a large extent, become a substitute for arthrodesis. In the milder forms of paralytic deformity of the feet, it suffices for holding them in good functionating positions, without transposition of intact muscles, during a period when regeneration may be expected to occur. Its simplicity as compared with the problems of tendon transposition and tendon elongation, is one of the advantages which would often recommend it for preference. It also offers an opportunity to repeat the operation in the same joint, if necessary, without detriment to the improvement which may have followed an earlier attempt to limit its movement. If, on the other hand, it were evident that this procedure restrained the joint detrimentally in its movements, or the recovery of function or development, it would be easy to remove the restraint exercised by the silk ligament by dividing it anywhere in its continuity, or even withdrawing it altogether. No tendency has thus far been shown for the silk ligaments to cut their way out of the joint, or cause sloughing of the tissues in contact with them. They become looser, however, with time and the use of the limb. As they cannot stretch, the chief source of looseness is probably from absorption of the bone in which they are buried at points where tension is greatest.

Delaware State Medical Journal, Wilmington

December, III, No. 1, pp. 1-26

88 Alcohol and Public Health. G. F. Jones, Georgetown, Del.

Medical Fortnightly, St. Joseph, Mo.

December 25, XXXX, No. 12, pp. 519-546

89 Abdominal Drainage. C. H. Blickenderfer, Shawnee, Okla.
90 Medical Education. R. O. Braswell, Fort Worth, Tex.
91 Conjunctival Flap. R. H. T. Mann, Texarkana, Ark.-Tex.

Journal of Abnormal Psychology, Boston

December, VI, No. 5, pp. 329-400

92 Nature of Sleep. I. H. Coriat, Boston.
93 Contrary Suggestion. R. Macdougall, New York.

Bulletin of Johns Hopkins Hospital, Baltimore

January, XXIII, No. 251, pp. 1-32

94 *Ophthalmo Reaction in Typhoid. C. R. Austrian, Baltimore.
95 Strauss Test for Hepatic Insufficiency. J. W. Churchman, Baltimore.
96 *Observations on Sepsis and Antisepsis in Medicine. W. S. Thayer, Baltimore.
97 Sewerage System of City of Baltimore. C. W. Hendrick, Baltimore.

94. **Ophthalmo-Reaction in Typhoid.**—In seventy-five cases of typhoid studied by Austrian the ophthalmo-test was positive in seventy-one and negative in four. Of the nineteen cases examined during the first week of the disease, all but one reacted positively and in that case repeated blood-cultures and agglutination reactions were negative. Of the twenty-five patients tested during the second week of the disease, every one gave a positive reaction. One of these cases showed a negative reaction on the eighth day and a positive reaction on the twelfth day. Of the fifteen cases in the third week of the disease two failed to give the typical response. One of these cases had a negative blood-culture and Widal reactions; the other had a positive Widal reaction on the same day that the eye test was tried. Seven patients were examined during the fourth week of the disease and all reacted positively; and of the four patients in the fifth week all developed the typical response except one and that one had completely recovered. Two patients in the sixth week and one in the eighth week showed positive reactions. The earliest appearance of the reaction was on the third day of the disease, the latest on the fifty-seventh day. Of fifteen patients, convalescent and afebrile, only three still gave the specific response. In four patients with a relapse the reaction was positive early in the stage of reinfection. Inflammation of the conjunctiva was noted as early as one hour after the application of the antigen, the average interval before it developed

being two and a half hours. The maximum changes were usually apparent by the sixth hour, occasionally as early as the second hour, and in one case they were delayed until the sixteenth hour. The average duration of the palpebral injection was forty hours, the extremes being twenty-five and 240 hours. The intensity of the reaction showed no constant variation with the severity of the infection or with the stage of the disease, except that it was more constantly present and more marked in the febrile, greatly intoxicated patients. Especially worthy of note was the absence of symptoms, even when the inflammatory response was very intense; and the tendency of the most marked response to be localized in the palpebral conjunctiva of the lower lid and in the caruncle. The results of the ophthalmo-reaction and of the blood-cultures showed a striking similarity. In many instances the former was reported positive before the *Bacillus typhosus* was identified in cultures and in a greater number of cases the appearance of a positive eye test antedated by many days a positive agglutination reaction. Further, in three cases clinically typhoid the eye test antedated by many days a positive agglutination reaction. Further, in three cases clinically typhoid the eye test was positive, whereas repeated blood-cultures and Widal reactions gave negative results. Widal reaction was positive as early as the ophthalmo-reaction in only 23 per cent. of the cases. A total of 190 persons, normal or ill with diseases other than typhoid, were examined for conjunctival sensitiveness to "typho-protein." Many (eighty-four) of them were febrile, and, in the case of several, a tentative diagnosis of typhoid was made at the time the test was given. In this latter group especially the value of the ophthalmo-reaction as a diagnostic aid was apparent. In the examination of fifty-six pathologic conditions in no instance was a reaction like that seen in typhoid noted. In two cases only did a reaction develop which was difficult to interpret. From both patients a history of previous infection with the *Bacillus typhosus* was elicited and in both the injection of the palpebral conjunctiva of the caruncle was only of moderate grade and subsided in less than eighteen hours. The striking dissimilarity between the conjunctival reaction following the instillation of the test solution into the conjunctival sac of persons having typhoid and of those ill with other diseases or normal, Austrian says, must be apparent, and speaks strongly for the specificity of the reaction. A solution of one-third to one-half of a milligram of "typho-protein" in a drop of water, when instilled into the conjunctival sac of the patient ill with typhoid causes a typical inflammatory reaction. The most constant results are obtained when the "protein" is derived from numerous different strains of the bacilli. The typical response shows definite characteristics: It is limited to or is maximal in the palpebral conjunctiva of the lower lid and of the caruncle. The advantages of the test are its simplicity, the fact that it can be applied and interpreted by the physician, the rapidity with which it becomes manifest and the absence of any discomfort to the patient.

96. Abstracted in The Journal, Oct. 28, 1911, p. 1485.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

December, XIV, No. 12, pp. 705-782

98 Fluorescence Excited Within Human Tissues as Method of Treatment. W. J. Morton, New York.
99 Panhysterocolpectomy for Hernia Vaginæ. A. E. Gallant, New York.
100 *Status of Midwifery in Pennsylvania and Midwives of Philadelphia. S. W. Newmayer, Philadelphia.
101 Common Gastric Diseases. J. O'Malley, Philadelphia.
102 *Hypoadrenia as Cause of Death in Infections, and Its Treatment. C. E. de M. Sajous, Philadelphia.

100. Abstracted in The Journal, Jan. 6, 1912, p. 60.

102. Abstracted in The Journal, June 3, 1911, p. 1678.

American Journal of Urology, New York.

December, VII, No. 12, pp. 459-510

103 *Tubercular Epididymitis; Analysis of 153 Cases. J. D. Barney, Boston.
104 Preputial Redundancy; Operative Technic for Its Correction. W. W. Townsend, Rutland, Vt.
105 Suprapubic or Perineal Prostatectomy. A. C. Stokes, Omaha, Neb.

103. Appeared in *The Boston Med. and Surg. Journal*, Dec. 14, 1911.

Boston Medical and Surgical Journal

January 11, CLXVI, No. 2, pp. 35-74

106 *Operative Measures for Tubercular Knee Affections. H. W. Marshall, Boston.
107 Two Cases of Intracranial Cerebral Hemorrhage in New-Born Relieved by Operation. C. C. Simmons, Boston.
108 Infant Feeding Au Naturel. S. Delano, Boston.
109 *Case of Mild Anterior Poliomyelitis. W. N. Bullard, Boston.
110 Two Cases of Poliomyelitis Mistaken for Neuritis. T. A. Williams, Washington, D. C.

106. **Operative Measures for Tubercular Knee Affections.**—Well-developed, chronic, progressive cases of tuberculosis of the knees, Marshall says, can be treated most satisfactorily by excising such joints. The surgical skill needed in resections is simple enough to enable individuals with average experience and dexterity to perform them successfully from a surgical standpoint. Among eighteen patients whose histories are analyzed ten now have serviceable legs or stumps and lead active lives. Three died eleven months, two years, and six years and six months, respectively, after their operations. Two have so much pain in their legs at present that they are unable to work, and one works fairly regularly in spite of painful symptoms and partial non-union of the bones. One is incapacitated by tuberculosis of the spine, which developed after the knee became solidly united, and the remaining patient has nearly recovered and has departed for Italy, so that his condition is not accurately known. Among fifteen patients who are now alive, thirteen have solid union of femur and tibia and two have imperfect union after one year and eleven months, and three years and three months, respectively. Two of the fifteen have discharging sinuses after one year, and three years, respectively; and none have deformity from union in faulty position after operation. Seven of the ten patients with serviceable legs leading active lives were treated by resections, and among these seven resections, the average age was 32 years, and the average length of time since operation six years and nine months. The longest time since operation has occurred with a man 43 years old and has been twelve years and one month. The oldest individual with a successful resection is a woman of 44 years who was operated on four years and one month before the latest report was received.

Preliminary arthrotomies with excision of villi were performed in three of the eighteen cases. One of these refused further treatment and had his leg amputated at the thigh nine months later by his local surgeon and died six years and six months after the arthrotomy. The second had a resection in three months, and two years later he went to Italy. The third patient required two resections at intervals of one year and three months, and two years and three months, after the first arthrotomy. This latter patient is the only one in the series on whom two resections have been made. He now has fairly solid union after one year with the leg still held in a plaster cast and sinuses subsiding in their discharge of pus.

109. **Mild Anterior Poliomyelitis.**—There are several interesting points in Bullard's case. A child 8 years old had been thoroughly exposed to contagion from her brother, ill with anterior poliomyelitis. The patient developed an illness exactly one week later than her brother. Her illness, although the high temperature lasted but a short time, was a severe one, weakening the patient, who was a vigorous child, and at the time of the attack and for some time previously had been in perfect health, so that she was in bed fourteen days and was still weak at the end of three weeks. There was in this attack no important gastro-intestinal disturbance. The patient was for two days unwilling to eat and there was constipation. Once when pressed to eat she vomited, but this was evidently due to a temporary condition, and was a secondary symptom. The general hypersensitiveness of the nervous system was very marked. The absence of paralysis is a significant feature. The brother had a typical case of anterior poliomyelitis with paralysis at first of all the limbs; at the present time paralysis of the lower extremities remains.

American Medicine, Burlington, Vt.

December, VI, No. 12, pp. 621-694

111 Freud's "Apprehension Neurosis." S. A. Tannenbaum, New York.
112 Freud's Theory of Compulsion Neurosis. A. A. Brill, New York.

113 Freud's Theory of Dreams. H. W. Frink, New York.
114 Routine Practice of Psycho-Analysis and Its Related Subjects. B. Rosenbluth, New York.
115 Senile Rheumatism. I. L. Nascher, New York.

Ophthalmic Record, Chicago

December, XX, No. 12, pp. 711-766

116 Case of Hyaline Degeneration of Cornea. W. Reber, Philadelphia.
117 Modified Trephine for Fergus-Elliot Operation in Glaucoma. L. W. Fox, Philadelphia.
118 Copiopia Hysterica. W. E. Shahan, St. Louis.
119 So-Called Case of Idiopathic Neuroretinitis with Spontaneous Recovery. J. S. Wyler, Cincinnati.

Southern California Practitioner, Los Angeles

December, XXVI, No. 12, pp. 579-624

120 Inconclusiveness of Sputum Content in Cases of Pulmonary Tuberculosis. R. L. Cunningham, Los Angeles.
121 Diphtheria Bacillus in Regard to Its Relation to Public Health. A. H. Jones, Los Angeles.
122 Extrauterine Pregnancy. W. A. Holt, Globe, Ariz.
123 Studies of Malaria in Panama: Pernicious Malarial Fever. W. V. Brem, Los Angeles.

Interstate Medical Journal, St. Louis, Mo.

December, XVIII, No. 12, pp. 1161-1250

124 Acute Poliomyelitis; Diagnosis. D. Hecht, Chicago.
125 Treatment of Influenza. F. S. Meara, New York.
126 Contract Practice in Foreign Countries. W. B. Chamberlin, Cleveland.
127 Gumma of Sternum. L. Clendening and E. H. Skinner, Kansas City, Mo.
128 Tuberculin Reactions and Their Comparative Value as Diagnostic Aids. O. H. Benker, St. Louis.

Medical Record, New York

January 6, 81, No. 2148, pp. 1-50

129 Compensation by Displacement of Thoracic Viscera in Pulmonary Tuberculosis. C. L. Leonard, Philadelphia.
130 Myelocystocele. Spina Bifida Occulta. H. B. Sheffield, New York.
131 Acidosis Following Nephrectomy. J. B. Squier, New York.
132 Martinus Van Hille and His Treatment of Gonorrhea and Syphilis in Seventeenth Century. J. B. Stein, New York.
133 Postoperative Treatment of General Suppurative Peritonitis. A. Judd, New York.
134 Practical Points in Diagnosis and Treatment of Diphtheria. A. Levinson, Chicago.
135 Retrobulbar Optic Neuritis. S. H. Brown, Philadelphia.

Journal of Maine Medical Association, Portland

January, II, No. 6, pp. 571-615

136 The Physician Himself as a Business Man. W. I. Blanchard, Phillips.
137 Dynamic Energy of Man. J. D. Ames, Norridgewock.
138 Nutrition and Metabolism. H. A. Milliken, Hallowell.

Bulletin of Manila Medical Society, P. I.

November, III, No. 11, pp. 182-195

139 Use of Salvarsan in Military Service. W. Shields, Manila.
140 Wassermann Reaction in Diagnosis and Treatment. C. H. Treuholtz, U. S. Army.

Military Surgeon, Washington, D. C.

December, XXIX, No. 6, pp. 607-727

141 Sanitation of Maneuver Camp at San Antonio, Tex. P. F. Straub, U. S. Army.
142 Problem of Rocky Mountain Spotted Fever. W. C. Rucker, U. S. P. H. and M.-H. S.
143 Medical Service of French Army in Campaign. P. Février.
144 A New Stretcher. W. A. May.
145 Venereal Prophylaxis. D. C. Howard, U. S. Army.
146 Operation for Inguinal and Femoral Hernias. Routte.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

December 30, No. 2664, pp. 1685-1720

1 *Varieties of Colitis and Their Diagnosis by Sigmoidoscopic Examination. P. L. Mummery.
2 *Vicious Circles Associated with Diseases of Skin. J. B. Hurry.
3 Epidemic Poliomyelitis Occurring at Stowmarket, Suffolk. S. Hillier.
4 *Epidemic Paralysis in Hampshire. G. F. England.
5 *Epidemic Anterior Poliomyelitis in South Derbyshire. J. H. Moir.
6 *Retention of Fetus in Abdominal Cavity for Forty Years. E. Weatherhead.

1. **Varieties of Colitis.**—Study of a large number of these cases, both by a routine sigmoidoscopic examination and during operations has led Mummery to the conclusion that chronic mucomembranous colitis is not, as usually described, a clinical entity, but is a collection of symptoms which, owing to want of better knowledge as to the pathology and physiology of the colon, have been placed together and labeled as a disease; whereas, in fact, these symptoms may result from a large number of entirely distinct pathologic lesions. Thus, he has seen cases in which all the characteristic symptoms of chronic mucomembranous colitis were found on careful investigation to be due to one or other of the following causes: Kinking and partial obstruction of the colon from adhesions or pericolitis; dilatation of the colon and visceroptosis; chronic appendicitis; inflammation or displacement of the uterus or appendages; previous operations on the abdomen resulting in adhesions; cancer of the colon; fibrous stricture of the colon; aneurysm of the abdominal aorta; floating kidney. Many of these conditions are only an indirect cause of the symptoms in that, by causing accumulation of fecal material in the colon, they set up pain and excessive mucus secretion. In addition to these cases in which a mechanical cause for the symptoms can be found, there is a certain proportion, which Mummery has found in his experience to be about 45 per cent., in which there is a definite chronic inflammatory condition of the mucosa of the colon. These cases, he says, are the only true cases of chronic colitis, in that they are the only cases in which a definite inflammatory condition exists. Mummery distinguishes three distinct types of inflammation of the mucosa: (1) The hypertrophic form. The mucous membrane appears swollen, due to submucous edema and is of a paler color than normal, with much sticky mucus. (2) The granular variety, in which there is a markedly granular appearance of the whole visible mucosa, accompanied by considerable inflammation, giving the whole a dusky red color. (3) A well-marked variety in which the visible mucosa looks as if it had been sand-papered. Mummery emphasizes that the diagnosis in many of these cases is very difficult, but much can be done by careful investigation of the stools, examination of the abdomen, and, more especially, by a systematic sigmoidoscopic examination of the pelvic colon. In cases of ulcerative colitis a sigmoidoscopic examination affords the only means of distinguishing this condition from cancer or villous tumor of the rectum, or from multiple papilloma of the rectum, conditions which exactly simulate ulcerative colitis in symptomatology. There are several other varieties which are seen occasionally and which it is important to distinguish. A rare but important form is hemorrhagic colitis. This is a variety of ulcerative colitis in which the whole mucosa of the colon becomes soft and spongy and remarkably hemorrhagic in appearance. It results in profuse bleeding and severe diarrhea. There is also severe toxemia, with high temperature. Most of the cases Mummery has seen have been due to a primary infection of the colon with the *Diplococcus pneumoniæ*, large numbers of these organisms being present in the stools in almost pure culture. The condition somewhat closely resembles enteric fever in symptomatology, but can be distinguished from it by the fact that blood is present in the stools from the first. The disease is very dangerous, but Mummery has had excellent results from appendicostomy. Another rare form of colitis is that due to infection by the bilharzia parasite.

2. **Vicious Circles in Skin Disease.**—The following classification of vicious circles associated with diseases of the skin is made by Hurry: 1. Circles associated with inflammatory disorders. 2. Circles associated with parasitic disorders. 3. Circles associated with neuroses. 4. Circles associated with the appendages of the skin, hair, nails, sweat and sebaceous glands.

4. **Epidemic Paralysis in Hampshire.**—England reports seven cases of acute disorder affecting the spinal cord and meninges which do not all conform to the usual type of epidemic acute anterior poliomyelitis, inasmuch as the intense pain in the back of the head and neck, the twitchings of the face, the retraction of the head, amounting in some cases to opisthotonos, the marked rigidity and continued pains in the limbs, the interference with the due control over the bladder and rectum, and, in several instances, the more or less rapid and complete recovery, are quite contrary to the usual experience in that disease.

5. **Epidemic Anterior Poliomyelitis in South Derbyshire.**—Of the twenty-five cases cited by Moir five were of the encephaloid type and proved fatal, death being due to respiratory

paralysis early in the disease, in one case six hours after the onset. In the remaining twenty cases, of the spinal type, death occurred in three and was due to respiratory paralysis in two. The remaining death occurred a month after onset from acute bronchopneumonia. This gives a total mortality of eight, or 32 per cent. Several cases, which were open to doubt, have been omitted from this analysis. The paralysis affected one leg in eleven cases, both legs in four cases, one arm in two cases, one arm and one leg in one, and all four limbs in two cases. Some of the cases bore a great resemblance to sunstroke and Moir is convinced that exposure to the sun or unaccustomed excessive heat is an important etiologic factor. In most of the cases under his observation, there was no proper means of isolation and in many there were large families of young children who escaped, though they came into more or less intimate contact with the victim. There was no evidence to show in what way the virus was transmitted in any case.

6. **Retention of Fetus in Abdominal Cavity.**—In the notes of a meeting held in September, 1872, just thirty-nine years ago, account is given of Weatherhead's case. In part the history is as follows: At the end of April, 1871, the woman had an attack of enteritis, relieved by opium. After this she thought herself pregnant, as she felt larger and had what she deemed the usual signs of childbearing. At the end of six months there was milk in the breasts. She thought she felt the movements of the child. At Christmas, which would be the termination of the supposed pregnancy, she had severe pains, none of them bearing down. The medical man who saw her found a tumor in the hypogastric region having all the appearance of a fetus in utero. He heard the placental murmur, not the fetal heart. He did not examine for ballottement. The catamenia returned May 3, and have been quite regular to the present time. There is now a very large tumor lying across the hypogastric region. On the left side this is extremely hard; on the right somewhat softer. There is no fluctuation. There appears to be a kind of sulcus in the middle of it. On examining per vaginam the os is very small, slightly open and appears fixed at the left side. The tumor can be distinctly felt through the uterine walls. The sound had not been passed and no examination made per rectum. In the early part of September, 1911, the patient began to suffer from diarrhea with raised temperature and gradually sank, dying about three weeks later. A post-mortem examination disclosed the following condition: The tumor consisted of a fetus lying in the bag of membranes, which were more or less completely calcified. It formed an ovoid mass, which filled up the greater part of the pelvic cavity, the broader end of the ovoid being uppermost. The adjacent coils of intestine were intimately adherent to the sac and had to be peeled off and the parietal peritoneum on the lower part of the anterior abdominal wall was also adherent. The uterus, flattened out by the tumor and atrophied, can be recognized lying in front of the lower part of the mass, with the inner ends of the Fallopian tubes and part of the broad ligament. There is no sign of any fibroid tumor. The fetus lies in the breech position, face looking forward and in the usual attitude of flexion of the head and extremities. The skin, where it is in contact with the calcified membranes, is for the most part adherent to them. As to the condition of the fetus, there is no calcification of any of the deeper tissues, but there is a good deal of calcareous deposit in the subcutaneous tissue and parts of the skin and according to some authors it would be classified as a lithopedion. The fetus has not undergone that process of dehydration which results in mummification, a condition which has sometimes been recorded in cases of long retention. All the parts are easily distinguishable. The substance of the fetus has a curious waxy or soapy consistency, suggesting that it may be partly converted into that rare material, adipocere. The umbilical cord is seen passing to the remains of the placenta, which is situated laterally on the right. As to the age to which the living fetus had attained before its death, judging from the history of the pregnancy, it ought to be nearly full term. The fingernails reach to the ends of the fingers, but not beyond; a tuft of well-grown hair is visible at one spot on the scalp. The weight, including the membranes, is 3¾ pounds. Weatherhead says it is probable that the primary rupture of the tube occurred at the so-called attack of enteritis mentioned in the early history of the pregnancy, apparently somewhere between the fourth and eighth weeks. The severe pains which the patient had at Christmas, about which time she expected her confinement, may probably have been associated with the onset of false labor, which would coincide with the death of the fetus.

Lancet, London

December 23, CLXXXI, No. 4608, pp. 1755-1820

7 Some Points in Heredity. R. C. Lucas.
8 Electro-Chemical (Ionic) Treatment of Certain Gynecologic Affections. S. Sloan.
9 Case of Ruptured Esophagus. D. W. Roy.
10 Fibroid Induration of Mediastinum Probably Syphilitic. W. Brander and J. B. H. Holroyd.
11 Carcinoma of Bowel. J. S. Manson.
12 *Type of Nervous Vomiting in Childhood. E. B. Smith.
13 Two Cases of Ectopic Pregnancy. W. M. Fergusson.
14 Several Attacks of Appendicitis in Appendix Situated in Sac of Scrotal Hernia; Operation; Recovery. C. H. James.

December 30, CLXXXI, No. 4609, pp. 1821-1829

15 Cancer of Rectum and Its Treatment. P. L. Mummery.
16 Radiography in Intestinal Stasis. A. C. Jordan.
17 Case of Ruptured Extra-Uterine Pregnancy, with Remarks on Diagnosis. I. B. Muirhead.

12. **Nervous Vomiting in Childhood.**—Smith describes a type of nervous vomiting occurring in children about the age of the second detention, which has received but little attention in modern text-books, is not uncommonly seen in the out-patient department of a children's hospital and is not infrequently overlooked. It is not periodic, but is of a persistent character; often, when untreated or when treated unsuccessfully, it may continue for many weeks. It occurs during a meal, or more usually directly the meal is finished, and is of frequent, if not of daily, occurrence. It is painless and effortless and neither preceded by any organic disturbance, nor followed by any ill-effects. No diet, no ordinary gastric sedatives, appear to influence it. But with all this, and this is a feature to which Smith draws special attention, the child seems neither to lose weight nor to suffer in any respect an alteration in its general appearance of well-being. This nervous phenomenon, however, while apparently inducing little or no change in the general health of the child, creates a great deal of distress in the minds of the relatives concerned and generally reflects very little credit on the therapeutics of the practitioner who fails to recognize its real nature. On the other hand, when diagnosed, a very simple remedy suffices in most instances to effect a cure. Observation of both parent and child is often of value. The mother is frequently of a neurotic temperament, one who suffers from headaches and backaches and has little or no control over her offspring. The child, sometimes thin, sometimes well-nourished, is frequently of a reserved and introspective nature. Occasionally the child is emotional and highly timid, one who cries on being undressed, or struggles and shrinks from any examination that involves a stethoscope or spatula. A review of the histories of these cases generally discloses the presence of other functional nervous disorders, such as enuresis, migraine and habit-spasm; or in some cases a rheumatic diathesis. The treatment resolves itself into an elimination of all causes that may aggravate the underlying nervous instability. Removal from unsuitable home surroundings and the application of a little firm moral control will often effect a cure. In obstinate cases the same treatment as is applicable to lienteric diarrhea, namely, small doses of arsenic and opium given just before meals, has, in the author's experience, always proved immediately efficacious.

Journal of Obstetrics and Gynecology of British Empire, London

November, XX, No. 5, pp. 211-267

18 Occurrence of Carcinoma in Cystic Teratomata of Ovary. H. Williamson and J. Barris.
19 Multilocular Ovarian Cyst Containing Teratomatous, Sarcomatous and Papillomatous Elements. M. J. Stewart and C. Eglington.
20 Case of Malignant Cystadenoma of Cervix Uteri. G. W. Fitz-Gerald.

Bristol Medico-Chirurgical Journal, London

December, XXIX, No. 14, pp. 289-344

21 Present Position of Surgery of Malignant Growths. C. A. Morton.
22 Household Syphilis (Syphilis Economica), with Observations on Acquired Syphilis in Infants. J. A. Nixon.
23 *Tea-Poisoning. N. Neild.
24 Cardiac Arhythmia; Five Cases. C. Coombs.
25 Herpes and Brachial Neuritis. G. M. Smith.
26 Bristol Medical Library. L. M. Griffiths.

23. **Tea-Poisoning.**—The commonest coexisting diseases, Neild says, are those which most frequently lead to excess in tea-drinking. First among these is oral sepsis, due to decaying stumps of teeth, septic gums and pyorrhea alveolaris. During the night the undisturbed incubation of bacteria in the mouth and the accumulation of their products creates a bad taste, that is removed for a time by an early-morning cup of strong tea; the more tannin present in the infusion the more efficient for the purpose. With this early cup of tea we have the best conditions for the rapid absorption of a poison. The solution is hot and concentrated, the stomach has had a long rest and it may be an hour or more before any food is taken. But the presence of a bad taste in the mouth is not the only cause of the craving for tea in these cases; the absorbed toxins from the septic trouble, both by their direct action on the nervous system and by the starvation of that system by the secondary anemia, produce a condition which urgently calls for the stimulant action of tea. The decomposition is also responsible for various disturbances of the digestion and the tea which is taken to relieve the trouble may in turn produce further disturbances on its own account. In women at the menopause nervous instability is a frequent cause of excess in tea-drinking; and although tea seems to brace the nerves for a short time, it also greatly aggravates certain of the symptoms. Among men, those whose occupations create thirst, with the marked exception of brewers' employees, are liable to become excessive tea-drinkers, although it is in sedentary occupations that the effects of tea excess are most rapidly produced. A very large amount of tea is often taken by those whose occupation makes them perspire freely, without producing any distressing symptoms. In the majority of cases of chronic tea-poisoning the symptoms come on very gradually during some months and then rapidly increase during the last few weeks or days before the patient comes under observation. Many of the symptoms are much more prominent and more rapidly produced where there is also sepsis in the mouth or constipation present, particularly the discoloration of the skin and the dyspepsia. Symptoms attributable to the colon are not uncommon, but a dilated colon was found only in a small number of the cases where it was looked for. The roughening of the back of the upper arm is not unusually common in tea-poisoning. The whites of the eyes are not discolored, thus distinguishing the discoloration from a slight jaundice. The hot flushes so frequent in tea-poisoning are, as one would expect, much more distressing at the menopause. Occasionally a patient will complain of polyuria. There is only one pathognomonic sign of tea excess, but it is not present in all cases; that is, the odor of the breath. It is that of musty old books. The cardiac symptoms are more akin to those of tobacco-poisoning than to those of alcoholism, the symptoms of nervous derangement predominating over the signs of muscular degeneration. In six cases of tea-poisoning Neild found that the blood-pressure is not much altered, although in one very severe case it was lowered. Arteriosclerosis is not more common in these cases than would be accounted for by its general frequency, yet the three types of the preliminary stage of arteriosclerosis, as set forth by Stengel, would cover the great majority, if not all, of the cases of chronic tea-poisoning. Some disturbance of the digestion is always present. Myasthenic or atonic dyspepsia may serve as a general hold-all for the symptoms of the indigestion from which these patients suffer. A frequent symptom is a peculiar "sinking sensation," that comes on with striking regularity about an hour and a half after having taken tea, whether with or without food. It comes on quite suddenly and begins with a feeling of movement or contraction at the pyloric end of the stomach. It is caused by excess of tea and yet this excess may consist of the only cup taken in the twenty-four hours, provided that the tea and its method of preparation are sufficiently bad. Constipation is by no means always present, but is usual, and when it does occur greatly hastens the onset of the severe symptoms. As is the case with other astringents, tea may sometimes cause diarrhea. Regulation of the bowels and an alkaline gentian mixture with nux vomica are most efficacious in treatment.

Annales de Gynécologie et d'Obstétrique, Paris

December, XXXVIII, No. 12, pp. 689-759

27 *Hypophysis Extract in Obstetrics. (La médication hypophysaire en obstétrique.) J. Parisot and A. Spire.
28 *The Prematurely Born. (Quelques considérations sur les diverses variétés de prématurés.) A. Herrgott.

27. **Hypophysis Extract in Obstetrics.**—Parisot and Spire review the experimental and clinical experiences on the physiology and pathology of the hypophysis which have been published in recent years, and add the conclusions from considerable experimental research of their own and observation of ten clinical cases. They gave hypophysis extract to four women in labor, hoping thus to rouse the uterus to better contractions; no effect was apparent in one case but in the others tardy contractions followed, although spontaneous delivery occurred in only one of the cases. In two cases of abortion the hypophysis extract failed to accelerate the expulsion of the embryo. They gave the hypophysis extract to four other women to stimulate micturition in the course of delivery or post partum and urination followed in three of the women but not in the fourth. The extract was from the whole gland and they are now engaged in research with the extract of the posterior lobe of the hypophysis alone.

28. **The Prematurely Born.**—Herrgott discusses the various types of the prematurely born, saying that legal viability in France commences after 180 days while medical or obstetric viability accepts the end of the seventh month, or 210 days, as the limit. He refers in particular to the children prematurely delivered when there is reason to fear dystocia, with a passage 8.5 or 9.5 cm. in diameter. By waiting until the last moment when the fetus can safely pass through the natural outlet, it is possible to save the mother from cesarean section while the child is born viable and in good condition. By keeping watch over the increasing size of the head, it is generally possible to determine the proper moment for interference and the child is born in good condition. Herrgott's article supplements Wallich's article on the subject, summarized in these columns, January 6, 1912, page 68.

Archives Générales de Chirurgie, Paris

November, V, No. 11, pp. 1201-1320

29 *Perforation of Low Ulcer in Esophagus. (Perforation de l'oesophage par ulcère. Péritonite diffuse—Laparotomie—Guérison.) L. Sencert.
30 *Thrombosis of Mesenteric Artery Simulating an Abdominal Tumor. (Thrombose de l'artère mésentérique supérieure, simulant une tumeur abdominale.) L. Thévenot and C. Rey.
31 *Aneurysmorrhaphy. C. Monod and J. Vanverts. Concluded.

29. **Perforation of Ulcer Low in Esophagus.**—Sencert reports a case of ulcer in the esophagus, 2 cm. above the cardia, which first revealed its presence by symptoms of perforation and acute peritonitis. As it proved impossible to suture the perforation and the patient was almost moribund, he drew up the fundus of the stomach and wrapped it around the lower end of the esophagus, holding it in place by a few sutures 5 or 6 mm. beyond the perforation. The peritoneum was filled with a greyish, odorless fluid but he drained it away and introduced besides into the peritoneum a large tube through a buttonhole in the iliac fossa on each side. The operation was completed in fifteen minutes and as soon as the patient had been returned to bed, half sitting up, Sencert connected one of the iliac fossa tubes with a tank of oxygen, thus flushing out the peritoneum with a continuous stream of oxygen, supplemented by proctoclysis, flushing the rectum with a continuous stream of hot saline solution through a two-way tube, and the ordinary stimulants. The patient was a woman of 25 and her condition was very precarious for twenty-four hours, but then she rapidly improved and the oxygen was discontinued the

sixth day. The eleventh day the temperature rose a little and very little pus escaped through the drains so he connected one tube with the oxygen tank again, and pus poured anew out of the drains. The oxygen was discontinued the fourth day and the patient left the hospital in good condition the thirtieth day after the operation. Sencert makes a point of connecting each of the drain tubes in turn with the oxygen tank, extolling this continuous flushing with oxygen as a most important aid in drainage. It is, he says, a physiologic antiseptic which exalts the defensive powers of the peritoneum, combats paralysis of the viscera, promotes peristalsis, and has a stimulating action on the circulatory and respiratory apparatus. Of his twelve patients with diffuse septic peritonitis treated with the oxygen he was able to save six and still another recovered from the diffuse peritonitis but succumbed later to an unsuspected complication. His proportion of recoveries has thus increased from 29 to considerably over 50 per cent. His previous communication on the advantages of oxygen flushing was summarized in The Journal, May 28, 1910, p. 1829.

30. **Thrombosis of Superior Mesenteric Artery.**—Thévenot and Rey review the ordinary syndrome caused by this condition, comprising the six elements: sudden intense pain, early vomiting, possibly with admixture of blood, intestinal hemorrhage, early diarrhea, diffuse meteorism and subnormal temperature. They then report a case in which there was only one of these symptoms, namely, the characteristic pain. A large tumor rapidly developed at the site of the pain which radiated to the sternum and legs. The tumor filled the space between the right costal arch and the spine of the ilium. The tumor was movable but did not rise and fall with the breathing. The right lumbar region was tender. The elderly patient was in the hospital at the time, being treated for prostatic retention and suppuration, and an operation was out of the question. The necropsy findings were typical and there was some arteriosclerosis. In another case and in two on record this rapid tumefaction in the region of the infarction was the main or only symptom aside from the pain.

31. **Aneurysmorrhaphy.**—Monod and Vanverts summarize 103 cases from the literature, including a number from The Journal, classifying them according to the artery involved and whether the operation was restorative or reconstructive.

Presse Médicale, Paris

December 16, XIX, No. 100, pp. 1033-1048

32 Percussion of the Chest and the Resistance Experienced by the Finger. (Percussion thoracique et résistance au doigt.) E. Rist.
33 *Tabes and General Paralysis Possibly Result of Oversaturation with Antibodies; Means to Neutralize Them. (Essai d'une conception nouvelle de la parasyphilis, et thérapeutique qui en découle.) H. Danlos.
34 Treatment of Acute or Subacute Mental Disease in Public Hospital. (Assistance hospitalière spéciale et états mentaux aigus ou subaigus.) R. Benon.
35 Photothermotherapy. (Principes physiques et physiologiques du surchauffage lumineux.) M. de Laroquette.

December 20, No. 101, pp. 1049-1056

36 Mistakenly Diagnosed Fracture of the Neck of the Femur or Idiopathic Coxa Vara? (Fracture du col méconnue ou coxa-vara essentielle de l'adolescence?) M. Savariaud.
37 *Collateral Circulation in the Thorax with Tracheobronchial Lymphadenitis. (Circulation collatérale thoracique et adénopathie trachéo-bronchique.) G. Cany.

33. **Tabes and General Paralysis and Their Treatment on New Basis.**—Danlos accepts that tabes and general paralysis develop only in persons who have had syphilis but in whom it has ceased to be active. He does not know of an instance of living spirochetes being found at necropsy of persons with parasyphilis. This fact, in connection with the immunity to new infection possessed by old syphilitics, suggests that this immunity is due to production of antibodies and that overproduction of antibodies induces in turn such changes in the nervous system that the syndrome of tabes or general paralysis is liable to follow. If this conception, namely, that overproduction of antibodies is responsible for the development of parasyphilis, is found to be true, it may be possible to counteract the excess of antibodies and thus remove the cause of the parasyphilis. He suggests that it might be possible to utilize in this line the familiar fact that in the right proportions, antibody, antigen and complement neutralize each other. The antigen is not rigorously specific, so that we have the choice between a number of substances able to act as syphilitic antigens. Danlos offers this new therapeutic suggestion with some diffidence, remarking that in medicine as in other sciences, new ideas may not prove all that is hoped for them, but that light may result from the impact between several ideas.

37. **Collateral Circulation in the Chest Wall with Lymphadenitis.**—Cany was impressed with the number of his child patients who had a prominent network of veins in the front of their chests. He found signs of this collateral circulation pronounced in all but seven of fifty-eight children with some affection of the lower air passages or adjacent lymph-nodes; the conditions induced secondarily by the relative paresis of the muscles concerned in respiration, the defective development of the chest, tendency to scoliosis, etc., readily explain the disturbances in the circulation. This collateral circulation indicates measures to aid in developing the chest, supplemented by direct medication of the inflamed lymph-nodes. It is possible, he relates, to act directly on the lymph-nodes by inhalation of a saline spray. The lymph carries directly to the adjacent lymph-nodes any substance reaching the alveoli of the lungs.

Revue de Médecine, Paris .

November, XXXI, No. 11, pp. 761-810

38 Case of Cerebral Hemorrhage from Phlebitis. (La phlébite des veines cérébrales.) H. Claude.
39 History of Treatment of Tuberculosis in Europe. (La phthisiothérapie en occident pendant le moyen âge et les temps modernes.) M. Piéry and L. Sarrazin.
40 Measurement of Muscle Tone. (Comment on mesure le tonus musculaire avec mon myotonomètre.) P. Hartenberg.
41 *Psychasthenic Epilepsy. (L'épilepsie psychasthénique. II. Les raptus.) J. Lépine.

41. **Psychasthenic Epilepsy.**—Lépine remarks that the word "epilepsy" is derived from a root meaning to surprise, so that the term is peculiarly applicable to the condition of apprehension, agitation or hypochondria sometimes observed in the predisposed as an aggravation of their previous tendency. The special feature is that this severe and chronic aggravation comes on suddenly at a certain moment, day or night, following a sudden fleeting sensation of pain and apprehension impossible to describe as it occurred and vanished so abruptly, but yet it leaves the patient different from what he was before. In the four cases reported, this seizure was evidently made up of emotional and circulatory factors and disturbances. Treatment should be usually both psychic and with heart tonics and general hygiene. One patient took course after course of treatment at various sanatoriums without relief but finally was cured by general hygiene and being persuaded to resume his business life. Another with a chronic phobia was cured by heart tonics alone, after all other measures had proved ineffectual. Lépine has witnessed acute obsessions develop with failing compensation with heart defects.

Archiv für Verdauungs-Krankheiten, Berlin

December, XVII, No. 6, pp. 647-803

42 *Act of Swallowing. (Ueber die normalen Vorgänge beim Schlucken und die Schluckkraft.) J. Schreiber.
43 *Case of Atrophy of Entire Gastro-Intestinal Tract. (Zur Frage über die Atrophie des Magendarmkanals.) L. Golubinin and Kontschalowski.
44 Nutrient Enemas in Treatment of Stomach Disease. (Zur Rektumernährung in der Behandlung von Magenkrankheiten.) J. Dudley-Dunham (Columbus, Ohio).
45 *Butterine Poisoning. (Margarinevergiftungen.) F. Schilling.
46 *Retarded Evacuation of the Stomach with Intestinal Disease. (Verzögerung der Magenentleerung bei Darmkrankheiten.) A. Borgbjärg.
47 *Tender Points in the Back with Gastric Ulcer. (Die diagnostische Bedeutung der dorsalen Schmerzdruckpunkte des runden Magengeschwüres.) F. Seidl.

42. **The Act of Swallowing.**—Schreiber says that the physiology of swallowing is acquiring practical interest on account of the modern plastic operations on the esophagus. His research has demonstrated that it is a complex phenomenon, made up of a number of factors, like the circulation of blood from the heart to the periphery.

43. **Atrophy of the Entire Gastro-Intestinal Tract.**—Golubinin's patient was a woman of 35, of a healthy family and apparently healthy herself until 1903 when chronic intestinal

catarrh developed and the entire gastro-intestinal canal became almost totally atrophied, the resulting progressive disturbances proving fatal by the end of 1910. The blood-findings were not those of pernicious anemia, but the floating tenth rib and enteroptosis suggested a possible congenital weakness of the digestive organs, aggravated by numerous pregnancies.

45. **Butterine Poisoning.**—Schilling states that a number of cases of gastro-intestinal derangement were encountered in 1911 traceable to the use of substitutes for butter made with some injurious substances. The syndrome frequently suggested paratyphoid or ptomaine poisoning, the patients complaining of nausea, vomiting and headache with diarrhea and depression for days, or vertigo, pain and stiffness in the arms and legs and a feeling of hemiplegia. He discusses the various substances that are being used now in the manufacture of oleomargarine, the manufacturers being always on the alert to find cheaper ingredients. Schilling states that the German law requires admixtures of 16 per cent. sesame oil with all artificial butter, and consequently tests for sesame oil in the stools permit the tracing of the gastro-intestinal derangement to butterine as a possible cause.

46. **Delay in Evacuation of the Stomach with Certain Localizations of Intestinal Disease.**—Borgbjärg found that the motor functioning of the stomach was retarded in a young woman with tapeworm, while after expulsion of the parasite the stomach functioning was found normal. In another case of tapeworm the motor functioning was found normal. In seven cases of an intestinal tumor the motor functioning of the stomach was decidedly impaired when the tumor was in the small intestine and ileocecal region as also with chronic appendicitis, while tumors lower than this in the bowel did not seem to influence the gastric motor functioning. He cites other authors who have noticed a connection between a bowel affection and delay in the emptying of the stomach and restoration of normal motor functioning after removal of the segment of bowel involved. In one of Borgbjärg's cases the gastric symptoms overshadowed the intestinal, and the patient was given a course of treatment for the assumed gastric ulcer but without benefit; all symptoms subsided after removal of the appendix. In his four other cases of chronic appendicitis during the last year the gastric motor functioning was normal. In a case of cancer and one of an inflammatory tumor, both in the cecum, the gastric motor functioning was impaired and returned to normal after the operation on the cecum. In four cases of cancer in the transverse or ascending colon or sigmoid flexure the motor functioning of the stomach was constantly normal.

47. **Tender Points in the Back with Gastric Ulcer.**—Siedl confirms the assertions of Boas and others in regard to the diagnostic importance of tender points in the back, along the side of the spine, accompanying certain localizations of an ulcer in the stomach. The deeper and larger the ulceration, the more numerous, larger and more painful the tender points. As the ulcer heals the points cease to be sensitive. The tender points may be minute or as large as a penny or up to the size of half a dollar or more, but the tender spot is always sharply defined from its non-tender environment. The number of tender points varies in different cases, and one side may have them and the other not, or they may be symmetrical. He gives a diagram showing the composite findings in seven cases in which the diagnosis was confirmed by an operation or necropsy. The pressure is applied with the middle finger, gradually increasing the force. The patient shrinks away when a tender spot is reached, and this sudden jump, the *Zuckungsphänomen* is characteristic. The sudden pain may be quite severe although the skin over the spot is not tender. He gives the findings with a summary of seven cases of an ulcer of the pylorus, twelve with ulcer at other points, four with erosions at various points, which likewise are accompanied by from one to four tender points, while in four cases of a gastric neurosis or gastroptosis, although the symptoms otherwise simulated ulcer, yet the lack of the tender points excluded it. With ulcer at the pylorus, the tenderness is most pronounced or exclusively on the right side; the tender points are along the edge of the tenth to the twelfth dorsal vertebræ and the first to the third lumbar. With an ulcer in the posterior wall of the stomach, the number of tender points is large, extending to the cervical vertebræ, reaching possibly seventeen on each side, but generally the tenderness is most pronounced on the left side. With ulcers in the lesser curvature, the tender points form a chain extending from the seventh dorsal to the third or fourth lumbar vertebræ.

Berliner klinische Wochenschrift, Berlin

December 25, XLVIII, No. 52, pp. 2333-2364

48 Toxin-Destroying Properties of Leukocytes. (Ueber die giftzerstörenden Eigenschaften der Leukocyten.) M. Massone.
49 Influence of Salvarsan on the Wassermann Reaction in Normal Rabbits. (Beeinflussung der Wassermann'schen Reaktion des normalen Kaninchens durch Salvarsan.) G. Emanuel.
50 Precociously Developed Male Pseudohermaphrodite. (Frühreifer Scheinzwitter.) R. Asch.
51 *Treatment of Gonorrheal Cervicitis. (Zur Behandlung der Cervicalgonorrhöe.) Wagner.
52 Idiosyncrasy to the Roentgen Rays. (Zur Frage der Idiosynkrasie gegen Röntgenstrahlen.) H. E. Schmidt.
53 Roentgenotherapy in Obstetrics and Gynecology. (Verwendung der Röntgenstrahlen in der Geburtshilfe und Gynäkologie.) E. Runge.

51. **Hot Irrigation of Uterine Cervix in Treatment of Local Gonorrhea.**—Wagner uses a wire frame to distend the walls of the vagina, with a solid rubber funnel opening to protect the clothing. The water is kept at a uniform temperature by passing from both the hot and cold water faucets into a spherical receptacle that has a thermometer mounted in it, so that the mixture can be maintained at a constant temperature of 45 C. and be shut off by a stopcock at will. He has been applying therapeutic hyperemia in this way for more than a year in his service at Frankfurt a. M., using from 20 to 25 liters of the hot water to flush the parts once a day, the patients continuously in bed. Once a week mucus from the cervix is examined for gonococci, and the treatment is kept up until none has been found on three examinations. In 85 per cent. of the cases the gonococci had disappeared in from twenty-six to thirty-five days, and by the ninetieth day in all the others. The method seems to be peculiarly effective for gonorrheal vaginitis in little girls.

Deutsche medizinische Wochenschrift, Berlin

December 21, XXXVII, No. 51, pp. 2361-2408

54 Present Status of Gout. (Ueber Wesen und Behandlung der Gicht.) P. F. Richter.
55 Aid of Roentgenoscopy in Diagnosis of Internal Disease. (Die Förderung der Diagnose innerer Krankheiten durch das Röntgenbild.) G. Treupel and F. M. Groedel.
56 Influencing of Temperature of the Stomach by Various Hydrotherapeutic Measures. (Ueber die Beeinflussung der Magentemperatur durch verschiedene hydrotherapeutische Applikationen und ihre Messung mit dem "Fieberregistrierapparat.") Eichler and Schemel.
57 *Induced Pneumothorax. (Apparate und Operationstechnik für den künstlichen Pneumothorax.) C. Forlanini.
58 Simultaneous Contrast Stain for Diphtheria Bacilli. (Eine neue einzeitige Doppelfärbungsmethode für die Polkörperchen der Diphtheriebazillen.) M. Raskin.
59 Medical Impressions of the Congo Region. (Vom Kongo und Neu-Kamerun.) Haberer.
60 *The Application of Chemotherapy to Cancer. (Beiträge zum Problem: Geschwülste von der Blutbahn aus therapeutisch zu beeinflussen.) A. v. Wassermann, F. Keysser and M. Wassermann.

57. **Induced Pneumothorax.**—Forlanini reviews extensive experimental and clinical experience with this method of immobilizing the lung in unilateral pulmonary tuberculosis by injection of a gas into the thorax. He describes the technic which avoids danger of gas embolism, with illustrations of his improved portable apparatus for graduating the amount and pressure of the nitrogen. He has been studying this method of treating unilateral tuberculous lesions since 1890 and has applied it in 134 cases.

60. **Treatment of Cancer by Drug Reaching the Tumor by Way of the Blood.**—Wassermann's communication on the elective action on cancer cells of selenium injected into the blood stream was summarized in the Berlin Letter, January 13, page 127, and discussed editorially on page 120. He lays great stress on the importance of providing facilities for the drug to display its action, comparing conditions to a car which runs easily to its destination when rails have been laid for it. Without rails it is practically immovable and inert. In the research reported, he utilized the exceptional diffusing power

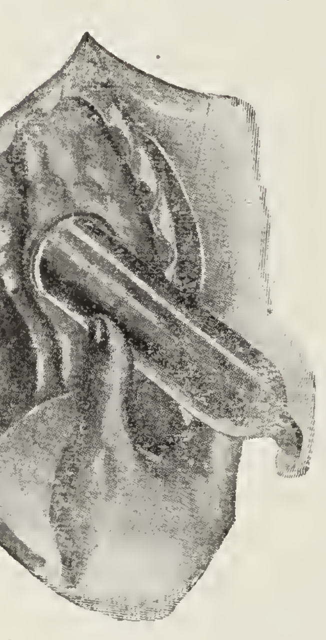
of eosin as the rails on which to run the selenium into the system and send it straight to the cancer cells, which it seizes on with selective and exclusive avidity.

Medizinische Klinik, Berlin

December 24, VII, No. 52, pp. 2005-2044

61 *Suction Bell in Surgery. (Die Verwendung der Ansaugung in der operativen Chirurgie.) F. Krause.
62 Meningeal and Cerebral Symptoms in Infants. (Meningeale und cerebrale Krankheitsbilder beim Neugeborenen und Säugling.) W. Knöpfelmacher.
63 Treatment of Retention of Fetal Membranes. (Behandlung der Retention von Eiteilen bei bestehendem Fieber.) O. v. Franqué.
64 Inhalation of Medicinal Sprays in Treatment of Tuberculosis. (Inhalationen bei der Phthisiotherapie.) F. Wehmer.
65 Borax in Treatment of Epilepsy. P. Jödicke.
66 Synergy of Different Parts of Gastro-Intestinal Tract. (Die Synergie der einzelnen Teile des Verdauungstraktus.) A. Bickel.

61. **Suction as Aid in Operations.**—Krause states that the application of a suction bell as an aid in holding and removing a tumor has proved of great importance in a number of operations, especially on the brain. His first communication on the subject was summarized in The Journal, Sept. 18, 1909, p. 980. He now extols anew the advantages of thus being able to lift up the tumor without prying it up from behind, and relates further experiences with the method in operations on the thorax. The suction must be so strong that the glass bell and the tumor form a single solid object and can be handled as such, but not strong enough to suck the cerebellum, medulla or other organ involved entirely into the vacuum apparatus. A small hole in the side of the bell, convenient to close by the finger, permits entrance of air as the finger is raised. He reports a case in which a large enchondrosarcoma in the right wall of the chest was removed and the lung kept from retracting during the operation by the hold of a vacuum bell, which effectually substituted the otherwise indispensable differential pressure procedure in this instance, as shown in the illustration. In another case the hold of the vacuum bell was all that rendered possible the effectual excision of a deep-lying, friable goiter. The vacuum in the glass bell is induced by a connection with the hydrant on the principle of a water-jet vacuum pump.



Lung kept from collapsing by vacuum bell.

Münchener medizinische Wochenschrift

December 19, LVIII, No. 51, pp. 2721-2784

67 *Diagnosis and Treatment of Tuberculosis of the Kidney. (Zur Diagnose und Therapie der Nierentuberkulose.) H Hohlweg.
68 *Diagnosis of Perforating Aneurysm of Cerebral Artery. (Zur Diagnose perforierender Aneurysmen der Hirnarterien.) H. Wichern.
69 Oatmeal or Wheat for Diabetics. (Hafer- oder Weizenmehlkur?) M. Klotz.
70 Roentgenoscopy of the Gastro-Intestinal Tract. (Zur Röntgenuntersuchung des Verdauungskanals.) F. Best and O. Cohnheim.
71 Pseudoneuritis and Congenital Anomalies of the Optic Nerve. (Ueber Pseudoneuritis und andere differentialdiagnostisch wichtige kongenitale Anomalien des Sehnervenkopfes.) F. Salzer.
72 Bacterial Content of Distilled Water in Druggist's Stock. (Ueber den Bakteriengehalt des in Apotheken erhältlichen destillierten Wassers.) P. T. Müller.
73 Sterilization of Rubber Gloves. (Praktische Erfahrung über Sterilisierungsmethoden von Gummihandschuhen.) B. Kozlowski.

67. **Tuberculosis of the Kidney.**—Hohlweg relates that he has obtained the best results in diagnosis of tuberculous kidney disease by cystoscopy and catheterization of the ureters, and regards these measures as the most reliable of all and the best, as no time is wasted. If prompt operative measures are impracticable, he institutes a course of tuberculin treatment and reports four cases in which this alone gave excellent results, amounting to a complete clinical cure in the case of one patient, a woman of 49. Two years later guinea-pigs inoculated with urine from the kidney previously involved showed no signs of infection.

68. **Diagnosis of Perforating Aneurysm of Cerebral Artery.**—Wichern remarks that the location of the aneurysm outside of the brain is the rule, and this imparts a special character to the resulting disturbances, the sudden onset of the symptoms and the serious disturbances from traction or pressure on the nerves in the immediate vicinity. The walls of the aneurysm are elastic, so that it fluctuates in size and symptoms appear and disappear with this fluctuating course. In 222 cases of cerebral aneurysm he has found in the literature, a congenital predisposition was manifest in 24.5 per cent. This is particularly evident when the subjects are under 40 and no other cause for the aneurysm can be discovered. A cerebral aneurysm is liable to have perforation occur more than once, this peculiar recurring character of the brain symptoms being a marked characteristic of these cases. Cautious lumbar puncture is indispensable to confirm the diagnosis; he reports three cases in which this first cleared up the clinical picture. Differentiation is important on account of the possibility of surgical relief, or at least of benefit from subcutaneous injection of gelatin. The gelatin treatment promises well as aneurysm in the cerebral arteries displays a special tendency to thrombus development.

Therapeutische Monatshefte, Berlin

December, XXV, No. 12, pp. 701-772

74 *Breast Milk for Sick Infants. (Kranke Kinder bei Ernährung mit Frauenmilch.) L. Langstein and E. Hoerder.
75 *Transplantation of Free Flaps of Fascia. (Die freie Transplantation von Faszien.) M. Kirschner.
76 Influencing of Gastric Juice by Absorbent Substances. (Beeinflussung des Magensaftes durch adsorbierende Stoffe.) L. Lichtwitz and F. W. Greef.
77 *Extraction of Hairpin from Female Bladder. (Ueber das Entfernen von Haarnadeln aus der weiblichen Blase nach einem einfachen Verfahren.) J. Voigt.

74. **Change to Breast Milk for Sick Infants.**—Langstein and Hoerder have been trying to deduce some general rules for guidance from their experience with 188 infants who had previously been artificially fed and had developed severe intestinal catarrh, or had serious atrophy in the gastro-intestinal tract with acute derangement—the condition known as decomposition. The breast milk was always drawn for the sick infants in order to graduate the amounts and spare the child the exertion of sucking and also to keep the breasts in good condition. Of the 188 infants, 41 per cent. began to thrive at once and 18 per cent. improved, but more slowly, while 15 per cent. of the infants died and 26 per cent. showed no improvement and began to thrive only when artificial food was given. One lesson learned from the experiences related is that the general condition and all the elements of the clinical picture must be taken into account, not one alone, in estimating the benefit or damage from the change to breast milk. The stools may be far from normal even when the infant is improving; this should not lead to a change in the diet when the general condition shows benefit. The promptest results may be anticipated in the cases of chronic digestive derangement in which the stools are nearer to normal, showing that the digestive organs are "resistant." The prognosis is the more unfavorable the more numerous the preceding acute disturbances with loss of weight and the lower the constitutional vitality. A case is related in detail with diagram to illustrate the point that an increase in weight is not a good sign unless the general condition improves parallel; in this instance no improvement was observed on breast milk but the weight increased on artificial food although the general condition kept growing graver and the child died. Such cases confirm the assumption that the cause of disturbances on breast milk should not be sought in the milk but in the fact that the child is constitutionally below par. Four other children in this family had died in infancy; there was no trace of syphilis. A number of the infants increased in weight on the breast milk for a few days and then the weight kept at a constant level for a time, up to several weeks; this is evidently a period of repair—the organism takes some time to

repair the previous damage and get ready to work properly, and then follows a rapid gain in weight as the body begins to make tissue. These cases are particularly instructive as they warn against changing the food when the infants are seen to be no longer gaining in weight; here again the general aspect and condition are the main points. The tendency to vomit may persist; this is generally one of the last symptoms to be abolished by the change to breast milk. Infants over a year old may need food with more tissue-builders, protein and salts, than are found in breast milk. Buttermilk with carbohydrate addition was found useful in changing from breast milk to artificial food. It is possible that estimation of the phosphates in the urine may prove an objective index of the digestive capacity as Moll has asserted. In health he never found over 1.5 mg. of phosphates (P_2O_5) in 10 c.c. of urine, while over 5 mg. invariably accompanied severe sickness. Recent (unpublished) research of others has confirmed the accuracy of this index of morbid conditions and suggests its importance as a guide for treatment in puzzling cases. It seems probable that the child's state of health is reflected in his urine, and further research in this line may prove still more illuminating.

75. **Fascia Flaps for Free Transplantation.**—Kirschner reports excellent results from the use of fascia taken from the side of the patient's thigh, from the iliotibial band of the fascia lata, when the site to which it is to be transplanted is fully prepared for it. The still warm fascia is transferred to its new site and has proved an ideal material for the plastic operation, etc., in over fifty cases in his own and others' experience. The fascia invariably healed in place and grew stronger as functional demands were made on it. It always healed without reaction, even in infected cases, but there is a risk in this condition. He has had no opportunity to use the fascia to substitute a tendon, but thinks it is eminently fitted for this. His experience has been mainly with the transplanted fascia to wrap around a vessel or organ after suture, to close defects and reenforce hernia operations, to interpose between organs that had grown together as in operations for vesicovaginal fistulas, to make a sling in which to suspend a displaced kidney or other organ and to close a gap in the dura. He has also found narrow strips of the fascia an admirable material for suturing bones and other tissues and reliable as a ligature.

77. **Removal of Hairpin from the Bladder.**—In Voigt's case the hairpin stood upright in the bladder, its points buried in the lower wall. He pushed it up with the beak of the cystoscope to release the points, and then, guided by the finger in the vagina, he drew it out, points first, by pressure on the top of the hairpin from the light-holder of the cystoscope. The hairpin was stiff and the points 13 mm. apart.

Wiener klinische Wochenschrift, Vienna

December 21, XXIV, No. 51, pp. 1759-1790

78 *Serodiagnosis of Carcinoma. (Zur Diagnose des Karzinoms.) E. Freund and G. Kaminer.
79 Toxicity of the Urine During Pregnancy and the Puerperium. (Verhalten der Harntoxizität in der Schwangerschaft, Geburt und im Wochenbett.) R. Franz.
80 No Basis for Assumption that Cretinism is Transmissible. (Zur Kontaktinfektion des Kretinismus.) A. Flinker.
81 Improved Technic for Care of Gums in Applying Crown to Teeth. (Eine neue Methode zur Verhütung und Heilung von Zahnfleischwucherungen um Wurzelränder.) H. Bardach.

78. **Serodiagnosis of Carcinoma.**—Freund and Kaminer have continued their research on the different behavior of the serum of healthy persons and those with cancer in regard to the destruction of cancer cells in suspension. They tabulate here the details of 113 of the 250 cases in which the test has been applied since their last communication. The results were specific in all but eleven instances and a repetition of the test gave positive findings in some of these; in three cases the trouble was only a benign liver affection, while in six other similar liver cases the reaction was negative. The reaction is independent of cachexia and age. The carcinoma material (preferably from the cadaver) is crushed and passed repeatedly through a coarse cloth or several layers of gauze after the carcinoma material has been mixed with ten times its volume of a 0.6 per cent. salt solution with 1 per cent. acid sodium phosphate. The turbid filtrate contains the entire cell material. A limpid extract of this fluid is made for the test by adding to it a 5 per cent. solution of acetic acid in the proportion of 5 parts to 100 parts of the fluid, heating to 80 C. on the water bath for fifteen minutes and, after cooling, neutralizing with a solution of sodium carbonate (litmus), heating again in the water bath and filtering. The limpid filtrate thus obtained is the fluid to be used for the test. The filtrate does not keep well and has to be tested anew each time with a normal and a known cancer serum to ascertain its efficiency at the time. On addition of normal serum the fluid remains limpid while with cancer serum it is seen to be distinctly turbid when held up against the light. The blood-serum from the patient must have been drawn not less than several hours and not more than two days before. Ten drops are placed in each of two test-tubes and 2 c.c. of the above extract is added to the first tube and 2 c.c. of a control solution to the second tube. The control solution is made with the same ingredients and in the same way as the above extract except that it contains no carcinoma material. The test can be effectually controlled further by the power of healthy serum to protect the carcinoma cells against destruction. This requires 2.5 c.c. of serum, so that as much as 6 c.c. of blood has to be taken for the combined tests, consequently the protection test is not always applicable, but it is very instructive when it can be applied. In twenty normal pregnant women the original test gave the cancer reaction in 60 per cent. but the control protection test was always negative, while the findings with the two tests were constantly parallel in the cancer cases. In four cases the test revealed the presence of a totally latent and unsuspected cancer in the stomach or intestine. The lesion for which the test had been applied, a mammary tumor, stenosis of the larynx or peritonitis, proved to be of tuberculous, or of other nature, but necropsy revealed the symptomless cancer at some point in the digestive tract responsible for the positive reaction. Another interesting feature of the test is that the reaction in eight operative cancer cases changed from positive to negative two or three months after removal of the growth; the protection reaction still persists positive, however. Dried normal serum may be used but the results are not quite so reliable as with fresh serum. The carcinoma cells are obtained early and are separated from other elements as completely as possible by decanting three times. Thymol has proved useful as a preservative, better than sodium fluorid. The turbidity of the fluid and the proportion between the number of the cells before and after the application of the serum are the criteria of the test. If the number of cells remains the same or only slightly less and the protection reaction is manifest, carcinoma may be accepted. In the tables the proportional numbers of the cells are given as 22:20; 20:20; 25:25, etc., in the cancer cases, while the proportions were 20:3; 34:11; 20:0; 26:0; 16:0, etc., in the cases of tuberculosis, leukemia, nephritis and pneumonia.

Zentralblatt für Chirurgie, Leipsic

December 23, XXXVIII, No. 51, pp. 1657-1688

82 Palpation of Kidney. (Ueber die Lagebeziehung der Kolonflexuren zur Niere und zu Nierentumoren.) T. Hausmann.

Zentralblatt für Gynäkologie, Leipsic

December 23, XXXV, No. 51, pp. 1705-1728

83 *Massage for Prevention of Linear Pigmentation of the Skin in Pregnancy. (Ueber Schwangerschaftsstreifen und ihre Verhütung.) W. Barfurth.
84 *Endogenous Infection in Gynecology. (Selbstinfektion und Gynäkologie.) W. Liepmann.
85 Antimeristem in Treatment of Inoperable Cancer of the Uterus. (Ueber mehrere Heilungun von inoperablem Uteruskarzinom bei Behandlung mit Antimeristem.) O. Schmidt.
86 Repeated Tubal Pregnancy After Plastic Operation on Fallopian Tube. (Wiederholte Tubargravidität nach Tubenplastik.) W. Wessenberg.

83. **Massage for Prevention of Pregnancy Stripe.**—Barfurth says that the linear pigmentation liable with the abrupt stretching of the skin can be prevented by a little systematic massage of the region, once or twice a day for fifteen or thirty minutes, taking up a fold in the skin for the massage each time. He reports the application of the method in twelve cases; no by-effects were observed in any instance although the massage was done by pupil nurses.

84. **Endogenous Infection in Gynecology.**—Liepmann hails as an advance Winter's appeal for preceding bacteriologic examination before every gynecologic operation. Liepmann has long preached the advantages of his *Dreitupferprobe*, that is, bacteriologic examination of three swabs applied to the field of operation one before, one during and one at the close of the operation. This permits accurate estimation of endogenous infections, and Winter's appeal illuminates the importance of "operation bacteriology;" for this Liepmann thinks his three-swab test is far the simplest and most instructive technic.

Zentralblatt für innere Medizin, Leipsic

December 23, XXXII, No. 51, pp. 1241-1264

87 Indican in the Blood. (Ueber das Blutindikan.) W. v. Moraczewski and E. Herzfeld.

Gazzetta degli Ospedali e delle Cliniche, Milan

December 19, XXXII, No. 152, pp. 1611-1618

88 Malta Fever. (Sorgenti e veicoli della febbre del Mediterraneo.) G. Caiozzo.

December 21, No. 153, pp. 1619-1626

89 *Complement-Fixation Test for Cholera. (Di una nuova applicazione del metodo biologico della fissazione del complemento nella diagnosi rapida del colera.) A. Connio.

December 24, No. 154, pp. 1627-1642

90 Tuberculin in Diagnosis of Syphilis. (La tubercolina nella diagnosi della sifilide.) G. Burzi.

December 26, No. 155, pp. 1643-1650

91 General Anesthesia with Morphin, Scopolamin and Chloroform Combined. (Sulla narcosi pantopon-scopolamino-chloroformica.) C. Mantelli.

89. **Complement-Fixation Test for Cholera.**—Connio applies the test to fresh stool after heating it to 60 C. for twenty minutes; 1 c.c. is sufficient for the test. For the antibody he uses an agglutinating cholera immune serum: for the alexin fresh guinea-pig serum diluted twenty times with physiologic solution; the hemolysins are from the serum of rabbits prepared with beef red corpuscles and the red corpuscles used in the test are likewise from beef; they are suspended in twenty parts of physiologic solution. The results obtained in eleven cases to date all confirmed the accuracy and reliability of the test, while the findings were constantly negative in patients with other affections. The products of the cholera vibriones in the gastro-intestinal tract amply explain the presence of the antigen in the stools.

Ugeskrift for Læger, Copenhagen

December 14, LXXIII, No. 50, pp. 1871-1933

92 *Chronic Otitis Media in Rural Districts. (Bemærkninger om Otitis media suppurativa chronica hos Patienter paa Landet.) E. Nielson.

December 21, No. 51, pp: 1934-1982

93 *Roentgenotherapy of Superficial Cancers. (Behandling af Hudkarcinom med Röntgenstraaler med særligt Henblik paa Underlæbekankroidet.) J. F. Fischer.

92. **Otitis Media in Rural Districts.**—Nielsen has reexamined or received reports from 112 patients who had been in his charge for chronic suppurative otitis media in the five years ending with 1909. Only thirty-two of the patients were under 15, and all lived in the country. There had been a discharge from the ear for at least a year before any medical assistance had been obtained. Only one of his patients with chronic otitis media succumbed to cerebral complications; fourteen of the thirty-two children were entirely cured and seventeen adults, but eighty-one still have the suppuration. Nielsen deplores the prevailing carelessness and pessimism in the rural districts that allow otitis media to run for years without attempts to check it.

93. **Roentgenotherapy of Superficial Cancer.**—Fischer reports the details of twenty cases of cancer, generally on the lip, which yielded to Roentgen ray exposures with complete disappearance of all traces of malignant disease. He extols the rapid and thorough curative action of the rays when the cancer is not too deeply rooted. The extent of the surface is immaterial, but the dosage must be strong enough to induce a powerful reaction. The exposures must be continued as long as there is reason to suspect that a trace of the malignant disease is left. With appropriate technic recurrences are rare. During the last five or six years he has exposed also a zone of normal skin about 1 cm. outside of the lesion, the skin beyond being protected with a sheet of lead, and has applied the maximal dose at two sittings, with a one or two-day interval. The reaction followed in from six to nine days and there was more or less ulceration for several weeks; then the healing process began and by the fifth or seventh week in the favorable cases the epithelioma had entirely vanished. If the lesion does not all subside and if hard lumps can still be felt, the treatment must be continued. This technic is what Kienböck calls the "expeditive method," and all Fischer's patients free from recurrence to date had been treated by this maximal-dose method. None of his patients with cancer of the tongue seemed to derive any benefit from the roentgenotherapy; at most, he thinks, it can be relied on only for prophylaxis after operations. He never ventured this treatment for carcinoma of the lip until the last three or four years, when six patients refused an operation, and all the growth vanished under the exposures to the Roentgen rays and there has been no sign of recurrence in any instance to date, over three years in one case. The cosmetic result is ideal, he says; not a trace of the growth is left in five cases and in the sixth merely a slight cicatricial depression. He advises to remove any enlarged lymph-nodes in the region if metastatic involvement is suspected.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

DISEASES OF THE SKIN AND THE ERUPTIVE FEVERS. By Jay Frank Schamberg, A.B., M.D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine. Second Edition. Cloth. Price, $3. Pp. 573, with Illustrations. Philadelphia: W. B. Saunders Company, 1911.

INFECTIONS OF THE HAND. A Guide to the Surgical Treatment of Acute and Chronic Supperative Processes in the Fingers, Hand and Forearm. By Allen B. Kanavel, M.D., Assistant Professor of Surgery, Northwestern Medical School, Chicago. Cloth. Price, $3.75. Pp. 447, with 133 illustrations. Philadelphia: Lea & Febiger, 1912.

WOMANHOOD AND ITS DEVELOPMENT. A Treatise on Adolescence Designed for the Young Woman, Embracing the Fundamental Principles of Biology, Physiology, Hygiene and Maternity. By Luella Z. Rummel, Ph.B., M.D. Cloth. Price, $1.50. Pp. 221. Kansas City, Mo.: Burton Publishing Company, 1912.

ARTHRITIS. A Study of the Inflammatory Diseases of Joints. By Peter Daniel, F.R.C.S., Senior Surgeon, Metropolitan Hospital, London. Edited by James Cantlie, M.A. M.B. No. 3, the Medico-Chirurgical Series. Cloth. Price, $4. Pp. 515. New York: William Wood & Co., 1911.

CLINICAL DIAGNOSIS. A Manual of Laboratory Methods. By James Campbell Todd, Ph.B., M.D., Professor of Pathology, University of Colorado. Second Edition. Cloth. Price, $2.25 net. Pp. 469, with Illustrations. Philadelphia: W. B. Saunders Company, 1912.

PRINCIPLES AND PRACTICE OF PHYSICAL DIAGNOSIS. By John C. Da Costa, Jr., M.D., Assistant Professor of Clinical Medicine, Jefferson Medical College. Second Edition. Cloth. Price, $3.50. Pp. 557, with Illustrations. Philadelphia: W. B. Saunders Company, 1911.

CLINICAL IMMUNITY AND SERODIAGNOSIS. By A. Wolff-Eisner, M.D. Translated by Ray W. Matson, M.D., Professor of Histology, North Pacific College of Dentistry and Pharmacy, Portland, Ore. Cloth. Price, $2.50. Pp. 184. New York: William Wood & Co., 1911.

DELAYED AND COMPLICATED LABOR. By Robert Jardine, M.D. (Edin.), M.R.C.S. (Eng.), Professor of Midwifery in St. Mungo's College, Glasgow. Cloth. Price, $3. Pp. 351, with 107 illustrations. New York: William Wood & Co., 1912.

THE NEW PHYSIOLOGY IN SURGICAL AND GENERAL PRACTICE. By A. Rendle Short, M.D., B.S., Senior Demonstrator of Pathology, University of Bristol. Cloth. Price, $2. Pp. 201. New York: William Wood & Co., 1911.

A DIGEST OF THE LAWS AND REGULATIONS OF THE VARIOUS STATES RELATING TO THE REPORTING OF CASES OF SICKNESS. By John W. Trask. Paper. Public Health Bulletin 45. U. S. P. H. and M.-H. Service. 1911.

ANATOMIE TOPOGRAPHIQUE ET CHIRURGIE DU THYMUS. Par M. le Dr. Eugène Olivier, Aide d'Anatomie à la Faculté de Médecine. Paper. Pp. 152. Paris: G. Steinheil, 2 Rue Casimir-Delavigne, 1911.

BIBLIOGRAPHICAL CONTRIBUTIONS FROM THE LLOYD LIBRARY. Bibliography Relating to the Flora of Germany. Paper. Published by the Lloyd Library, 309 West Court Street, Cincinnati.

THE PERMANENT BETTERMENT OF THE CRIPPLED CHILD. By Douglas C. McMurtrie. Paper. New York City, 480 Park Ave. 1911.

EIGHTEENTH ANNUAL REPORT OF THE WOMEN'S DIRECTORY OF PHILADELPHIA, 204 South Seventh Street. 1911. Paper.

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TREATMENT OF ACUTE ENDOCARDITIS AND MYOCARDITIS

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Perhaps there is no province of medicine that has elicited such sustained interest as that devoted to circulatory diseases. Every year sees the appearance in text-books, systems of medicine and current journals of an increasing number of articles on the heart, some of them voluminous in character, some inclusive and some devoted to limited fields.

Comparative anatomy, physiology and the clinic have been peculiarly busied with the subject in the last few years, so that it would hardly be an exaggeration to say that even in the last lustrum almost a complete revolution has been wrought in our ideas of the physiology and pathology of the heart.

More especially has the investigation of these later years taught us that, though the heart in the totality of its structure and the totality of its function operates to forward the circulation, the totality of structure is the combination of distinct anatomic units and the totality of function is cooperation and coordination of the functions of these units, and that a keener analysis of the data of disease is distinguishing clinical complexes corresponding to disturbance of function or change in structure of one or more of these units.

To illustrate my statement in brief, it is now recognized that the heart-muscle substance subserves five distinct functions, some of which at least are attributes of definite muscle fibers. They are:

1. The power of producing a stimulus which can excite the heart to contract—stimulus production.

2. The power of being able to receive a stimulus—excitability.

3. The power of conveying a stimulus from fiber to fiber—conductivity.

4. The power to contract when stimulated — contractility.

5. The power to retain a certain amount of contraction, even when the active movement has ceased — tonicity.

Anatomically the heart is found to be composed of two very different kinds of muscle substance; one, representing a very small part, is the remains of the primitive cardiac tube of lowly types of animal life; the other represents the bulk of cardiac muscle with which we are familiar.

One part of these remains of the primitive tube is the "pace-maker" of the heart, subserving the function of rhythmicity and situated at the junction of the superior vena cava and the upper border of the right auricular appendix; another is the bundle of His, or auriculoventricular bundle, which subserves the function of conductivity, a disturbance of which gives rise to the condition known as heart-block, which obtains in the clinical complex termed Stokes-Adams syndrome.

Certain kinds of irregularities of heart-beat can be attributed to interference with other parts of this primitive tissue, while cardiac dilatation, with which we are all familiar, is attributable to impairment of the function of tonicity, resident in later-developed muscle, representing the bulk of the heart, whose other function, contractility, when involved gives rise to many of the phenomena of cardiosclerosis.

RELATION OF CARDIAC AFFECTIONS

In considering acute affections of the heart, we should not be confused by terms. We read and talk of acute endocarditis, acute myocarditis and acute pericarditis, often as if they had but little relationship to each other. That conception of cardiac disease is wrong. In truth, these affections are most intimately associated.

It is true that the endocardium may bear the brunt of the disturbance; it is true that the vegetations produced on the valves may be dislodged and become the cause of the involvement of distant organs, as the brain, with consequent hemiplegia, or the cause of death; and it is true that the defects in the valves will, as time goes on and sclerosis increases, lead to mechanical obstacles to the circulation of great significance, but at the time of the acute involvement, except for the dislodging of emboli, the endocarditis, *per se,* has but little influence on the immediate outcome.

What is of importance is this fact, which should never escape our minds: Endocarditis is only a part of a general process that involves the myocardium as well, and this involvement is the serious feature in the case.

Moreover, it is equally true that the pericardium may bear the brunt of the disturbance; and it is equally true that the effusion may, on rare occasions, be the immediate cause of death; and, equally true, adhesions may occur, to obliterate the pericardial cavity and later lead to cardiac failure through that fact; but at the time of the acute involvement, the pericarditis, *per se,* has but little influence on the outcome. Again, what is to be equally kept in mind is that it, too, is but a part of a more general process which involves the myocardium, and that this involvement is the serious feature in the case.

All three of these structures may be and very frequently are implicated, so that what we deal with in acute infectious processes, such as occurs in rheumatism and sepsis, is a carditis or pancarditis.

Of the three, the myocardium is by far the most important structure and it may be involved in many instances alone, and because our attention has been trained so assiduously to the appreciation of murmurs, endocardial, and rubs, pericardial, we overlook the signs which should be as equally obvious of myocardial disease.

The changes in the heart may be due to the invasion of the organ by the pathogenic germs or may be due to the effects of the toxins of such organisms elaborated at a distance. In the former case the heart may be primarily or secondarily affected.

In this article I shall consider only the rheumatic or toxic endo- and myocarditis, leaving the cases due to the direct action of other pyogenic organisms, constituting septic or malignant endocarditis, out of consideration.

In acute inflammatory rheumatism, the involvement of the heart is so common as to make it a probable complication in a given case. In diphtheria and pneumonia myocardial changes always threaten and should never be forgotten for a moment. The signs and symptoms of endocarditis and myocarditis do not burst into bloom in an instant; they are often extremely insidious in their onset; there is always that borderland of doubt that must be traversed before a diagnosis can be certainly established, and yet it is in this borderland, which we seek ever to narrow by more refined clinical methods, that the paths may divide for the patient; and so what should be emphasized is that in the diseases just mentioned, to be forewarned is to be forearmed and the least hint of cardiac implication should give the patient the benefit of the doubt, so far as measures directed toward protecting the heart are concerned.

SIGNS AND SYMPTOMS

What are the hints of cardiac implication?

When during the course of the rheumatism there occurs a rise of temperature that cannot be accounted for by joint-lesions or other local involvement, a developing endocarditis should be thought of. This has especial weight in children in whom the joint involvement may be slight or quite absent. There may be no other evidence and the meaning of this febrile exacerbation may not be clear until long after, when the slowly advancing sclerosis secondary to the process has developed a mechanical defect in the valve accompanied by its appropriate murmur and other signs.

A murmur may occur, however, and if this murmur comes on early and with no signs of myocardial weakening, it probably is due to a valvular endocarditis. A later development of a murmur and more especially with diminishing strength of heart-beat may be due simply to the relaxation of the auriculoventricular rings, producing relative insufficiency and attributable to the parenchymatous degeneration of a milder type, a cloudy swelling, while there may be no accompanying endocarditis and the heart may later return to its pristine integrity.

If a murmur take on a musical quality, it is more likely to be due to endocarditis and the diastolic murmur may be considered as practically pathognomonic of that condition.

When the myocardium is involved in profound changes either by an extension of the rheumatic process, in a parenchymatous degeneration, such as we see in diphtheria, typhoid fever and influenza, or in an interstitial inflammation, suppurative, from the invasion of pyogenic organisms, we get additional and more significant symptoms. They are:

1. An increase in the rate of the pulse out of proportion to the temperature (the pulse usually increases 8 to 10 beats to each 1 degree F.); a change in its character, becoming more empty, gaseous, of a lower tension; an irritability of the pulse, increasing on slight exertion or emotion and irregularity.

2. Changes in the physical signs, the apex-beat a little more diffuse, possibly a trifle displaced; the sounds somewhat muffled and if not so, sharper, shorter, more valvular; the cardiac outline a trifle enlarged, especially to the right.

3. Changes in the appearance of the patient, pallor or a slight cyanosis, increasing prostration, a little precordial discomfort.

Any of these signs, then, singly or in combination, increase of temperature, appearance of a murmur, increase in rate and change in quality of pulse, diffuse apex-beat, muffled sounds, enlarged cardiac outline, should lead one to take precautionary measures at once.

It should not be forgotten that the dreaded myocardial degeneration of diphtheria usually occurs in the second and third weeks after the attack, or at least that it becomes evident by alarming symptoms at that time, by vomiting, precordial distress, great anxiety and restlessness or apathy, and that sudden death is associated in our minds with it, as one of the tragic incidents of childhood.

The lesser signs detailed above might well have been detected by conscientious routine examinations and such an issue avoided. The heart is involved in diphtheria in from 10 to 20 per cent. of the cases.

Frequently in the acute process we have no further manifestations of the disease, but there may ensue dilatation, sometimes quite rapidly, with breathlessness, cough, perhaps edema of the lung tissue and, on occasion, pleural effusions. There may be nausea, vomiting, some mental disturbance, a swollen tender liver, scanty urine containing albumin and, though not characteristic of the acute attack, dropsy. Dilatation is more common and more striking in the rheumatic cases. In the myocardial degenerations progressive weakness of the heart or sudden failure on exertion is more likely to occur.

Our treatment begins, then, with constant vigilance to detect the first least sign of cardiac involvement and, on the mere hint of it, to institute in all its rigor the one measure that outweighs in importance all others directed to the relief of that organ.

THE VALUE OF REST

Rest means something more than going to bed. That, in all probability, the patient has already done, as endocarditis and myocarditis are usually secondary to processes that have already compelled rest in bed, but there are exceptions to this rule and especially in children, and it is no uncommon experience for the worker in children's clinics to have presented to him a child with acute endocarditis running a temperature too slight to attract the parents' attention and with no other symptoms except fugitive joint-pains and the malaise that brought him to the clinic.

To express crudely what rest in bed means, let us recall a few figures from physiology.

To estimate the amount of work the heart has to do many factors have to be taken into consideration, such as the quantity of blood put out, the aortic pressure to be overcome, the specific gravity of blood and its viscosity, the velocity of the current and the effect of gravity.

Some of these factors we cannot influence, but some we can.

Taking average figures, the amount done by the heart per hour is 1,000 kilogram-meters.

To raise 2,000 pounds one yard high, or 1 pound over a mile, in the course of an hour seems to be considerable work.

One of the factors we can influence is the output of the heart, because we can control the rate within certain limits.

Suppose that Mackenzie's figures are correct and that a change of position from lying down to sitting up with the legs down increases the pulse-rate from 2 to 5 beats per minute; that standing up means a further increase of from 4 to 8 beats a minute; slow walking an increase from a rate of 68 to 100, fast walking an increase to 140 and running an increase to 150 per minute; then one of the factors, the output, if each beat delivered the same, would be increased sitting up some 5 per cent., by standing 13 per cent., by slow walking nearly 50 per cent., by running, over 100 per cent.

One would scarcely think it judicious to require an inflamed heart or one degenerated after diphtheria, to a degree that may result in failure, to increase its work to the degree specified by these figures.

And this is not all, for another factor is the pressure, and we are told by numerous observers that the blood-pressure rises 5 to 10 mm. Hg in changing from the recumbent position to the sitting or standing.

If we take 120 mm. Hg as the average pressure in recumbency, then the rise just quoted means an increase of from 4 to 8 per cent. in the work done to overcome this factor.

Multiply these factors by twenty-four and appreciate what an economy in work rest in bed means over sitting up or being about.

But rest in bed means quiet in bed, for muscular exertion means more heart-beats and more pressure and again we have more work done. To prevent muscular exertion the patient must be made easy in bed, put in the position in which he feels most comfortable and that is often semirecumbent. Pillows must be arranged so as to give support and the bed must be smooth and regular. Effort to maintain a strained and uncomfortable position calls muscles into play, and their exercise means more work for the heart.

Mental work and worry, excitement and anger are to be avoided, because all these things by increase of heart-rate and blood-pressure are a burden to the heart.

These influences can be estimated mathematically and are very real things.

Every effort must be made to avoid restlessness and turning and nothing conduces to this more than sleepless nights.

THE IMPORTANCE OF SLEEP

How important sleep is for the maintenance of health is well known; how much more important for the recovery of health may be imagined. We are all too prone to skip over this item too lightly. We should find out each day how long our patient slept, whether the sleep was fitful or continuous and whether it was refreshing.

It often happens that the loss of sleep is due to incompetent nursing, to overheated rooms, to an uncomfortable bed, to too many visitors or to the introduction of subjects that annoy or worry. In other cases the patient is of a frankly nervous type, keenly concerned over his condition and moderate doses of bromids (15 to 30 grains) in the early evening will produce enough sedation of the nervous system to invite sleep.

If this condition does not obtain or the bromids do not succeed, recourse must be had to the hypnotics.

For milder grades of insomnia, insomnia accompanied by no considerable degree of distress, there are a long list of hypnotics in use, all closely allied, chemically and pharmacologically, such as sulphonal, trional, chloralamid, paraldehyd, urethane, amylene hydrate, veronal; and this does not exhaust the list.

Every man who has handled these drugs comes after a time to have a preference. My preference is for trional or chloralamid.

These hypnotics all belong to the marsh-gas series, the series in which the carbon and hydrogen are linked in an open chain. All the members of this series have a depressant effect on the cerebrum, inducing sleep and later coma. The more links there are in the chain, the more toxic they become.

Methane, CH_4, ethane, CH_3-CH_3, propane, CH_3-CH_2-CH_3, and so on up the list are progressively more active.

The alcohols, CH_3OH, methyl or wood alcohol, CH_3-CH_2OH, ethyl or common alcohol and so on, possess the same properties. The oxids, as CH_3-CH_2-O-CH_2CH_3 or common ether, the aldehyds, as CH_3-COH, or methyl aldehyd, the basis of chloral, the ketones, as C_6H_5-CO-CH_3, or hypnone exert effects in kind. But the acids have no effect at all.

The introduction of certain other substances into the radicles may heighten the depressant effect on the cerebrum, as for example, the halogens.

The best-known example is chloral, which is the methyl aldehyd, given above, CH_3-COH, into which 3 Cl have been introduced to replace 3 H, hence, CCl_3-COH, or chloral. But while chloral is a highly potent hypnotic, the best of the series, it has acquired other properties which are not desirable. It is a depressant to the heart and the respiration. It is administered as chloral hydrate.

The chemist next tried to modify chloral so that he might retain its hypnotic effect while diminishing its toxicity. He did this by combining chloral with an NH_2 or amido group. In this way chloralamid was synthetized by combining chloral with formamid, CCl_3-CH (OH) NH.COH.

This body is slowly split in the organism, releasing the chloral sufficiently fast to produce the characteristic hypnotic effect, but not the cardiac and respiratory depression. It was thought that the amido body converted to ammonia would by a stimulating effect counteract the depression of the chloral, and that seems to be borne out by blood-pressure experiments.

Trional is a diethyl-sulphon-ethyl-methyl methane (CH_3) (C_2H_5)-C-$(SO_2C_2H_5)_2$. It will be noted that there are three ethyl groups in the structure. It is on them solely that the hypnotic effect depends. Sulphonal is the same with one less ethyl group. I believe these drugs to be the safest of the group.

Trional operates more rapidly than sulphonal, is eliminated more promptly, so has less effect during the following day, and is said to be less toxic. It is practically insoluble in water. It is best given in powder form. It has but little taste, can be put on the tongue dry and washed down. It can be given in wafers or capsules or dissolved in a little whisky, brandy or wine or stirred up in a little water or milk, but I must emphasize my dislike of ever associating the administration of a drug with food.

The dose is 10 or 15 grains, given about two hours before sleeping-time and if this dose promises to be ineffectual another dose of the same size may be admintered at the end of the second or third hour after the first dose.

Chloralamid, which is fairly soluble in water and freely in alcohol, may be given in solution or may be given in powder form. It should not be administered in hot menstrua, as the heat decomposes it. The dose is 20 to 30 grains and may be repeated after two or three hours as described for trional. For children the dose should be smaller, about one-half as a rule.

But even these may not answer. There remain two more powerful hypnotics to which we may have recourse, chloral and morphin. The former is very reliable, but its depressant effect has to be taken into consideration. I should care to use it only in the excited sthenic heart of rheumatic endocarditis; but if the myocardium was much involved or in the myocarditis of diphtheria, pneumonia, influenza or typhoid, I would distrust it.

Morphin is far and away the best hypnotic in cardiac disease—best because it is safest, surest and operative in the presence of distress, dyspnea or pain. It should be given in doses of 1/8 to 1/4 grain hypodermically.

Circulatory disturbance as well as respiratory disturbance connotes actual or threatened deficiency of oxidation, so the importance of fresh air cannot be overestimated. That means that the choice of a room is important. The room should be capable of good ventilation and if it has a balcony or veranda that can be approached from it, the patient should have the benefit of fresh air. A room whose air contains an excess of carbon dioxid or a deficiency of oxygen will, of course, give rise to manifest disturbance of respiration, but those are not all the factors that cause discomfort. A room may have been freshly aired, but because of odors clinging to it, or because there is too much moisture or too much warmth, it may affect the patient unpleasantly.

DIET IN CARDIAC DISEASE

If the endocarditis intervenes in the course of an attack of rheumatic fever, there is no indication for changing the diet. It consists of milk, or milk to which milk-sugar enough to make the sugar content of the milk up to 10 per cent. has been added, which fortified milk contains 925 calories to the quart, milk soups, cereals, rice, bread and butter and eggs. Our patient needs some 2,500 to 3,000 calories a day in his food, more if his appetite dictates it, less if his digestion cannot handle it.

Myocarditis occurring in typhoid, diphtheria and other conditions named indicates no less food, rather more, for there is evidence that the nitrogenous destruction going on elsewhere in the body does not spare the heart.

With respect to the dietary, one thing in particular is to be emphasized, namely, that if tympanites or flatulency occur, the articles of food responsible shall be promptly eliminated and relief for the condition sought at once, as this distention embarrasses the heart's action.

Milk may have to be stopped at once, or modified, given as buttermilk, or whey, or peptonized. It should be remembered that the constituent of milk most likely to make trouble in fever is the fat. Skimming the milk may be all that is necessary to remedy the trouble. Milk is sometimes better borne diluted with water or vichy. Cereals should be suspected as a possible source of gaseous collection, through the process of fermentation, or the disturbance may be attributed to the milk sugar.

METHOD OF OBTAINING CATHARSIS

In the prevention of distention the care of the bowels is as important as the regulation of diet. When first seen, a free evacuation of the bowels may be secured by calomel in divided doses, 1 to 1½ grains, in all, followed by a half ounce of Rochelle or Epsom salts or their equivalent. If the bowels do not continue free, a mild saline, like Hunyadi water or one of the many aperients on the market, or a half ounce of phosphate of soda may be given every second day or an enema may be given instead.

MEDICINAL TREATMENT

There are three objects to be aimed at in the use of drugs in acute cardiac disease.

1. To control or modify the progress of the disease of which the endocarditis is a part or complication.

2. To affect the progress of the cardiac condition itself.

3. To meet the needs of the heart as they arise, i. e., symptomatic treatment.

1. In the acute endocarditis of rheumatic fever, the salicylates should be continued in full dosage, 15 and 20 grains every two hours during the waking period; that is, there is no modification of the use of the drug when the endocarditis intervenes. It is impossible for one who has the opportunity to see many cases of rheumatism not to be impressed with the striking effects of the salicylates in rheumatism; and though it is agreed that the progress of the cardiac disease is not modified like the events in the joints, still it does seem irrational to neglect the only measure that can demonstrate its efficiency in other phases of the disease, if the drug does not depress the heart, which I think is a very rare occurrence even in such doses as I advocate.

I must acknowledge, however, that there is a wide divergence of opinion in this matter. While some men would push the salicylate to much larger doses, others contend that it is not safe or efficacious.

The one other mode of treatment directed against rheumatism, which has much vogue, is the alkaline, and it is contended by its advocates that it has a decided effect on the cardiac inflammation.

I do believe that the use of the alkali makes the salicylates better borne and I am accustomed to combine the treatments.

A rough rule is to give double the dose of salicylate in alkali, e. g., if giving 15 grains of the salicylate, to give 30 grains of the alkali, until the urine reacts alkaline and then diminish the dose, but keep the urine alkaline.

In parenchymatous myocarditis occurring in diphtheria, the onset is usually late, but if it does occur while the process is active in the throat, the antitoxin should be pushed vigorously, for though the toxin combined with the heart muscle cannot be ousted, the combination of more can be prevented.

In typhoid its appearance does not contra-indicate the use of the cold bath, as long as the reaction remains good, and in pneumonia the cold air is of double value when myocarditis ensues.

2. I do not think we have any drug that can affect the progress of the cardiac condition itself. One cannot be entirely indifferent, however, to the constant reference of the books to the use of potassium iodid in such con-

ditions. I find, however, that the references are almost invariably in very general terms, with no definite instructions as to how it is to be used or what the rationale of its usage is.

Potassium iodid belongs to the class of drugs known as alteratives, and that term covers about all we know of their action: that is, that they produce changes. There are no more real therapeutic agents than this class of drugs, as witness mercury and potassium iodid in syphilis. The fact that new tissue of syphilitic origin fairly melts away under the action of potassium iodid has led to its use in all kinds of conditions in which replacement of tissue new or old is formed, but with dubious results. That this drug may not yet prove an active agent in controlling inflammatory and degenerative changes in other conditions than syphilis, one cannot predict.

SYMPTOMATIC TREATMENT

3. Before considering drugs, what local measures of relief may be afforded?

Local measures have been used (1) to modify the progress of the inflammation, and (2) to relieve such symptoms as palpitation, precordial distress and pain. These measures consist in the application of cold, heat or counterirritants.

The application preferred is the ice-bag over the precordium. This is indicated in cases of pain or distress and certainly gives relief.

Palpitation is also relieved and it is maintained that the slower pulse, better heart-beat and improved regularity that is claimed for this method can be demonstrated experimentally in the healthy subject. The ice-bag may be put on at intervals of several hours for an hour at a time or can be kept on continuously.

Care must be taken that the bag does not become a source of annoyance from its displacement and the effort demanded to keep it in place, as the fatigue ensuing would more than neutralize any benefit that might accrue from it. There is constant danger that these things may degenerate into senseless routine, and it is one of the commonest experiences to find that neither nurse nor patient makes any effort to keep the bag where it belongs.

I believe that the effects produced come through the reflexes, starting in the skin and impinging on the viscus innervated from the same segment in the cord as the skin area concerned, so that an ice-bag resting on the abdomen can scarcely have the effect on the heart to be anticipated from one resting on the precordium.

To some patients who stand cold badly, the application of heat over the heart in the shape of fomentations or poultices may allay pain and distress. It is not a usual procedure.

It has been the practice from time to time to use counterirritants over the heart in acute endocarditis, not merely to allay pain, but with the idea that it influenced the inflammatory processes. Blisters were commonly used. The practice is but rarely recommended in this country.

When pain cannot be relieved by local measures, or when precordial distress, anxiety or palpitation is severe, morphin is indicated in doses of 1/8 to 1/4 grain hypodermically.

In the first attacks of rheumatic endocarditis the above measures will suffice in the vast majority of cases to carry the patient through. The heart muscle is strong; mechanical defects have not yet had time to strain it and our chief concern will be so to manage the convalescence as to study the cardiac reserve and spare the heart excessive demands that hasten it to permanently crippled condition.

Sometimes, however, in the first attack and much more frequently in recurring attacks, cardiac insufficiency intervenes, with rapid dilatation, dyspnea, cardiac distress and occasionally, but rarely in first attacks, a dropsy.

When this condition comes on rapidly, it is accompanied by much mental as well as physical distress and there is nothing that accomplishes so much at once as morphin. It should be given in doses of 1/8 to 1/4 grain hypodermically. It quiets the mind, lessens the dyspnea and produces muscular relaxation and accomplishes the maximum of rest. Sleep ensues, itself of the greatest value.

In such a condition the heart needs stimulation.

There is no drug comparable to digitalis unless it is strophanthus. I prefer, if the stomach has been in good shape and the condition does not threaten too urgently, the infusion of digitalis in doses of 2 to 4 drams three or four times a day, until results are obtained.

When nine to twelve doses have been given it is wise to intermit, for such quantities will be operative if any quantity will and more may prove toxic. The omission of the drug for two to four days allows of excretion of some of the accumulation. Other official preparations may be used if fresh and reliable. For more urgent use strophanthin stands preeminent.

There is no drug that operates more rapidly than a reliable strophanthin gr. 1/120 put into the vein or into the muscle. Its effect on the pulse in increasing its amplitude may be made out in a few minutes and on the urine in two or three hours. The dose may be repeated once in the next twelve hours if needed, but further dosage is hazardous. It is better to rely on the effects of the digitalis, which should be begun at the same time as the strophanthin and the delayed action of which will take up the strophanthin effect in twenty-four to forty-eight hours.

Little reliance is to be placed on the glucosids of digitalis for prompt action or for full equivalent of the action of the leaf or its official preparations.

As the heart strength is restored the drugs should be withdrawn as rapidly as possible.

In the cases of acute myocardial degeneration we may have progressive weakening, slapping sounds, thready and rapid pulse and some evidence of dilatation, especially to the right. This weakening, if not responding to rest and the measures advised, will need the administration of digitalis.

Besides this condition, we have sudden cardiac collapse, asystole. This occurs especially often in diphtheria. So rapid may this be that death ensues before measures of relief can be obtained.

Myocardial degeneration may be marked in diphtheria, but we have reason to believe that the collapse is more often due to vasomotor paralysis than to cardiac. Such vasomotor collapse is probably the cause of most of the deaths in the myocardial cases, and it is safer to treat such cases of collapse on that theory.

In vasomotor collapse or in surgical shock, the splanchnic vessels are dilated and the patient is literally bleeding to death into his own visceral vessels. The vasomotor center might or might not respond to stimulants, but the vessels will. A rapid and marked effect, though a temporary one, is obtained by a hypodermic of adrenalin, 15 to 20 minims of 1 to 1,000 in normal salt solution, the strength in which it is usually dispensed. This should be given deep into a muscle whose wide network of vessels, Meltzer has shown, aborbs almost as rapidly as a vein.

Next, the abdomen should be massaged and pressure brought to bear on it, for the mechanical effect is to squeeze the blood from the vessels along into the veins and toward the heart.

Another effectual way of stimulating the splanchnic vessels is to give an enteroclysis of hot saline solution and hot black coffee. It should be hot, not lukewarm, should be at 110 to 115 F. The heat causes contraction of the splanchnic vessels and raises the column of blood in the vessels of the general circulation and forwards their contents into the veins, while the coffee acts on the heart and vasomotor center if it is capable of responding.

Another drug directed toward the vasomotor center is camphor 5 grains in 10 per cent. solution in olive oil, or caffein 3 to 5 grains hypodermically as a soluble double salt of caffein and sodium salicylate or benzoate.

Strychnin may be tried in doses of 1/20 grain hypodermically.

For the heart, more important than caffein or camphor is the intravenous use of strophanthin.

Digitalis in other preparations acting more slowly may be added to sustain the circulation.

Hypodermoclysis or a saline infusion may be of value in these emergencies.

One of the most difficult items in the treatment of endocarditis and myocarditis is the management of convalescence.

No patient should be allowed to get up until every symptom of cardiac insufficiency has disappeared and he is free from fever. Moreover, he should not be allowed up until some study has been made of his cardiac reserve.

I cannot improve on Forchheimer's precautions, which I quote literally:

> I usually begin with a massage and resistance movements, applied in the mildest possible way at first and then gradually increased; the condition of the pulse as to regularity, rate and tension being noted before and after manipulation. When the proper reaction takes place the passive exercises are increased in force and duration. . . . During the first week the patient has been allowed to sit up in bed, first for a short time, then longer and longer, until only the normal change in pulse-rate is noted. After a week of treatment, sometimes sooner, sometimes later, the patient is allowed to leave his bed and sit up in a chair by the side of the bed. The normal reaction of the pulse may be determined here by its frequency; if an increase of about 20 beats per minute is produced, it must be looked on as an abnormal reaction.
>
> After he has sat up in a chair, the time of sitting up being gradually increased, he is allowed to walk; first short distances, then longer and longer, being finally permitted to leave the room. Then he may be permitted to walk down stairs, to go out for a drive and finally to walk up stairs.

These rules are excellent and it is step by step that the patient has to be followed and observed. As the heart regains strength, it needs exercise, but always under observation until it demonstrates its improvement under the new test.

Change of air and surroundings may help to hasten convalescence.

Fresh air, an abundance of good food and good cheer leave little for medicines. Tonics are usually superfluous under such circumstances and the red cells take care of themselves, but if the ideal cannot be attained, iron in the shape of Blaud's pills, 5 grains three times a day, with or without a little arsenic in the shape of arsenous acid 1/40 grain three times a day, which can be combined with the iron, or as Fowler's solution 3 to 6 minims three times a day.

Strychnin 1/60 to 1/30 grain, and small doses of quinin, 1 grain three times a day, are credited with strengthening effects.

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RELATIONSHIP OF DRUG ADDICTIONS, PARTICULARLY ALCOHOLISM, TO NERVOUS AND MENTAL DISEASES

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Drug addiction is frequently associated with lesions of the cerebrospinal system as cause or effect. It is comparatively simple to recognize many of the pathologic conditions resulting from drug addiction; but it is difficult to clear up the obscure etiology usually lying back of the addiction itself. Outside of cases manifestly artificially induced, it is rare to find an instance of drug habit which is not engrafted on underlying neuropathologic soil. Among artificially induced cases may be cited those of persons who have blundered into the habit through taking alcohol as a tonic, or as a hypnotic, or as a sedative in dysmenorrhea, or through the use of morphin to relieve pain such as that incident on gall-stone colic or neuralgia. In this class also are those cases induced through social customs and prejudices, such as the custom of treating; that of giving young children alcoholic beverages in the belief that such will make them healthy, large and strong, and the wide-spread custom among the working classes of taking alcohol in the belief that it gives muscular endurance or supplies bodily warmth. But in those cases not artificially induced it is difficult to trace the etiology because of the part such factors as heredity or environment may or may not play in the neuropathologic condition. Alcoholism, or other drug addiction, in the ancestry does not necessarily produce a similar condition in the children, but it is probable that this, as is the case in tuberculosis, syphilis, cancer, etc., implants in the offspring a less resisting constitution which proves to be a ready soil for certain neuroses with which drug addiction seems especially likely to become associated. We cannot always say that a neurotic constitution is the result of heredity even when the ancestry has been such as to point to that conclusion; for often the children of alcoholics and other drug addicts are so insufficiently nourished during childhood, and are reared in such unhappy and such unhygienic homes as to endow them with unstable nervous constitutions, even though the parents may not have been the subjects of such addictions. A factor which I believe may figure largely in evolving the unstable, the unfit, among whom drug habits abound, is the widespread use, during infancy, of opium-containing and other narcotic-compounded soothing-syrups.

ALCOHOLISM AS A CAUSE

1. As a cause alcoholism, the conspicuous example of drug addiction, may be associated with forms of neuritis affecting many or all of the *peripheral* nerves (alcoholic

multiple neuritis). But there are infinite gradations of this neuritis from slight paresthesias up through the severe forms in which wrist- and ankle-drop may figure, to that in which cranial nerve or cerebral involvement may be found. I digress here to say that we often do not sufficiently emphasize the various paresthesias with which we are familiar; when no more serious symptoms arise we are likely to look on them as of little consequence; yet, when a neuritis develops we do not hesitate to point to them as having represented its prodromal stage. By looking on these paresthesias, then, as at least indicative of an especially vulnerable nervous system, it may be possible to avoid more serious subsequent involvement. At times, as in certain eczemas, acnes, and some skin infections (often induced by scratching), it is difficult to determine whether the irritation is due solely to inflammation of the nerve terminals: there may be inflammation of the skin emunctories through its effort to eliminate toxins from the system. As an illustration of the action of a toxin on nerve terminals and skin, I recall a recent case of fatal acute exfoliating dermatitis apparently induced in a neurotic individual by a dose of wood alcohol. We are accustomed to think only of surface perversions of sensation such as numbness, prickling, formication, etc., as constituting the paresthesias; but a condition often exists in the internal organs which it is safe to classify as equally indicative of paresthetic states. An example in the alcoholic is that peculiar unsatisfied sensation in pharynx, gullet and stomach which early expresses itself in a desire for some hot, burning substance. A further development of this paresthetic state reveals itself in the cough noticeably characteristic of the alcoholic, having its origin commonly in an irritation of the nerve terminals of the pharynx or stomach. The hissing, buzzing, crackling noises so distressing to the chronic alcoholic may at times be expressive of paresthesias which often are an important factor in the formation of hallucinatory experiences (persecuting voices) which in turn may give rise to morbid mental states.

2. Alcoholism may be causally associated with lesions of the *cranial* nerves, with or without general neuritis, instances of which effect may be seen in optic atrophy—especially produced by methyl alcohol—trigeminal neuralgia, rarely peripheral facial palsy; disorders of taste and smell, and tremulous tongue, all pointing to cranial nerve involvement. Some authors believe that sudden death in alcoholics is at times produced by inflammation of the vagus.

3. Alcoholism may be associated as a cause with *cortical* involvement, with or without demonstrable peripheral change. This condition may be observed in the several forms of delirium tremens, in alcoholic amnesias and automatisms, in alcoholic epilepsy, hallucinosis, dementia, and also in alcoholic "wet brain."

4. Alcoholism may be causally associated with both *peripheral* and *central* nerve involvement seen in Korsakoff's psychosis and alcoholic pseudoparalysis. In the former we usually find neuritis in the extremities along with impairment of the mental faculties, manifested typically in loss of memory for recent events, confabulation, and disorientation. In pseudoparesis, produced only by alcohol, there is peripheral and central involvement of such nature as to produce a facsimile of the picture seen in true or general paresis.

5. Alcoholism may causally display its effects chiefly on the *cord*, giving rise to pseudo-tabes, at times resembling very closely tabes of specific origin.

6. Alcoholism is associated as a cause with involvement of the *higher cerebral centers*. This is true in all drug addicts. Such involvement exists side by side with the lesions already mentioned as well as when they are not present.

> "Even the smallest quantities of alcohol tend to lessen the activity of the brain, the drug appearing to act most strongly, and therefore in the smallest quantities, on the most recently acquired faculties, to annihilate those qualities which have been built up through education and experience, the power of self control and the sense of responsibility."[1]

In 1900, Kraepelin and Dr. Kürz found by experiment that moderate daily drinking reduced the rapidity with which both habitual and free association of ideas were formed in the mind. In the case of the latter the retardation was the more marked. The same experimenters found the memory to be greatly retarded. A. Smith obtained like results in twenty-seven experiments.

> "Even in small doses alcohol exercises a paralytic action on the higher psychic processes. Inhibition in its more complex and elevated manifestations—judgment, modesty, reserve, shame and prudence—becomes weakened or suspended. Action follows thought with greater promptness and less deliberation. The tipsy man, instead of carrying out in an orderly manner a program suited to his true character, becomes the passive and pliable sport of every chance impression that happens to affect his consciousness."[2]

An example of perverted judgment seen every day in the alcoholic wards is the peculiar suspicion with which the alcoholic regards everyone who approaches him. He doubts the disinterestedness of his physician, attributing anything the latter may wish to do for him to selfish motives or to some plot on the part of the victim's family. It is characteristic of the alcoholic impairment of judgment that the patient shows indifference to his own diseased condition and doubts the significance of glaring pathologic symptoms. A nephritic, when told of the condition of his urine, will say: "That's nothing; you find that in everybody." He will refuse to regard seriously tabetic pains, or he will treat lightly, refusing to take medicine, a condition in which the legs are enormously edematous. I have had chronic alcoholics of a high order of intellect suddenly confronted by the necessity of abstinence on account of intercurrent disease, such as tuberculosis; and these habitués, after their condition was cleared up, have been amazed at their former blindness in thinking they could do their best when under the influence of alcohol.

In the beginning of this paper I stated that it was comparatively simple to recognize much of the pathology resulting from drug addiction, especially with alcoholism as the cause. We have cited instances of such pathology expressed in the brain and nervous system. There were also mentioned factors, social customs, heredity, etc., which, in my opinion, lead to drug addiction as an effect.

ALCOHOLISM AS AN EFFECT

In dealing with the pathologic conditions associated with addiction to drugs as a cause (1, 2, 3, 4, etc.), we were able to grade results from the least marked nerve involvement to the most serious, in which the brain and its highest processes participate in the diseased conditions. It was pictured so merely for purposes of clearness, as all grades and combinations of the above syndromes may exist, if not simultaneously at least successively. In the following, in which the conditions are reversed, that is, in which the addiction itself is an effect of some usually obscure cause, the gradation cannot be so definitely represented.

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[1] Cushny: Pharmacology and Therapeutics, Philadelphia, 1910, Lea & Febiger, Ed. 5, p. 133.

[2] Tanzi: Text-Book of Mental Diseases, Rebman Co., New York, 1906, p. 314.

As an effect the addiction to alcohol, morphin or other narcotic drug may be associated with various neuroses and psychoses (neuralgias, tics, obsessions, etc.). The fact that a neuralgic pain long continued may lead to the formation of a drug habit, especially morphinism, is well known; a tic often ceases temporarily while the sufferer is under the influence of a narcotic; and fears and abulias may disappear under the same influence. One of my patients, a successful business man, has had to retire from business owing to an obsession which, through fear of his ability to put through a business deal, compelled him to resort to morphin before every important transaction, in order to overcome his timidity.

Addiction to drugs, noticeably alcoholism, is frequently associated as an effect with that peculiar, though common, constitutional make-up known as cyclothymia. This is an emotional disorder and expresses itself in periods of depression — dysthymia, alternating with periods of excitation — hyperthymia. Between these phases such individuals often experience normal periods. The habitué of this class is very often met with. Such persons have resorted to their drug as a solace during the depression; as an outlet during the period of exuberance. Jelliffe says:[3]

> "The cyclothymic constitution . . . manifests itself very frequently under the guise of periodic alcoholic debauches. . . . The alcohol excesses are apt to be fairly short in duration and are frequently interspersed with periods of productive energy, often in the gifted, of a very high order of efficiency. . . . It is recognized by many at the present time that dipsomania—or periodic drunkenness—is not by any means always an epileptic equivalent. . . . On the other hand, periodic drunkenness is a common cyclothymic manifestation, as well as a frequent complication in a fully developed manic-depressive psychosis. I have observed it in both the cyclothymic depressed and the cyclothymic excited persons, though rarely in the same individual."

The application of the term "periodic drunkenness" must be limited when applied to the foregoing class. If by "periodic drunkenness" we mean the condition in those individuals who are abstinent between sprees, the debauch may be attributed to the cyclothymic constitution; but if the periodic drunkenness applies to those chronic alcoholics who drink daily, coming up periodically to a spree, the debauch is to be attributed to the cumulative toxic effect of alcohol on the system. It is well also not to confuse or use synonymously the terms "periodic drunkenness" and "dipsomania." Dipsomania is a very rare condition, and a more desperate one than periodic drunkenness. It entirely transcends the will of its victim, thus lying in the realm of true insanity. Tanzi says that it manifests itself periodically in a morbid craving which is an uncontrollable impulse.

We find alcoholism a result of involutionary processes. It "is generally the effort of the individual to maintain his productive power by recourse to artificial stimulation" (Neff). It is noticeable that a previous moderate indulgence in alcohol sometimes at this period becomes excessive. Curiously, however, we find persons in whom the indulgence has previously been excessive who at the involutionary period entirely cease to have a desire for alcohol.

Drug addiction may be associated as an effect with manic-depressive insanity, having been begun in the depressive stage as an effort to counteract the melancholy, or bodily depression. On the other hand, the maniacal or excited phase may be the starting-point in the habit formation as an effort to procure quiet or sleep.

Drug addiction, particularly alcoholism, is relatively frequently associated, as an effect, with the early stages of dementia præcox—especially so in young men in a city environment. This does not result from a craving for narcotics. The individual is attracted toward the gaiety of brilliantly-lighted cafés, saloons and the red-light district, and his habit formation is an incident accompanying his indulgence of whimsical fancies beyond his control.

Drug addiction is often an effect associated with hypomania, in itself characterized by "an exuberance of thought, speech and action which resembles that of the first degree of drunkenness" (Tanzi). This disease is likely to lead its victim, at times through his insistent sociability, at times through the depression following the characteristic "stress of occupation," to alcoholism or morphinism.

Alcoholism especially may be a result of a predisposition caused by the deteriorating processes of general paresis. More frequently, however, we find the alcoholism already existing and more freely indulged in as the specific disease advances, thus adding an agent highly favorable to the action of the poison of syphilis in the production of paresis. The finely organized cortical cells and nerve tissue cannot successfully withstand the double toxicity. In discussing the frequent association of alcohol, syphilis and general paresis, Dr. August Hoch[4] lays great emphasis on the fact that alcohol is an important cause in the production of brain diseases in which there is syphilis.

In the study of drug addictions one soon comes to see that there are many conditions in which the addiction may figure both as cause and as effect. Alcoholism in the ascendants may establish disease of brain or nervous system and this in turn be the determining factor in the etiology of alcoholism or other drug addiction in the descendants. In the individual a drug habit once formed establishes organic and mental changes leading to tolerance and finally craving, making a continuance of the indulgence necessary to preserve his comfort against the ever-increasing distress of withdrawal.

It is well known that narcotic drugs may obscure the clinical picture and symptom-complex of diseases generally. The obscuring of the signs and symptoms of appendicitis by morphin is a familiar example. This obscuring is likewise true in nervous and mental diseases. Cases are not uncommon in which the symptoms of the early exuberant grandiose stage of general paresis have been overlooked because of the superficial likeness of such symptoms to those of alcoholism. This is true as well at times when depression characterizes early paresis. I recall the case of an alcoholic in whom very definite pains of tabes asserted themselves on the withdrawal of his drug; and the case of a morphinist whose neuritis did not reveal the symptom of pain until her morphin was stopped, although definite signs of a severe neuritis had been in evidence for several weeks, though entirely overlooked.

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[3] Am. Jour. Insan., April, 1911.

[4] State Hosp. Bull., New York, September, 1909, p. 7.

In this paper I have considered many of the more common nerve and brain conditions in which drug addiction plays a part as cause or as effect. The isolated cases, however, in which we find drug addiction associated are very numerous. This is conspicuously so in those cases in whom some perverted metabolism or toxic secretion is the exciting cause. Recently the case of a patient brought to the hospital for treatment for alcoholism had been diagnosed as neurasthenia; the woman had long been intolerantly looked on as a perverse habitué, her complaints set down as purely psychic. Though the psychic disease was a prominent feature, it was clearly due to perverted thyroid functioning; and alcohol had been resorted to because of the relief it afforded from the distressing mental and nervous symptoms characteristic of hyperthyroidism.

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THE NON-SURGICAL TREATMENT OF CHRONICALLY DISCHARGING EARS

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What to do for his patients with chronic discharging ears has been long a troublesome question to the general practitioner. He has always among his clientele a number of these cases, which have persisted for years, some of them despite the most earnest efforts to bring about a cure.

To have an ear attended with a constant secretion of purulent matter presenting at the external auditory meatus, especially if it be foul-smelling, is a disgusting affliction, from which the unhappy subject naturally yearns to be relieved. But the esthetic discomfort, though great, is the least of the disadvantages of such a condition.

A continually suppurating ear means the persistence of a destructive process going on in a physiologically important portion of the auditory organ. The middle ear cavity is essentially concerned in sound transmission, and it is impossible for it to be long the seat of a suppurative process without serious impairment of the hearing function.

In the course of time, if the process is not checked, the drum-membrane will gradually slough away and become almost or completely destroyed. The little ossicles, denuded of their thin layer of membrane, fall a ready prey to necrosis and are exfoliated, and sooner or later other important structures are involved in the destructive process. The hearing must surely, though slowly, grow worse if the disease is unchecked, and eventually may become lost. In addition to this actually present evil, there is in every case of suppurative otitis, a large chance of something more serious happening, because of an extension of the infection to neighboring vital organs.

It is unnecessary, I am sure, to have to insist on the seriousness of suppurative otitis to intelligent practitioners of the present day, although it is only recently that they came to realize the full measure of the dangerous possibilities of such an affection. The fact that life-insurance companies, basing their proposition on cold statistics, exclude from risks subjects of chronic discharging ears, is significant enough.

The patients generally look sickly and have muddy complexions, no doubt due to the absorption of bacterial toxins from the pus pent up in the pneumatic cavities. They are subject to frequent headaches from exacerbations of the disease, often with some involvement of the mastoid cells. But worst of all, they are in imminent danger of grave, it may be fatal, intracranial complications, due directly to an extension of the process. Most brain abscesses are known to come from this cause. Lateral sinus thrombosis is an even more frequently fatal result, and meningitis, septicemia, labyrinthitis, epidural abscess and facial paralysis are all possibilities seriously to be feared.

It is because of these dangers and disadvantages attending a suppurative otitis that many otologists who, from their experiences with the fatal consequences possible, are naturally more impressed than others with the gravity of the situation, have advocated radical surgery in such cases. Unfortunately the only operation which we can offer with a promise of almost certain success is one that is extremely radical. The milder or conservative measures, such as ossiculectomy, which are sometimes practiced, have been generally disappointing. To effect a certain cure it has been found necessary not only to remove the drum membrane and all the contents of the tympanic cavity, including the ossicles, but also to enter the antrum and the attic and throw all these into one by breaking down the partitions which lie between, concluding with the performance of a proper plastic operation on the auricle to form a new meatus leading to the cavity which has been thus artificially created.

An operation of this kind is one that the thoughtful and conscientious surgeon hesitates to advocate except for the most positive indications. At any rate, even when the operation seems for the best of reasons to be positively indicated, the wisest plan is not to intervene until conservative measures have been exhausted, and the patient has been given the benefit of a course of medical treatment.

It is quite evident that in many cases surgical treatment is out of the question, because of the personal attitude of the patient, and we must content ourselves with doing the best that can be done in other ways. On the other hand, there are cases, of course, in which it is plain to see from the beginning that no kind or amount of medical treatment alone can be successful, cases, for instance, dependent on chronic mastoiditis, the existence of large cholesteatomatous masses in the antrum and attic, or large polyps and granulations blocking the way of drainage. But there still remains a large percentage of cases which may be guided to a successful termination if we use the right kind of treatment and use it properly.

The object of treatment of suppurative otitis is not primarily the cessation of the discharge, but the cure of the pathologic process on which it depends. The discharge is but a symptom and its relief is incidental to the cure of the disease. Since, however, the latter is never completely cured until the former stops, we may regard the two, from the standpoint of treatment, as synonymous. Our treatment should be directed, in some cases, to the general health, in many cases to the state of the nose, nasopharynx and Eustachian tubes, and in all cases to the seat of the suppuration in the middle-ear cavity and its immediate adnexa.

In some cases the continuance of the suppuration is maintained by systemic dyscrasia, impoverished or depraved states of the blood and general lowering of the vitality. For such patients iron, quinin, arsenic, manganese, or strychnin, should be prescribed, and fresh air, exercise and a proper hygienic environment insisted on.

Where either tuberculosis or lues is present, it is of course impossible to get results unless the general condition receives its appropriate general treatment. Infection from the nasopharynx by the Eustachian tubes is in almost all cases the original cause of the otitis. Attention to these parts is therefore very important to the successful cure of this disease.

In children a chronic suppuration of the ear that has not been left by either measles, diphtheria or scarlatina is almost certainly dependent on adenoids. In cases in which adenoid growths are present their thorough removal should be the first step adopted toward bringing about a cure. In some cases it is all that is necessary. In many cases of adults in which adenoids might not be suspected, there will be found, on careful examination, a little growth lurking in the fossa of Rosenmüller close to the mouth of the tube, which is a frequent source of infection passing through to the middle ear. A careful curettement of this region in such cases may prove a great help to treatment.

PRINCIPLES OF TREATMENT

As to the local treatment to be directed to the ear itself, there are various agents and various means of using them, but they will be found, all of them, to be based on one, or a combination of the following three principles:

1. The removal of the purulent secretion or other products of the disease process.
2. The sterilization of the parts and the prevention of sepsis.
3. The use of selected medicinal agents to assist Nature in restoring the diseased parts to a normal healthy condition.

Very few of the measures ordinarily employed are limited to one of these principles alone. As a rule they endeavor to combine two or, it may be, all three.

1. Of agents used strictly for cleansing the parts and the removal of secretions, we have Politzerization, irrigation with sterile water and the employment of a suction apparatus at the external meatus. If there is a sufficient perforation in the drum-membrane, Politzerization may be done with impunity. The fear that secretion may be driven into the accessory pneumatic cavities is not well founded. With a well-open drum-membrane experiments have amply demonstrated that the blast of air coming through the Eustachian tube drives everything to the external meatus. I have been in the habit, however, of first seeing that the pharyngeal mouth of the Eustachian tube is free of secretion and as sterile as we can make it by local application of antiseptics, to avoid bringing fresh infection from the nasopharynx. When irrigation is done with simple sterile water, it is done, of course, to fulfil only the first indication, viz., that of cleansing the parts. The use of a normal saline solution materially assists this function, as thereby the albuminous products are dissolved and are more effectually removed. As a rule, however, the practice is to use for irrigating purposes solutions that are actually germicidal, it being the aim of these not only to cleanse, but to have some beneficial effect at the same time in sterilizing the affected parts.

Of methods aimed to remove secretion, a valuable one is the rarefication of the air in the external meatus. This has been practiced for some time, but has recently come more into vogue by reason of the construction of effective suction apparatus adapted to this end. The Fowler apparatus which I have used with apparent benefit combines the suction principle with irrigation, the vacuum being produced by siphonage.

Of methods which depend on the cure of an otorrhea by virtue of a cleansing alone, we should mention one that is extolled by some specialists as the only correct method, namely, the frequent mopping out of the secretion from the canal by the use of cotton-tipped applicators. When this is done to the exclusion of irrigation it is spoken of as the "dry treatment." It has many advantages, but requires painstaking attention on the part of the physician, or that the patient shall be unusually careful, intelligent and persevering. It is much better applicable in cases of acute suppuration than in chronic cases.

The same is to be said of what is termed the "wick treatment," meaning the frequent introduction of sterile or antiseptic strips of gauze into the depths of the canal to be left *in situ* a certain number of hours for the purpose of absorbing the secretion as fast as it forms. This is my favorite method of treatment in acute suppuration, but it is too tedious to be carried out faithfully in long-standing chronic otorrhea.

Under the head of cleansing agents I might mention those which are intended to digest or dissolve the products of inflammation. I have especially in mind enzymol and peroxid of hydrogen. The latter is used with certain precautions to meet special indications. It is undoubtedly an excellent cleansing agent as well as a good antiseptic. When the dioxid is decomposed the bactericidal action of the liberated nascent oxygen is exerted throughout the cavity, and the active effervescence serves a good purpose in dislodging the purulent material and getting rid of it in a way that syringing alone could not so successfully accomplish. I do not share the fear of those who hesitate to use it thinking that thereby they will cause a spread of the disease to unaffected parts. There is no place that it can carry infection where it does not already exist and wherever it goes it naturally exerts a favorable influence.

2. The second principle which I have named as applying in the local treatment of discharging ear is one that has both a passive and an active function, the former consisting in the maintenance of aseptic conditions by the avoidance of additional infection from the outside; the latter in the use of directly active germicidal agents with a view to overcoming as far as possible the septic conditions already present.

The passive part of this proposition should of course be kept in view and respected, no matter what treatment is used. When we reflect that we are dealing with parts separated by the thinnest partitions from surrounding vital organs, where infection generally means death, we should appreciate the importance of scrupulous asepsis. But in addition to a mere passive asepsis, much is expected in suppurative otitis by the employment of active germicidal agents brought into contact with the suppurating focus. It is the custom to add some antiseptic agent to the solution used in irrigating the ears, and drugs which come more properly under the next class to be mentioned depend in no little measure on their antiseptic properties.

3. This third class, however, includes especially those agents which are recommended and used because of

their supposed direct therapeutic action on diseased mucous membrane.

Incidentally, as stated, these agents have usually considerable antiseptic properties, and therefore exert favorable influence in preventing decomposition and putrefaction. But apart from this they are given because of their special physiologic action, which renders them valuable agents in this condition. They will be seen to excite often marked reactions, altering for the better the circulation and nutrition of the parts. In other cases they promote an absorption of the round cells, while to still others they act by destroying necrosed tissues. The agents used are chiefly astringents, stimulants, alterative desiccants, caustics and absorbifacients.

METHODS OF APPLYING MEDICATION

There are three methods that can be employed in bringing medicinal agents in contact with the diseased surfaces of the middle ear cavities, viz., irrigation, insufflation and instillation.

By irrigation is meant the directing of a liberal quantity of solution through the external auditory canal, which in case of a sufficient defect in the drum-membrane will accomplish a general cleansing of the tympanic cavity. It may be done by means of a bulb or piston hand syringe or by the use of a fountain irrigation bag with a proper nozzle. The solution should have a temperature of 90 to 100 F., and care should be taken to use only moderate force. Too great a pressure will produce often a very unpleasant vertigo. To avoid this it is well to have the nozzle of the instrument so placed that the stream will be directed against the upper or posterior wall, instead of going straight inward. After irrigation, the canal should be dried as thoroughly as possible with cotton-tipped applicators.

Of solutions which are recommended for use in this way I may mention boric acid, 4 per cent., phenol, 1 to 2 per cent., liquor cresolis compositus, 1 to 2 per cent., liquor formaldehydi, 1 to 2,000, mercury bichlorid 1 to 5,000.

The objection to irrigation, at least when frequently practiced, is that it tends to produce maceration of the parts and favors sloughing. Heat and moisture are, moreover, as is well known, the two chief requirements for the growth of bacteria and perhaps for that reason should be avoided where possible. As done by the patient it is generally inefficient and I am of the opinion of Gleason that "discharging ears do better under methods of treatment in which syringing has little or no part." At times, however, it is indispensable, at least in the beginning of the treatment.

Insufflation is the blowing of a powder into the canal of the ear to become spread over the diseased parts. Various powders are used, but mainly boric acid, aristol, europhen and iodoform. They are aimed to have a drying effect on the membrane and at the same time to exert a germicidal action. Powders should not be used unless there is an almost or complete destruction of the drum membrane and the discharge happens to be very scant. If these precautions are disregarded, caking is likely to occur, and it may be that the perforation in the drum will be clogged, interfering with drainage. This, of course, is dangerous. In all cases in which the use of powder is contemplated an otoscopic examination must be first made, and the ear again carefully inspected from time to time to ascertain the state of things.

Instillation means the dropping of a small quantity of any fluid medicinal agent in the canal, with the intention that it shall arrive at the diseased parts and there produce its healing effects. It is especially designed for the introduction of agents which have for their purpose the fulfilling of the third of the indications, following my classification. This method, I believe, is the ideal one for the treatment of the chronic form of otitis. In this condition profound changes have taken place in certain parts of the middle ear, and it is necessary to reach them if we are to get results. It is only by the instillation method, properly done, as I hope to point out, that the medicine can be made to arrive successfully at the desired place, especially in a degree of concentration sufficient for the purpose.

Permit me to call attention briefly to one or two points in the anatomy and pathology directly relevant to the main points of my contention.

The tympanic cavity, it must be remembered, does not constitute of itself the entire middle ear. Situated above and behind this cavity lies the so-called antrum, the largest of the mastoid cells. This cell is connected directly with the tympanic cavity by a channel, the aditus and antrum, through which the lining of these two cavities become continuous. It is a well-known fact that in all cases of profuse suppurative otitis, the antrum, no less than the tympanic cavity itself, must be regarded as the source of the discharge. The tympanic cavity being more accessible to treatment, and besides being the more advantageously situated for drainage, naturally yields the more readily to treatment and returns the sooner to normal. In favorable cases inflammation of the antral walls subsides *pari passu*, and the case terminates in recovery with a complete cessation of all discharge.

But it often happens that the virulency of the infection is such that, though the tympanic cavity proper may clear up, the antrum still lingers in the throes of the suppurative process. Sometimes the aditus or channel connecting these two cavities becomes much narrowed by the inflammatory thickening of the wall or the presence of inspissated secretions, which naturally increases the difficulties of drainage and may lead to a complete imprisonment of the purulent matter in the antral cavity.

Let no one object that these statements are merely theoretical and speculative. Otologists know well enough that they are based on undisputed pathologic facts as revealed by the findings of autopsy and the experience of the mastoid surgeon. Those who are in the habit of opening the mastoid process so frequently encounter an antrum filled with granulation tissue, cholesteatoma, polyps and other products of a degenerated mucosa in cases of old suppurative otitis, that there is never a doubt in their minds that here lies the focus chiefly responsible for the persistence of the discharge. In view of these facts the futility of attempting to cure old otorrheas by the methods ordinarily practiced must be evident.

What more can the routine syringing of the ear accomplish than merely clearing out such secretions as are present in the tympanic cavity? The irrigating fluid, supposing the drum-membrane defect to be adequate, flows through the opening and returns without coming in contact at all with the region which most requires treatment. Even though some of the fluid did succeed in reaching the more remote recesses of the middle ear, it could not be expected to have any very decided effect, as only dilute solutions of mildly antiseptic qualities can be employed in this fashion.

In the classes of cases under discussion it is necessary not only to employ medicaments of extraordinary strength and potency, but also to be sure that they are brought into direct contact with the parts particularly affected, if we are to secure results. This object can best be realized by the employment of instillations. The usual manner of employing instillations is to have the patient flex the head laterally or to lie on one side with the diseased ear uppermost, when the fluid is dropped into the ear, whereafter he immediately assumes again the erect position. If the object to be accomplished be to bring the medicament especially in contact with the internal wall of the tympanic cavity, then this manner of procedure is to be commended. But the internal wall is the most resistant of all to necrotic processes and therefore the one we can best afford to neglect.

As I have already, I hope, made sufficiently clear, the region to which it is essential to direct the healing fluid is the antrum, located a little above as well as behind the tympanic cavity. To do this it is necessary to have the head in such a position that when the fluid is dropped into the auditory canal it will gravitate upward and backward and find its way through the aditus. Instead, therefore, of inclining sidewise, the patient should be recumbent, with the head in a position of overextension. It is a good plan to order the instillation to be used at the patient's hour for retiring, in which case we can be sure that sufficient time will be allowed to enable the fluid to percolate to the deepest recesses and be a sufficiently long time in contact with the diseased parts.

Of course the patient needs, first of all, to assume the lateral position with the affected ear upward, for the drops must enter the tympanic cavity before they arrive at the aditus of the antrum. When time enough has elapsed for this—but a few seconds if the defect in the membrana tympani is large — the position must be changed to the recumbent. In order to get the overextension needed to have the fluid go upward as well as backward, it is well to direct the patient to place a bolster under the back of the neck or shoulders in such a way that the head can fall backward. As regards the best agent to use, it is to be borne in mind that for these old stubborn chronic cases, in which the membranes are thickened and degenerated and the walls perhaps carious, the mild antiseptic solutions used in ordinary irrigation will be generally ineffective. We must employ remedies of exceptional virtues. The best agent for this method is alcohol, either alone or serving as a menstruum for other drugs, such as boric acid, iodin, silver nitrate, mercuric bichlorid, liquor formaldehydi and resorcin.

Alcohol not only is a splendid antiseptic, but also has dehydrating properties that commend it especially in this class of cases. In the case of granulations or polyps its tendency to produce a shrinkage or ultimate devitalization of these structures makes it particularly valuable. Absolute alcohol in some patients gives rise to so much smarting that they will object to its use. They can, however, be brought eventually to tolerate the full strength by a process of beginning with a 50 per cent. dilution with water and gradually increasing day by day the proportion of the alcohol. Other patients will tolerate the full strength at once if we adopt the plan of first instilling a mere drop or two, and then waiting a few seconds before putting it in freely. To get results from the instillation method, as from any other, the first requisite is to get the middle-ear cavities as clear as possible. This can be done by any of the methods I have mentioned in discussing the first indication of treatment.

Irrigation may occasionally be necessary, but its general use should be discouraged, and when it has been used the canal of the ear should be mopped and the parts thoroughly dried. I am in the habit of preceding the alcohol treatment by a two weeks' course of enzymol or hydrogen peroxid, each 50 per cent., administered by the same method. The object of these drugs is to digest and assist in the removal of the debris, thus preparing the way for the curative agents.

The alcoholic instillations may be used every day, every other day or even twice a day, according to the case, always having regard for the postural requirement as I have specified. About once a week a preparation of silver may be used of a strength varying from 1 to 5 per cent., or of tincture of iodin, 1 part to 10 of alcohol. The latter preparation is one of special value, but cannot be used frequently because of irritation which would be caused. Silver nitrate must also be used cautiously on account of the reaction which follows.

In certain of the London clinics anilin oil is highly extolled, used by instillation, for the cure of suppurative otitis. It has undoubtedly rare penetrating qualities which render it very efficacious, but it cannot be generally recommended because of the cyanosis which is likely to follow, even when only a few drops are used. Especially ought it to be avoided in the case of children. Individualization is of course necessary in the selection and use of a remedy, as each case is different in some respect from every other.

A preliminary otoscopic examination is important, to discover the size and location of the aperture in the tympanic membrane and the existence or other obstructive conditions which interfere with the drainage. Not infrequently in these cases the bottom of the canal will be found filled with the epithelial debris mixed perhaps with inspissated pus, constituting a serious hindrance to drainage. In other cases polyps and granulation tissue are seen protruding from the tympanic cavity and occasionally large cholesteatomatous masses are present. Unless such conditions first receive our attention, all efforts to bring about a cure by other methods will be defeated.

There will be, of course, a certain number of cases of old chronic otorrhea dependent on such profound and extensive bone destruction that nothing short of radical surgery can be effective. But I am convinced that the proportion can be greatly lessened and many apparently hopeless patients finally healed by assiduous local treatment, and especially by scrupulous attention to the few principles which I have emphasized in this paper.

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Discovery of the Transmission of Disease-Causing Protozoa.—We are justified in having no little pride in the fact that two of our countrymen, Smith and Kilbourne, in 1893 actually proved for the first time the transmission of disease-causing protozoa by blood-sucking arthropods. The honor for their discoveries and patient observations and experiments on Babesia in connection with Texas fever in cattle was not shouted from the ridge-pole, but came with the fact that their results were immediately applied to human diseases. To Smith and Kilbourne, then, belong a great part of the credit and honor of paving the way to the present-day control of malaria and sleeping-sickness, and the practical extinction of yellow fever in epidemic form.—G. N. Calkins in *Science*.

SIGNS AND SYMPTOMS PRESENTED BY THOSE ADDICTED TO COCAIN

OBSERVATIONS IN A SERIES OF TWENTY-THREE CASES

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The individual who is under the influence of a non-toxic amount of cocain, or its synthetic substitutes, experiences a sense of elation associated with increased mental and physical vigor. There exists a feeling of physical beatitude and exquisite pleasure. One seems to be in an atmosphere of new life where worries are unknown and all is a delightful calm. M. Montegazza, who had experimented with himself by administering a considerable quantity of the drug, exclaimed to his friends when sufficiently recovered that "God was unjust in that he made man to live without eating coca." "I prefer a life of ten years of coca to one of one thousand years without it." The brain and muscular system are extraordinarily stimulated, and one may accomplish tests of physical endurance which under ordinary conditions would be impossible. From the days of the Incas, the natives of Western South America have eaten the leaves of the *Erythroxylon coca* when performing long journeys and similar physical efforts.

Four patient in my series who had been morphinomaniacs asserted that the effects of cocain were far more enticing than those of morphin. The wholly agreeable effects enumerated above are the incentives for the individual with peculiar susceptibilities or morbid inclination.

As an aid to diagnosis it is of paramount importance to determine the method adopted by the habitué in taking cocain. Of the total twenty-three cases of this series, twenty-one administered the drug by way of the nasal chamber, similar to the manner of using snuff. The employment of the hypodermic needle is infrequent and was only observed in two instances. Application of a solution of cocain to the gums was noted in two devotees who used this method in conjunction with snuffing.

The clinical manifestations of cocainism are varied and confusing. In order to describe more definitely these manifestations of the habitué the signs and symptoms will be classified as incident to acute or chronic cocainism.

The eight cases of acute cocainism studied in this series occurred in old offenders who had taken more than their usual amount. The following symptoms were presented by this group: The pulse-rate was increased and ranged between 82 and 120 per minute. The respirations were varied, occasionally prolonged and less frequent than normal, more often rapid, irregular or sighing. The body heat was increased, the highest recorded temperature being 102.4 F. The body and extremities occasionally performed strange contortions due to spasmodic twitchings and convulsive seizures. In a case of this character the muscles contracted producing opisthotonos and by a sudden movement the patient would contract and hurl himself from the bed. I have seen similar convulsive seizures in tetanus. Emotional excitement and incoordinations are common. A devotee who presented the signs of acute mania was in the act of tearing his clothing from his body. A man under the influence of cocain went overboard. He was unconscious when taken from the water, but on being resuscitated exhibited the exhilarations and incoordinations of alcoholic intoxication. Hallucinations were not infrequently marked, including those of sight and common sensation associated with delusions of persecution, of suspicion and jealousy. Visual and auditory hallucinations with delusions of persecution occurred in a habitué who stated he had snuffed 65 grains of cocain. When apprehended this patient was in the act of procuring his rifle to protect himself from imaginary enemies.

The classical sign of a feeling of vermin crawling over the body has been observed but once. This condition occurred in a woman who was an advanced habitué. In order to convince me of her plight she had passed a score of safety-pins through her breast, believing she had thus secured the legs of the supposed "cocain bugs." A long hat-pin transfixed her left breast.

Following a cocain debauch, temporary insanity may result and two such cases have been under my observation. Restlessness, insomnia, anorexia and hallucinations were common to both patients. Alterations of reflexes, paresthesia and incoordinations were noted. In one of my insanity cases, as the condition advanced, the patient became depressed and sullen, alternating with intervals of hilarity, when he would become emotional and violent. At such times his appearance indicated fear and terror.

The after-effects of acute cocain poisoning are paleness and anemia. The eyes are sunken and have a nervous wandering expression. Tremor was not infrequent.

The symptoms of chronic cocain poisoning are fairly definite. They include dyspepsia, loss of weight, anorexia and a peculiar inability to concentrate the mind. Unfortunately, these symptoms are of small assistance in making a diagnosis, as they are common to all drug habits. The condition of the pupil in chronic cocainism may vary and cannot be depended on.

In two other articles[1] on this subject I indicated ulceration of the nasal fossæ as an aid in detecting suspected cases of cocain snuffing. The following extract from the second of these articles describes this lesion:

> In order to apprehend the unfortunate who is addicted to this evil it is necessary that one explore well the nasal fossæ for possible lesions incident to snuffing, and in a limited number of cases to examine the arms and legs for possible marks of the hypodermic needle.
>
> Within the nasal chamber the most frequent site of inflammation is the pituitary membrane over the cartilaginous septum. The papule, originally small, spreads. The center becomes gray or opalescent and the edges form a clearly defined irregular margin. The inflammation may spread and in one of this series the septum was perforated incident to necrosis of the cartilage. As the result of increased blood-pressure and of the corrosive action of cocain on the Schneiderian membrane, epistaxis is not infrequent. The importance of these signs when noted was such that a confession was sought and obtained in every case.

This nasal lesion was discovered as the result of epistaxis occurring in two men suspected of being addicted to the cocain habit. Examination of the nasal fossæ elicited the lesion which has been described and which subsequent experience has proved to be fairly characteristic. In this series of twenty-three cases, eight patients presented the symptoms of acute cocain poisoning and the diagnosis was not difficult. The apprehension of fourteen habitués depended on the presence of the nasal lesion, while the remaining patient who admitted his habit presented himself for treatment. Thus the importance of examining the nasal chamber in suspected cases of cocainism is clearly indicated, as, previous to the adoption of this routine method of examination, only cases exhibiting the symptoms of acute cocain poisoning had been successfully diagnosed.

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[1] Owens, W. D.: Cocain and Its Relation to the Military Surgeon, Jour. Mil. Surg.; The Importance of Eliminating the Cocain Habitué from the Personnel of the United States Navy and Marine Corps, Navy Med. Bull., April, 1910.

I know of six cases in addition to this series, in which the diagnosis depended on the presence of the nasal lesion. These cases have been observed by medical officers of the United States Navy since the publication of the article referred to.

A THIRTY-DAY RHYTHM IN APOPLEXY

PRELIMINARY NOTE ON A NEW FACTOR IN ETIOLOGY AND TREATMENT

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Two years ago I was studying the case-history of a patient who, in the previous twenty-one months, had suffered ten attacks of that type of cerebral hemorrhage which we designate as apoplexy. My attention was held by the fact that, of these ten attacks, seven recurred at the same period of the month, i. e., between the 14th and 19th. The remaining three occurred at a period midway between these dates, i. e., on the 2nd and 4th. This periodicity, too definite to be accidental, suggested the presence of some factor in the etiology which, once understood, might be of service in the treatment.

Case 1.—The patient, a woman over 90, lived the most regular of existences at her country home, and was subject to so few changes of environment that it seemed possible to exclude as an exciting factor of the attacks everything extrinsic to the patient herself. The victim of such attacks for years, she had experienced ten in the twenty-one months since my attendance on the case. These recurred most frequently at a thirty-day interval, but exceptionally with forty-five or sixty days intervening. The severity varied, some appearing so grave that the last rites were hurriedly administered, others being so mild as almost to escape attention.

DEDUCTIONS

The theory that there was a certain period, recurring approximately every thirty days, during which the liability to attack was increased, was put to the test as follows: It was explained to the relatives that as most of the attacks had occurred at a certain period of the month, danger of recurrence at this time was to be guarded against. The patient was placed under careful observation and special precautions were observed throughout the danger period. With the exercise of this prophylactic care during five days only each month, the patient, in the twelve months immediately following, had but one attack. This occurred on the twentieth day of the seventh month, and this possibly due to admittedly relaxed care on the part of her relatives.

AMPLIFICATION OF DATA

In the meantime my practice has furnished six other cases of apoplexy. Two were almost immediately fatal. Four remain and afford interesting evidence.

Case 2.—A woman of 70 suffered a severe attack, followed in forty-five days by a milder one; this followed in thirty days by a very severe one, and this again thirty days later by a slight attack (December 20, February 2, March 4 and April 3). At this point similar precautionary measures were instituted, and no attack has occurred for seven months. At the time of the danger period each month there has been some feeling of discomfort or oppression. The psychologic factor was eliminated by making no mention of a possible periodicity until the success of the investigation was assured.

Case 3.—Patient is a woman of 71, with the history of several "strokes." The last of these was experienced sixty days before she came under my care with a slight cerebral hemorrhage and partial transient hemiplegia. Precautionary treatment was instituted and no attack has occurred in ten months; at each danger period there has been headache and the feeling that an attack was imminent.

Case 4.—A man of 63 had a severe stroke of apoplexy (with considerable hemiplegia remaining) eighteen months ago. No further attacks have occurred. The patient has been constantly under the care of a skilled and devoted nurse, so that practically his whole month has been treated as a danger period. The nurse notes that there have been periods recurring every month or every two months in which the patient was less well, was restless and irritable.

Case 5.—A woman of 51, the subject of a double complete oöphorectomy some twenty years ago, for some time has been subject to apoplectic attacks, many mild in nature, but a few sufficiently marked as to make certain the diagnosis. For a long time she had made the observation that these had a tendency to recur at thirty-day intervals. Two attacks under my care with thirty days between, then no attacks for three months, when she passed out of my hands.

Some of these cases, conspicuously the last, may at first sight appear to be incomplete or to have been observed for too inconsiderable a period of time. They are included because, being all the material available, and all on some point agreeing with the theory, no one of them in any particular contradicts it. Their inclusion receives added justification by their possessing in common a feature to be referred to immediately.

THEORIES

Apoplexy is largely a matter of hydromechanics. The hemorrhage may arise from one or two factors—undue weakness of the vessel-wall or undue pressure of the blood-stream. It is improbable that the strength of a vessel-wall fluctuates to any extent either with, or without, a rhythmic periodicity. On the other hand, the contained blood-stream is subject to wide variations of pressure. Is there any evidence that this pressure can vary with a thirty-day rhythm? In the five cases enumerated above, series of blood-pressure readings, extending through several months, were taken as frequently and systematically as circumstances allowed. These observations furnished evidence that during the portion of the month designated as the danger period there was a rise of blood-pressure considerably above the average daily maximum for the rest of the month. To illustrate: In Case 2 the average daily maximum pressure for the non-danger period was 135 mm.; in one danger period this rose above 150, and in two was over 160. In Case 3 the readings were 140 for the average maximum, 175 in an attack, and 168 in a danger period during which no attack supervened. All patients gave higher readings during their respective danger periods.

Accepting this excessive blood-pressure as immediately responsible for the hemorrhage, we must admit that this itself is but the result of other factors among which we must seek the original cause. Many circumstances contribute to blood-pressure variations. Five stand out as reasonably more probable than the rest. These are: (1) nervous control; (2) mechanical changes compensatory to abnormalities elsewhere (as in cirrhosis of certain organs); (3) products of germ or parasitic activity; (4) disturbances of metabolism; (5) the internal secretion of certain glands.

The first three seem entitled to little consideration. The nervous system (certain energy-discharging ganglia excepted) is rather concerned in the conveyance of impulses already existing than in originating these *de novo*. Similarly the mechanical factor is but an adjustment compensatory to changed conditions elsewhere. Neither of these fits in with the required premise of periodicity. There is nothing inconsistent in the possibility of a germ or parasite operating in a thirty-day cycle, and at one period of this cycle of development discharging certain toxins which might cause elevation of blood-pressure, as the organism of malaria causes its tertian phenomena. It seems less probable than other surmises. On the other hand, disturbances of metabolism, especially of those organs concerned in the assimilation of food and elimination of waste products, cause the appearance in the blood-stream of certain pressor substances. But again the necessary agreement with our premise in the matter of periodicity is lacking. Does not this rhythm—this periodicity—favor the supposition that we have to deal with manifestations of activity on the part of some gland or group of glands having an internal secretion—for example, the thyroid, adrenals, pituitary or ovaries? We know that under given conditions the secretion of the first lowers, while that of the second and of part of the third raises blood-pressure. We know that commonly the ovary functions in a twenty-eight-day cycle; it did so in the menstrual life of these women. In Case 4 it might be necessary to argue for the testicular internal secretion functions analogous to those of the ovary in the other cases, did not Case 5 allow ovarian function to be eliminated from consideration. Possibly we are dealing with the unrecognized secretion of some well-known structure, for example, an internal secretion of kidneys or intestine; or the search may lead to glandular elements of which we know nothing. Here the problem must be left to await further investigation.

The fact that we have a means of diminishing the liability to, and the consequences of, apoplexy in these recurrent cases justifies us in using it without waiting for the disclosure of its *modus operandi*.

TREATMENT

It would be out of place in a preliminary note of this character to say more concerning a treatment still in the elementary stages of elaboration than to state that increased attention to the avenue of elimination during these so-called danger periods appears mainly responsible for the results quoted. Beyond this, the experimental stage of the work counsels the withholding of incomplete, and possibly misleading, results.

SUMMARY

Five consecutive cases of apoplexy show a marked periodicity in their recurrence. The danger periods appear not to exceed five days and to recur at approximately thirty-day intervals. Prophylactic treatment during these danger periods alone has lessened very materially both the frequency and severity of the attacks. During these danger periods the blood-pressure carried by the cases of the series was much in excess of that for the remainder of the month. The ultimate cause appears obscure. It is suggested that the phenomenon may be due to (1) influences originating in the nervous system; (2) the products of germ or parasitic activity; (3) mechanical compensatory changes of blood-pressure; (4) disturbance of metabolism, assimilative or eliminative, or (5) to the function, or disturbance of function, of a gland or chain of glands possessing an internal secretion.

HEXAMETHYLENAMIN IN THE TREATMENT OF BRONCHITIS *

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Since the introduction of hexamethylenamin as a medicine in 1894, its therapeutic indications have been greatly extended and its value demonstrated in a variety of infections. This drug was first employed as a urinary antiseptic by Nicolaier,[1] and continues to be recognized as the most reliable remedy to prevent the growth of bacteria in the urine.[2] The investigations of Crowe,[3] in 1908, with his further report[4] in 1909, showed that after its administration by mouth, hexamethylenamin can be demonstrated in the bile, cerebrospinal fluid, synovial fluid, saliva, pleural effusion, and blood of man. He contended further that doses of this drug, within therapeutic limits, exercise a decided inhibitory effect on the growth of organisms in the bile and cerebrospinal fluid. In 1910, Barton[5] reported an interesting case of suppurative otitis media in which the discharge ceased quite promptly after the administration of hexamethylenamin, and the presence of the drug in the secretion was demonstrated on two successive days.

As a result of the suggestive reasoning in the foregoing reports, showing the excretion of hexamethylenamin and its decomposition products by both serous and mucous surfaces, I began to employ this drug in the fall of 1910 in all cases of common colds that came under my observation, and in patients suffering from acute and chronic bronchitis. It was intended to further investigate such cases in regard to the presence of hexamethylenamin in the sputum, but reference to the literature disclosed the report of Armstrong and Goodman,[6] who were able to detect the drug without difficulty in the sputum of patients suffering from pulmonary tuberculosis, pneumonia, bronchitis and asthma, after a daily dose by mouth of 25 gr. These authors did not attempt to study its effect on pulmonary conditions, but suggested that it might be used to advantage in certain infections of the respiratory tract. Further search through the current journals disclosed the two brief reports of Heitmuller[7] and Miller,[8] in which the use of hexamethylenamin was advocated as a remedy in acute colds and in bronchitis.

Hexamethylenamin is made by the action of ammonia on formaldehyd. It is readily hydrolized by heat, dilute acids, etc., into its two components. When administered as a drug, part of it is excreted unchanged, but sufficient decomposition takes place to render its formaldehyd radicle of value. The usual daily dose in the case of adults is from 1 to 1.5 gm. (15 to 22½ grains), but as much as 5 gm. (75 grains) has been given per day without untoward effects. Hematuria and burning on urination has been noted occasionally after its administration to susceptible patients, and in a few cases a skin rash not unlike measles has followed its use. The experiments of Frothingham,[9] however, showed that guinea-pigs could withstand enormous doses of the drug, one animal, for instance, remaining lively and perfectly well after receiving 375 grains in eight doses during nine days. He concludes that hexamethylenamin in small doses may be considered a safe drug for most people, and that it may be given in large doses up to the appearance of symptoms. Furthermore, when symptoms appear they promptly subside as soon as the drug is withdrawn.

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* Read before the Forty-Second Annual Meeting of the Medical Society of Virginia, Richmond, Va., Oct. 24-27, 1911.

[1] Nicolaier: Deutsch. med. Wchnschr., 1895, p. 541.

[2] Sollmann, T.: Formaldehyd Derivatives: Their Fate and Actions in the Body, The Journal A. M. A., Sept. 5, 1908, p. 818.

[3] Crowe, S. J.: The Excretion of Hexamethylenamin in the Bile and Pancreatic Juice, Bull. Johns Hopkins Hosp., 1908, xix, 109

[4] Crowe, S. J.: The Excretion of Hexamethylenamin in the Cerebrospinal Fluid, Bull. Johns Hopkins Hosp., xx, 102.

[5] Barton, W. M.: The Elimination of Hexamethylenamin by the Mucous Membrane of the Middle Ear, The Journal A. M. A., March 12, 1910, p. 871.

[6] Armstrong, J. L., and Goodman, E. H.: The Excretion of Salicylic Acid and Hexamethylenamin in the Sputum, The Journal A. M. A., May 27, 1911, p. 1553.

[7] Heitmuller, G. H.: The Excretion of Hexamethylenamin, The Journal A. M. A., April 9, 1910, p. 1222.

[8] Miller, A.: Hexamethylenamin: A Remedy for Common Colds, The Journal A. M. A., June 10, 1911, p. 1718.

My experience with hexamethylenamin in the treatment of acute colds and acute and chronic bronchitis has been most gratifying. In the cases of individuals subject to severe colds, the stage of coryza has been definitely lessened in length, and in practically all cases the succeeding stage of bronchitis has been slight or missed entirely. It has been used with success in the case of patients awaiting surgical operation, in whom the administration of a general anesthetic has been deferred because of the presence of a cold. In this treatment of colds no other remedies have been employed except an initial purgative and subsequent care to see that the bowels remain open. Early experience soon demonstrated that the dose should be comparatively large, and as a routine 10 grains dissolved in a full glass of water is given four times daily for three to seven days, after which the drug is discontinued. The patient is always instructed to drink water copiously during the time the drug is being taken, and in a rather extensive employment of the remedy I have observed only one case in which the patient complained of any irritation of the bladder, and in this instance the burning on urination ceased very promptly after the drug was omitted. The successful treatment with hexamethylenamin of two cases of chronic antrum infection that had resisted several operative procedures and prolonged local treatments would lead me to recommend this remedy further as a prophylactic against sinus infections liable to be induced by the ordinary cold.

In the treatment of both acute and chronic bronchitis, hexamethylenamin produces results that are incomparable with the usually employed remedies. In some of these cases iodin has been administered along with the hexamethylenamin while in other instances hexamethylenamin has been the only drug used.

This fall a patient presented himself with an acute bronchitis of five days' duration, accompanied by fever and malaise so as to suggest the onset of a typhoid infection. Both sides of the chest were well filled with sonorous and squeaking dry râles and the blood showed the presence of a polynuclear leukocytosis with negative Widal reaction. The acute symptoms subsided in less than forty-eight hours and the illness was terminated in four days after treatment was instituted. In the management of common colds emphasis has always been laid on the institution of treatment at the first sign of the infection. In hexamethylenamin we have a drug that is decidedly effective even if not given until the stage of bronchitis has been reached. Its favorable influence on so-called head colds, while readily demonstrable, is not so pronounced as on the bronchitis in which most acute colds terminate; and its chief value in common colds, as already mentioned, is in preventing the succeeding bronchitis.

Prominent among the stubborn maladies that the physician is called on to treat is the chronic bronchitis of patients of mature years. From a somewhat limited experience in the treatment of such patients with hexamethylenamin, I believe that the cases can be divided into two classes, depending on the presence or absence of marked thickening and calcification of the cartilages, fibrous membrane and muscular structure of the bronchial walls. Hexamethylenamin has failed to ameliorate the symptoms in several patients who presented signs of extreme arteriosclerosis in the peripheral blood-vessels, and in these cases it has been assumed, rightly or wrongly, that the bronchi present a similar sclerotic change. In other instances the effect of hexamethylenamin has seemed truly remarkable, as witnessed in the following instance:

Patient.—In November, 1910, a woman of 50 years presented herself complaining of chronic cough. As a young woman she was subject to acute colds always terminating in bronchitis of several weeks duration. For the past twelve years, however, she had had a cough continuously and did not remember a single day in that period that has been unattended by the cough. Expectoration had been profuse, especially troublesome on retiring and on arising from bed, but has never been blood-tinged. Various physicians had examined the chest without finding evidence of tuberculosis, and had prescribed remedies without improving the symptoms. Frequent examinations of the sputum had been negative for tubercle bacilli.

Examination.—Chest examination revealed scattered moist râles throughout both sides with occasional sonorous râles at either base behind. The percussion note was everywhere resonant with no areas of exaggerated expiration or increased voice transmission. A tuberculin test was negative and *x*-ray plates of the chest showed no areas suggestive of tuberculosis. Peripheral arteries were not palpable. Blood-pressure 132 mm.

Treatment.—Hexamethylenamin was given to this patient in full doses accompanied by small doses of iodin. The immediate effect was so striking that the patient attributed the result to the effect of the *x*-ray exposure of a few seconds time. A letter was received from the patient one month after treatment was instituted, in which she said she was free from cough for the first time in twelve years. She was seen the latter part of January, 1911, and again the first of last March and had had no return of the bronchitis and considered herself as having entirely recovered.

CONCLUSION

Hexamethylenamin is recommended as a remedy of value in cases of acute colds and in patients suffering from acute and chronic bronchitis. The drug should be given in large doses accompanied by the copious drinking of water. In the ordinary cold, treatment with hexamethylenamin shortens the stage of coryza and greatly modifies or entirely prevents the succeeding bronchitis. It also acts as a prophylactic against ensuing infection of the accessory nasal sinuses. It is our best remedy in acute bronchitis. Certain cases of chronic bronchitis respond to treatment by hexamethylenamin with a gratifying alacrity, while others do not. In the latter instance it is presumed that structural changes have occurred in the walls of the bronchi, associated with thickening and calcification of the cartilages, fibrous membrane and muscular coats so as to preclude the hope of successful treatment by any remedy.

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[9] Frothingham, C.: The Effect of Hexamethylenamin on Guinea-Pigs, Arch. Int. Med., 1909, iv, 510.

POSSIBLE INTERRELATIONSHIP OF ACANTHOMA ADENOIDES CYSTICUM (MULTIPLE BENIGN CYSTIC EPITHELIOMA) AND SYRINGOCYSTADENOMA (LYMPHANGIOMA TUBEROSUM MULTIPLEX)

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Unna[1] prefers, on anatomic grounds, to group all tumors derived from the prickle-cell layer under the precise and at the same time comprehensive heading of acanthomata. This term, first suggested by Auspitz,[2] serves admirably when it is desired to draw a sharp line of demarcation between these growths and those originating from other cutaneous structures. Unfortunately, in some instances the point of origin is a matter of doubt, and particularly is this true in many of the lesions that have been reported as examples of multiple benign cystic epithelioma. Typical instances of this affection, which was first described almost simultaneously by Brooke[3] and by Fordyce,[4] in 1892, are easily identified histologically, but some of the variant and mixed forms are extremely difficult to classify.

The tumor of this type which has given rise to the greatest amount of controversy is one first reported by Biesiadecki[5] and Kaposi,[6] and named by them "lymphangioma tuberosum multiplex." While it is generally conceded that these authors were mistaken regarding the origin of the growths, the designation bestowed by them has been allowed to stand, partly on account of priority, but principally because of the indefiniteness of our knowledge concerning the origin of the epithelial processes of which the tumors are largely composed. The sources from which the epithelium can be derived are limited — it must come directly from the prickle layer of the skin or hair follicle, from the coil or duct of the sweat apparatus, or from the endothelium of the blood-vessels, or, theoretically, it may develop from misplaced embryonic rudiments of one or more of these structures (a so-called Cohnheim's rest, or, according to Ribbert's theory of mechanic isolation, from cells that accident has removed from the influence of normal cell association).

An idea of the lack of unanimity of opinion among the various investigators may be gained by a very casual survey of the literature. Almost every observer has seen fit to rename the affection, giving it a title that corresponded with his conception of the origin of the epithelial accumulations. The resulting cognomens vary from the "cellulome épithélial éruptif" of Quinquaud,[7] and the "nævi épithéliaux kystiques" of Besnier[8] to the "hæmangendothelioma cutis papulosum" of Waldheim[9] and the "nævi cyst-epitheliomatosi disseminiti" of Gassmann.[10] Recently we have had an opportunity to make a comparative study of multiple benign cystic epithelioma and lymphangioma tuberosum multiplex, and the findings are of interest as serving to emphasize the necessity of separately classifying these two varieties of non-malignant, cystic, cutaneous neoplasms.

CASE REPORTS

CASE 1.—*Patient.*—A. M., male, married, laborer, aged 70 years, was first admitted to Dr. Walter Sutton's service (surgical) at the University Dispensary in April, 1911. His case was there diagnosed as one of multiple benign cystic epithelioma by Prof. W. K. Trimble, to whom some of the biopsied material had been sent for microscopic examination. When the clinic for skin diseases was opened in October, Dr. Sutton kindly referred the patient to us for further observation and treatment.

Family History.—The cutaneous history of the family is negative. The patient has been twice married, and has seven children, aged from 12 to 40 years, all of whom are living and in good health. So far as the father knows, none of them has ever been troubled with a skin disease of any kind.

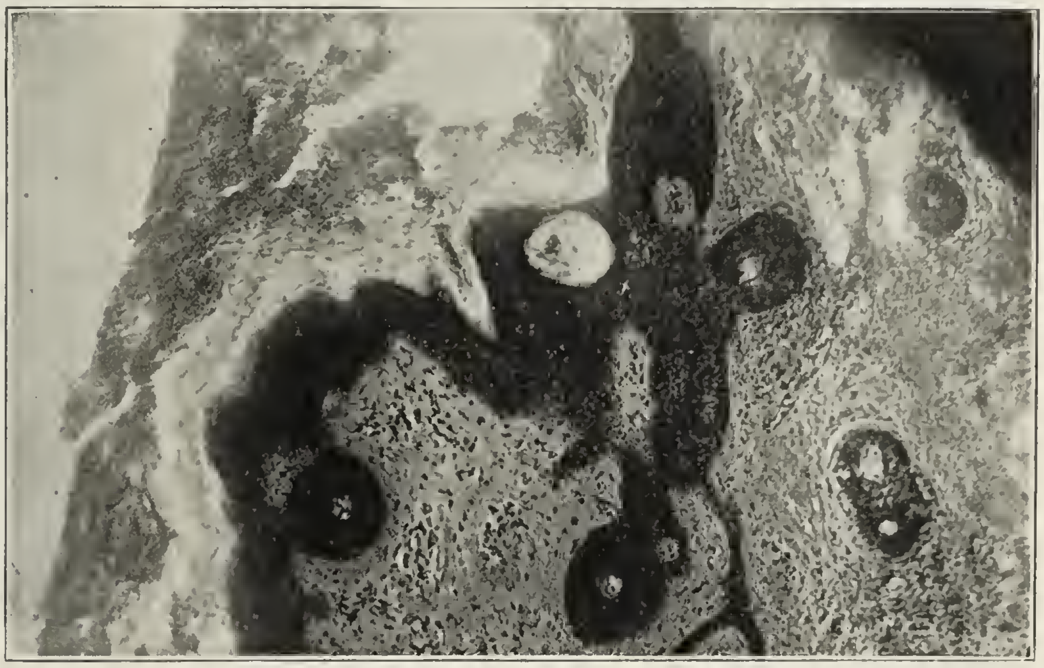

Fig. 1.—Acanthoma adenoides cysticum, showing epithelial strands extending inward from prickle-cell layer with numerous cysts. (Spencer ¼ obj. No ocular.) Case 1.

Personal History.—The patient is a native of Ohio, and a resident of Missouri. His general health has always been fairly good. At various times, however, he has suffered from rheumatism, eczema, seborrheic dermatitis, and urticaria.

Present Illness.—The small tumors on the patient's forehead, neck, and back have been present ever since he can recollect. One of the larger growths, on the left side of the neck, became hard and indurated in June, 1911, and ulcerated a few weeks later. Clinically, a typical rodent ulcer resulted, and the entire lesion was excised by Dr. Walter Sutton in August, 1911.

Examination.—The patient was a well-nourished man, and appeared to be much younger than his age would indicate. The Wassermann sero-reaction was negative, and there was no response to tuberculin. There was some senile atrophy of the skin, particularly on the backs of the hands. The hair was thin, and there was considerable branny scaliness (seborrheic) on the scalp and face. There were a few pigmented nevi on the chest and back. The skin of the trunk was reddened, and there was a decided tendency to dermographism. Irregularly scattered over the scalp, temples, neck, and chest were a number, seven in all, of the small, pink, nodular tumors characteristic of multiple benign cystic epithelioma. The growths varied in size from a grain of wheat to a split pea, and did not disappear on pressure.

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[1] Unna: Histopathology of the Diseases of the Skin, Transl. by Walker, Macmillan Company, New York, 1896, p. 784.

[2] Auspitz: Lehrbuch der Hautkrankheiten, Vienna, 1881.

[3] Brooke: Brit. Jour. Dermat., 1892, p. 269.

[4] Fordyce: Jour. Cutan. Dis., 1892, p. 459.

[5] Biesiadecki: Untersuchungen aus dem pathol.-anat. Institute im Krakau, 1872, p. 2.

[6] Kaposi: Hebra's Lehrbuch der Hautkrankheiten, Ferd. Enke, Stuttgart, 1876, ii, 282.

[7] Quinquaud: Tr. Internat. Cong. Dermat., Paris, 1889, p. 412.

[8] Besnier and Doyon's translation of Kaposi's Pathologie und Therapie der Hautkrankheiten, ii, 367.

[9] Waldheim: Arch. f. Dermat. u. Syph., 1902, p. 225.

[10] Gassmann: Arch. f. Dermat. u. Syph., 1901, p. 177.

Histopathology.—Two of the lesions were excised for laboratory purposes, one from the left scapular region, the other from the right temple. The first piece of tissue was frozen and cut, the sections being stained by the usual methods. The second was fixed in formaldehyd solution, and mounted in paraffin. The findings were practically identical in the two tumors. The corium was somewhat disorganized, considerable quantities of blood, and large numbers of infiltrating round cells being present. No hair follicles, or sebaceous or coil glands were found in either of the specimens. Extending downward into the cutis from the basal layer of the epidermis were numerous long, slender chains of epithelium, two or three cells in width, which terminated in bulb-like cysts, filled with colloid substance and corneous material. Several snared-off sebaceous masses, such as have been described by Csillag,[11] were also to be seen. The chains were composed of cylindrical epithelium which reacted to the various stains in a manner exactly similar to the apparently normal cells in the overlying epidermis. No free tracts were to be found. The outermost covering of the club-shaped projections consisted always of a layer of cylindrical epithelium—in no instance could the presence of a double row of flattened, regularly arranged cells be demonstrated—and an inner zone of imperfectly stained, rounded epithelial cells, encircling a central mass of débris.

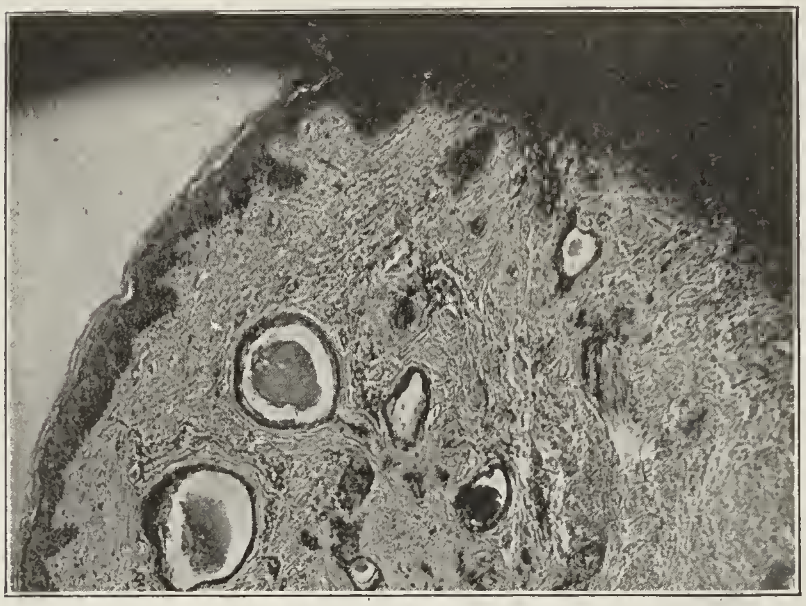

Fig. 2.—Syringocystadenoma. Section from apparently normal area on left side of body. Macroscopically, no tumors were visible. (Spencer ¼ obj. No ocular.) Case 2.

Case 2.—*Patient.*—M. D., female, married, housewife, aged 39, was a patient of Drs. J. Phillip Kanoky and Richard L. Sutton, and we are indebted to Dr. Kanoky for permission to record the history and the microscopic findings.

Family History.—So far as the patient is able to discover, no other member of the family has ever had a similar disorder. She is the mother of three children, aged 16, 9 and 3 years respectively, all of whom are living and well.

Personal History.—The patient is a native of Missouri, and a resident of Kansas City. Her general health has never been good, although she has experienced no severe illnesses. She never feels well during the excessively hot weather, and ascribes her weakness and discomfort to her inability to perspire freely, a peculiarity to which she has been subject ever since she can remember.

Present Illness.—For many years there have been present numerous small, whitish or pinkish papules, varying in size from a hemp-seed to the half of a soup-bean, on both sides of the patient's forehead, and on the right side of her chest, near the anterior axillary border. The little tumors have never given rise to subjective symptoms, and slight attention has been paid to them.

Examination.—The patient is a brunette, with brown eyes and hair. Her skin is soft, smooth and flexible. There are a few acne lesions on the left side of the chin, and a slight tendency to rosacea over the nasolabial folds. The Wassermann test is negative, but there is a slight reaction to tuberculin. Irregularly arranged on the left side of the forehead are about twenty small, soft, flattened, pinkish-white, smooth-topped papules, somewhat larger than the head of an ordinary pin, and oval or circular in outline. The group forms a rectangular patch, 4 cm. wide and 6 cm. long. In some instances the lesions have apparently coalesced, the resulting tumor being irregularly fusiform in shape. There is a similar but smaller collection of lesions over the right temple.

On the right side of the chest, near the anterior border of the axilla, is a third group of the tumors, their arrangement appearing to bear some relation to Heitzmann's lines of cleavage. The individual lesions in this collection are more sharply outlined, and the tops are more pointed than those on the forehead. Following the administration of pilocarpin hydrochlorid, 0.01 gm. hypodermatically, drops of moisture appeared on the tops of some but not all of the lesions. At this time, while the patient was perspiring quite freely, the tumors were perceptibly increased in size, and distinctly more prominent than before the drug was given.

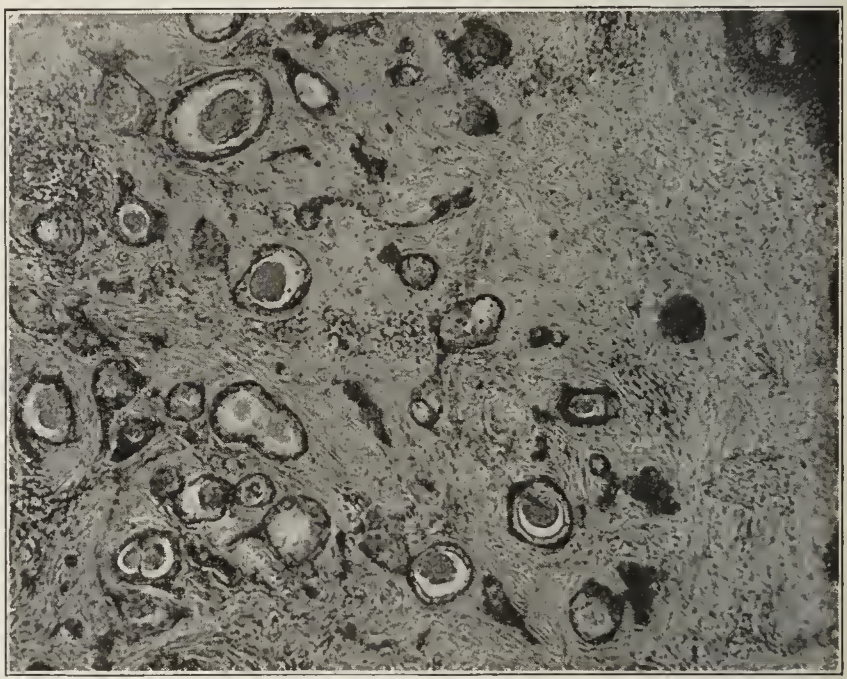

Fig. 3.—Syringocystadenoma, showing epithelial strands and cysts in the corium. (Spencer ¼ obj. No ocular.) Case 2.

Histopathology.—At various times, eleven of the growths, two from the forehead and nine from the axilla, together with two pieces of macroscopically normal skin from the sides of the trunk, were excised for microscopic study. The material was fixed in alcohol, formalin, or Zenker's solution. Two of the nodules were sectioned in a freezing microtome, and stained with scarlet R and Sudan III, alum-hematoxylin being used as a nuclear stain. The remainder of the material was mounted in celloidin or in paraffin, and cut at various angles (perpendicularly to, diagonally to, and parallel with, the surface), and the sections afterward stained with the usual dyes. In all, about eleven hundred sections were examined.

The pathologic changes in the epidermis were almost identical with those seen in Charles J. White's[12] case—an unchanged stratum corneum, a thinned granular layer almost devoid of granules, and a rete having a regularly arranged basal layer but composed of swollen, edematous cells, the nuclei of which were large and vesicular, and separated from the encompassing cytoplasm by a considerable space. In the majority of the specimens, the papillæ were flattened or entirely absent. There was some cellular infiltration in the upper corium, but the blood-vessels, which were considerably lessened in number, exhibited no inflammatory changes, and the capillary endothelium appeared normal in every way.

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[11] Csillag: Arch. f. Dermat. u. Syph., 1906, p. 163.

[12] White: Jour. Cutan. Dis., 1907, p. 49.

The elastic tissue was somewhat reduced in amount, although the distribution of the fibers was but little altered and the elastic network completely encircled the cysts, as in the cases reported by Dohi,[13] Gassmann and Stockmann.[14] Hair follicles and sebaceous glands were found in all of the nodules. Both the follicles and the appended glandular elements appeared to be normal. In those instances in which a complete longitudinal section of a hair follicle was secured, no budding or other abnormal condition was to be found. Occasionally, one of the long, wavy strands of epithelial cells, to be described later, was found in very close proximity to a pilo-sebaceous appendage, but careful search through the serial sections always showed the extremities to be free, and not connected with the follicle in any way. In addition, the reaction of the component parts of the two structures to the various aniline dyes was entirely different, and invariably served as a trustworthy method of identification.

The coil-glands were well developed, and exhibited no pathologic changes. In several instances the ducts could be traced entirely to the surface of the skin. There was no evidence of dilatation, or of cystic degeneration in either coil or duct, and no indication of budding or of other abnormal cell proliferation.

There was some collagenous degeneration of the connective tissue stroma, but the change was not marked.

Scattered through the cutis, from just below the basal layer of the epidermis down to the stratum of subcutaneous fat, were large numbers of round or oval masses of epithelium, and epithelial-lined tubules. Many of these cell collections possessed a stem-like appendage of epithelial cells, two cells in width, which frequently connected two or more of the glandular masses. In many instances these epithelial tracts were found extending in various directions through the corium. The nuclei of the cells were large, and stained much more deeply than those in the epidermis.

In several of the macroscopically normal sections from both sides of the trunk similar strands of epithelial cells were found, and in one specimen several budding processes and a few cysts were present. It would have been interesting to study sections of skin from parts of the body that are not so rich in coil glands as the axillae, but further material was refused.

Case 1 is a classic example of multiple benign cystic epithelioma as originally described by Brooke and by Fordyce.

C. J. White,[15] Jarisch[16] and Stelwagon[17] have reported similar cases in which the tumors underwent degenerative changes and exhibited evidence of malignancy. In this instance, the somewhat unusual sequel might be partially explained by the concomitant seborrheic dermatitis, which had been present for many years.

In Case 2, we have a typical representative of the Jacquet-Darier group. In general there has been such a remarkable uniformity in the reported cases referred to this group that it is exceedingly improbable that, as claimed by Möller,[18] some are of endothelial and others of epithelial origin. While it is true that actual connection of the epithelial strands and cysts with preexisting sweat-glands has been missed by the majority of investigators, there are now several well authenticated instances in which such connection has been recognized.[19]

Hartzell[20] has reported a unique neoplasm which resembled in some respects both benign cystic epithelioma and lymphangioma tuberosum multiplex. Frequently long, slender, epithelial branches were found extending from the sides of the follicles (as in the "tricoepithelioma papillosum multiplex" of Jarisch[16]), while, occasionally, tracts of cylindrical epithelium were found running in all directions through the fibrous stroma. These chains were quite long, sometimes branched, and usually not more than two or three cells in width, presenting somewhat the appearance of coil gland ducts. Only a few of them terminated in cysts, and no connection could be traced between them and either the sweat apparatus or the blood-vessels.

It is very probable that this growth, which clinically did not resemble any hitherto reported, was simply a mixed tumor, and that the two types of epithelial structures composing it were in no wise related. The most important evidence in support of the sweat-gland theory of histogenesis of these tumors is the resemblance between the epithelial strands, nests and cysts, and the tubules of normal coil-glands. There is a manifest similarity between the narrow, often wavy or twisting strands of epithelium connected with the cysts and the normal tubules of coil-glands, but most significant and convincing is the presence in many of the cysts and tubular strands of the double row of epithelial cells, the outer row flat and the inner row cubical, precisely the arrangement so characteristic of the cellular lining of the sudoriparous tubules. While this arrangement is not in all places apparent in consequence of pressure of the contents of the cyst, proliferation of cells, and other obvious causes, it can be recognized in so many places that it cannot be doubted that it is a characteristic histologic feature of this class of tumors.

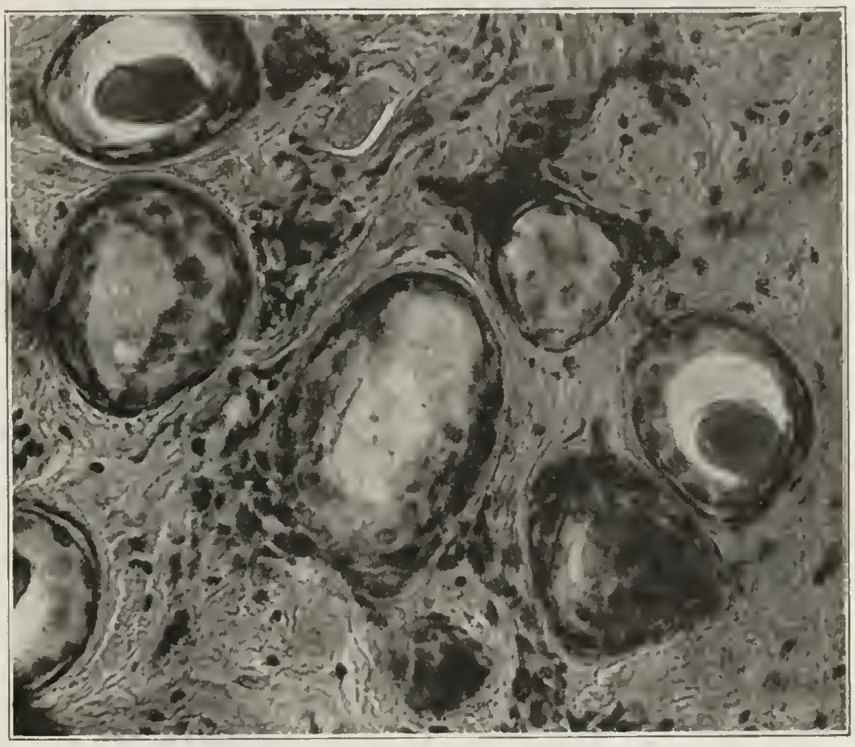

Fig. 4.—Syringocystadenoma, showing flattened epithelial lining of cysts, some of which contain hyaline bodies. (Spencer ¼ obj. No ocular.) Case 2.

The decision of the question as to whether the tumor springs from previously normal sweat-ducts or from congenital or acquired defects of the sweat-glands is more problematic. Considerable weight is to be given Török's[21] argument, who made the first thorough study of the histogenesis of lymphangioma tuberosum multiplex, that the absence or rare occurrence of sweat-glands in the area of the tumor, in contrast to the presence of

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13. Dohi: Arch. f. Dermat. u. Syph., 1907, p. 63.
14. Stockmann: Arch. f. Dermat. u. Syph., 1908, p. 145.
15. White, C. J.: Jour. Cutan. Dis., 1894, p. 477.
16. Jarisch: Arch. f. Dermat. u. Syph., 1894, p. 164.
17. Stelwagon: Diseases of the Skin, W. B. Saunders Co., Phila., 1910, p. 634.
18. Möller: Arch. f. Dermat. u. Syph., 1902, p. 55.
19. Blaschko: Verhandl. d. Berl. dermat. Gesellsch., July 5, 1908.
    Neumann: Arch. f. Dermat. u. Syph., 1900, p. 3.
    Joseph and van Deventer: Dermato-histologischer Atlas der Hautkrankheiten, Berlin, 1906.
    Fiocci: Gior. ital. d. mal. ven., 1904, p. 3.
    Winkler: Arch. f. Dermat. u. Syph., 1907, p. 129.
    Dohi: Arch. f. Dermat. u. Syph., 1907, p. 63.
    Stockmann: Arch. f. Dermat. u. Syph., 1908, p. 145.
20. Hartzell: Brit. Jour. Dermat., 1904, p. 361.
21. Török: Monatschr. f. prakt. Dermat., 1892, p. 182

these appendages in the normal skin, is indicative of the transformation of preexisting sweat tubules into tumor elements. The findings in the case here reported tend to confirm this theory, and the fact that epithelial strands, similar to those found in the tumor areas, may and do occur in apparently normal regions is additional evidence in support of this hypothesis.

In favor of the congenital theory is the occurrence in so many instances of the affection in early life, and especially its occurrence in several members of the same family. Schidachi[22] has produced similar cysts, even with epithelial strands, by occluding the sweat-ducts, and Unna[23] describes a budding epithelial process in spiroadenomata occurring in the neighborhood of varices of the leg apparently similar to the proliferative changes seen in some cases of lymphangioma tuberosum multiplex. Pick[24] objects to regarding these growths as true adenomata, the question being whether there is anything in the nature of a true secretion. If the hyaline or colloid material in the cysts is merely the result of cellular degeneration the propriety of such names as cystoma and cystadenoma would be questionable, but Stockmann[14] has apparently shown that, in some instances, the cysts and tubules contain genuine secretion, and the fact that some of the tumors in our case increased in size following the administration of pilocarpin would tend to confirm Stockmann's findings. Strictly speaking, these growths are benign cystic epitheliomata, although that name had best be reserved for the Brooke-Fordyce type of neoplasm, and a more appropriate and descriptive one adopted for tumors of this group. The designation "syringocystadenoma," suggested by Török, appears to us to be very appropriate, being expressive and at the same time concise.

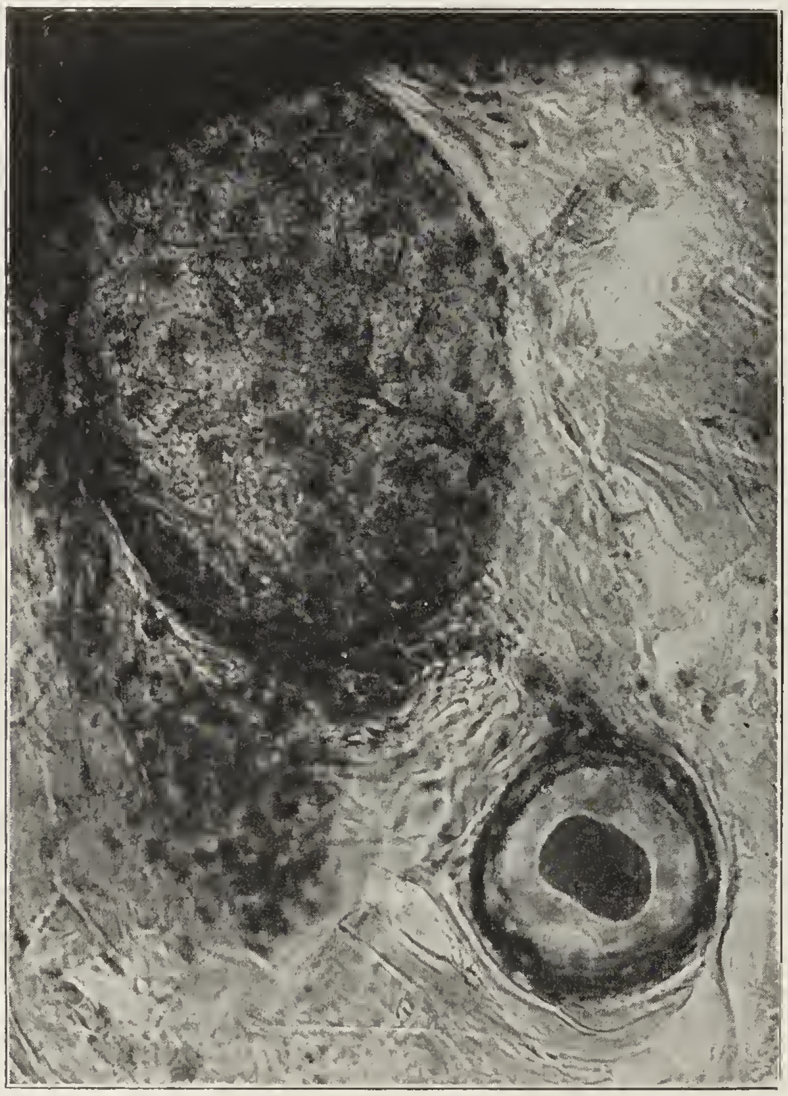

Fig. 5.—Syringocystadenoma, showing epithelial strand apparently developing from the covering of a sebaceous gland. Serial sections showed that there was no connection between the two substances. (Spencer 1/6 obj. No ocular.) Case 2.

The extremely interesting and very extraordinary example of sweat-gland tumor recently reported by Ormsby,[25] is exceedingly difficult to classify properly. So far as we can find, no similar case has ever before been described. Engman's[26] suggestion that the sudden and widespread multiplication of certain types of cells might be due to a specific chemical agent acting as a stimulant, as claimed by Starling in formulating his now generally accepted hormone theory, is of great interest, even though Webster's[27] careful and exhaustive analyses proved fruitless in this instance.

CONCLUSIONS

Lymphangioma tuberosum multiplex or, better, syringocystadenoma, is a non-malignant, cystic neoplasm derived from misplaced embryonal coil-gland elements. The cells still retain their sweat-secreting function, hence the tumors are true adenomata.

Although these growths are, in reality, benign cystic epitheliomata, they distinctly differ, both clinically and microscopically, from the acanthoma adenoides cysticum originally described by Brooke and by Fordyce. If the term "multiple benign cystic epithelioma" is to be retained, its use should be confined strictly to tumors of the Brooke-Fordyce group, and a more fitting and proper designation, as syringocystadenoma, adopted for the neoplasms which have so long been indexed under the euphonious but misleading appellation of "lymphangioma tuberosum multiplex."

We desire to express our very great indebtedness to Professor William H. Welch, of Johns Hopkins University, for his opinion regarding the syringocystadenoma sections. Much of the included summary is quoted almost directly from his personal communication to us, and we feel that his knowledge and discussion have gone far toward clearing up the puzzling subject in question.

TREATMENT OF NON-UNION OF FRACTURES *

J. SHELTON HORSLEY, M.D.
RICHMOND, VA.

A fracture which has been apparently properly reduced and treated according to the orthodox manner is supposed to go on to successful healing. Fortunately, this is usually the case. Occasionally, however, without any apparent cause, union fails to occur, and such an outcome is both distressing to the patient and embarrassing to the surgeon. Theoretically, bone should repair perfectly, as it belongs to the connective tissue group of tissues that are simple in construction and consequently easy of repair. We know that simple tissues repair readily, whereas the more complicated tissues, such as brain and epithelial and glandular structures, either do not repair at all, or else very imperfectly after a prolonged time. This is a simple, common-sense, biologic law that we would naturally expect. The exception in the case of bone is more apparent than real. The general connective tissue frame-work of the bone is built up even where no union occurs. The fault lies in the failure of the tissues to deposit lime salts, as the mineral matter in bone comes from the deposit of lime salts that are ordinarily maintained in solution in the blood. Just why this deposit sometimes fails is not always easy to explain. Of course, mechanical conditions, such as the imperfect reduction of the fracture, or the interposition of fascia or muscle must be excluded before the causes of true non-union are considered. Several constitutional diseases, syphilis in particular, are supposed to produce a condition in the blood that prevents, or, at least, retards the deposition of lime salts; but after excluding all local and constitutional diseases there still remains quite a group of cases in which, after proper reduction of a fracture and with absolutely no history whatever of constitutional trouble, the bone refuses to unite. This failure to precipitate lime salts is probably due to some idiosyncrasy that may exist in a patient who is otherwise normal and healthy, and apparently it may exist with a normal tendency to repair in every other respect.

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[22] Schidachi: Arch. f. Dermat. u. Syph., 1907, p. 3.
[23] Unna: Histopathology of the Diseases of the Skin, p. 807.
[24] Pick: Virchow's Arch. f. path. Anat., 1904, p. 312.
[25] Ormsby: Jour. Cutan. Dis., 1910, p. 433.
[26] Engman: Jour. Cutan. Dis., 1910, p. 444.
[27] Webster: Jour. Cutan. Dis., 1910, p. 441.

* Read before Richmond Academy of Medicine and Surgery, Nov. 14, 1911.

The problem that confronts us in the treatment of true non-union of bone, that is, cases in which lime salts are not properly thrown down, resolves itself into two indications. The first is to increase the quantity of lime salts contained in the blood; and the second, to induce a larger quantity of blood to flow through the affected bone. In practically all of these cases there is some very slight tendency toward the deposit of lime salts, though it may be so slight as to require a microscopic examination to demonstrate it. If we can induce a larger quantity of blood to flow to the injured part, not only shall we furnish a greater volume of blood within a given time from which lime salts may be taken, but also the nutrition supplied to the local bone-cells may so stimulate them as to increase their activity in causing the deposit of lime salts.

The first indication is met by the administration of calcium salts, usually in the form of hypophosphites. Thyroid extract has been recommended, though its method of action is uncertain and reports on its efficacy are conflicting. The thyroid gland is supposed to exert some influence on the growth of long bones. The extract may act as a hormone. The diet and personal hygiene of the patient generally should, of course, be carefully regulated.

The second indication, that of increasing the blood-supply to the site of fracture, must be carried out by local measures. We know that any foreign substance embedded in tissue induces a hyperemia. If infection occurs, this hyperemia is diverted to fighting the invading germs, and cannot be used toward building up the tissue. If, then, we insert a sterile foreign body that can be gradually absorbed, we have the ideal condition of bringing more blood to the region in which this foreign body is inserted, and, at the same time, attracting leukocytes for its absorption, and so accomplishing the gradual disappearance of the foreign body after union of the bone has occurred. Along this line Dr. Charles Mayo makes a practice of putting a sterile ivory pin in the medulla of the bone in cases of ununited fracture. This pin does not fit tightly, and is not intended to hold the bone in position, but to stimulate hyperemia and local leukocytosis. The idea was suggested to Dr. Mayo by the fact that a sequestrum causes a marked formation of new bone around it. Blood-clots also act in somewhat the same manner. The fragments should be set in the proper axis, but, instead of being smoothly sawed, the ends should be roughened and a little jagged so that blood-clots may accumulate in between the ends, and so increase hyperemia and leukocytosis for the absorption of these clots. Too often we lose sight of the scientific principles involved and become mere mechanics to make a neat joint, leaving little inducement for hyperemia, and so defeat the very object of the operation. Smoothly sawed bone and accurate approximation is proper in cases of ordinary fracture, where an abundance of lime salts will be thrown down after any operation, but in non-union such procedures will often fail.

Another measure that is useful in conjunction with those already mentioned is Bier's hyperemia. This may be effected by a rubber band placed around the limb, some distance above the fracture, and made sufficiently tight partially to obstruct the venous circulation. It is left on from twenty to forty minutes every day. This acts by damming back the blood and so dilating the capillaries and when the tourniquet is removed an arterial hyperemia follows the venous. It is the arterial hyperemia that is chiefly beneficial.

A very important factor in the treatment of non-union of fractures is the amount of bone to be nourished. Frequently in these cases the ends of the bone are filled with a solid mass of bone-tissue. This not only blocks off the nutrition that normally would come from the medulla and endosteum, but imposes a greater burden, by filling up the medullary cavity with bone and giving a solid column to be nourished instead of a hollow cylinder. It is a well-known principle of mechanics that, weight for weight, a cylinder has greater strength than a solid column. The bone fills up the medulla and will not only block off the nutrition from this source, but will take unto itself much of the nourishment that should go toward the cortex. It is important, then, to drill out the ends of the bone thoroughly until the medullary cavity has been reached. This is best done by means of a burr, and a small chisel may be used gently to enlarge the opening. The difficulty in obtaining nutrition for a solid column of bone is well illustrated by the following case:

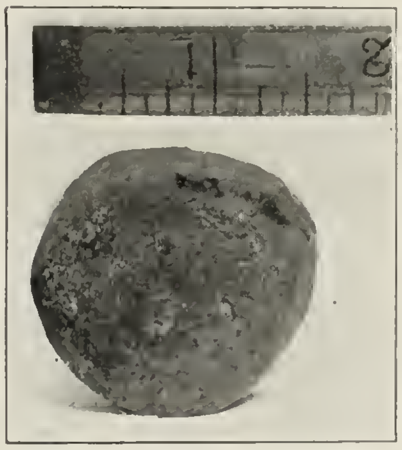
Fig. 1.—Section of bone removed from the femur about the junction of the middle and upper thirds. The medullary cavity is completely filled with bone. See case report.

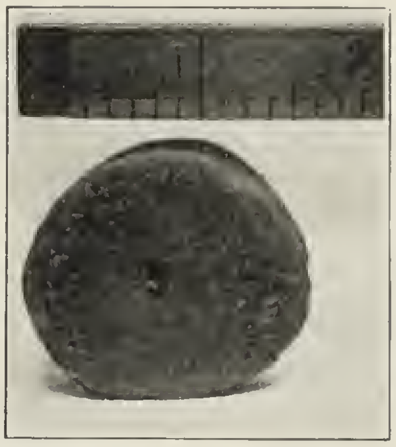
Fig. 2.—The other side of the bone represented in Figure 1. The section was about one-half inch long. In the center of this side of the section is seen a trace of the medullary cavity.

Patient.—A young man, a medical student, without any history of syphilis or tuberculosis, had been having for four or five years considerable trouble with his left femur. Abscesses would form which when opened would lead down to the femur. A small amount of bone would be removed and the wound would heal slowly. He had undergone a number of operations at the hands of various surgeons.

Operation and Course.—Finally, an osteitis developed, for which he consulted me and which was treated by incision and curetting. The wound did not heal, and he was operated on again and the curetting done more thoroughly; carious bone was also removed with a chisel. Instead of improving, however, the patient grew worse. There was apparently no effort on the part of the bone to heal, and the patient developed symptoms of sepsis. In order to save his life, the leg was amputated at the junction of the middle and upper thirds of the femur. The bone was perfectly solid. A fragment cut from the lower end showed only a small trace of the medullary cavity on one side and was absolutely solid on the other. (Figs. 1 and 2.) In this patient we had to deal with a femur that was a solid column and not only deprived of the nutrition which would normally come from the endosteum and the medullary cavity, but had the additional tax of having this space filled with bone that also required nutrition. The supply was just enough to nourish the bone under normal conditions, but when injury occurred and there was a call for extra blood for the process of repair, it could not be furnished as the femur was already taxed to its limit to maintain its physiologic nutrition. Any defect in such cases necessarily cannot be repaired.

The matter of fixation of the fracture in cases of nonunion is probably the least important part of the treatment. If the principles of personal hygiene are observed and there is no constitutional trouble, and particularly if the local indications, such as cleaning out thoroughly the ends of the bone to the medullary cavity, placing inside the medullary cavity an ivory pin, and roughening the ends of the bone so as to leave space for small bloodclots—if these principles are carried out, it matters little what method of fixation is used, so the limb is put up in its proper axis. I use a silver plate, fastened by one or two screws in each end of the fracture. This is supposed to be less irritating to the tissues than the iron plate, and can be cut to suit the case at the time of operation. In addition, while it is stout enough to withstand ordinary strain, if any great strain is placed on it, instead of snapping or pulling out at the screws, as would be the case in an iron plate, it will usually bend. The plate is best placed on the periosteum, or if the periosteum has been denuded, it should be sutured around the plate. The wound is closed without drainage, and a plaster-of-Paris cast or some other splint should be applied. The limb should be kept in a retentive apparatus for several months, though, of course, this should be changed every few weeks. After three or four weeks, it is best to begin the use of the limb. If it is a fractured leg, walking with crutches, having the leg heavily encased in plaster of Paris, should be encouraged, a little more weight being borne on the leg each day.

421 West Grace Street.

THE DECORATION OF THE INTERIOR OF HOSPITALS AND PUBLIC BUILDINGS

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WASHINGTON, D. C.

The decoration of the interior of hospitals should receive the earnest consideration of the physicians in charge, as the greater sanitary conditions which obtain from the application of thoroughly hygienic coatings are of vital importance in such establishments. I have made a careful study of the characteristics of various paints, and shall endeavor, in this article, to point out the defects and merits of different types of wall-coatings.

EFFECT ON HEALTH OF VARIOUS FINISHES

People who are confined for any considerable period of time in hospitals, office buildings or other structures, the walls of which are covered with unsanitary coatings, are subjected to an atmosphere which may be both disagreeable and poisonous. That the air may carry in suspension minute particles of matter that often have a serious effect on delicate tissue is shown by the effect of the pollen of plants which is frequently the cause of coryza and hay fever, and again by the unsanitary effects of the Paris-green coloring matter that was at one time largely used in the printing of designs on wall-paper. It would seem imperative, therefore, to provide within public buildings a non-poisonous and thoroughly inert type of wall-coating so as to have present at all times the most highly sanitary conditions.

Necessity of Paint.—The walls and ceilings of hospitals, which are generally finished in plaster to a hard surface, should never be papered, as the absorbent surface presented by paper, together with the paste binder used in its application, furnishes not only a resting place for germ-laden dust, but also a culture medium for the development of bacteria (see A in illustration). It is therefore advisable to select a suitable paint for the decoration of the walls.

Water Paints Dangerous.—Cold-water paints for the decoration of walls are not only unsanitary, but as a rule possess little durability. Like wall-paper, they cannot be washed down with water or antiseptic solutions, and even after short service are liable to scale and present a bad appearance. Cold-water paints have as binding material, glue, casein, dextrin and other products which serve as nutrient media for fungi and molds which develop musty, foul odors suggestive of decomposition. It is well known that meats, beverages and other sensitive foodstuffs placed in rooms decorated with cold-water paints are liable to absorb odors that ruin their taste. There have recently appeared on the market paste-paints which contain a rosin varnish binder, mixed with glue, dextrin and other water-soluble materials of an adhesive nature (see B in illustration). The instructions for the application of these paints call for reduction with water rather than oil or turpentine. Paints of this type are even more dangerous to use than ordinary calcimine. Cold-water paints, therefore, should be avoided under conditions in which highly sanitary results are desired.

Newer Materials.—The once prevalent method of washing the oil from white lead with turpentine, and applying it as a flat paint, should no longer be practiced. Recent progress in paint technology has brought about new and interesting developments in the production of oil-mixed paints which are better suited to meet most conditions in modern building construction.

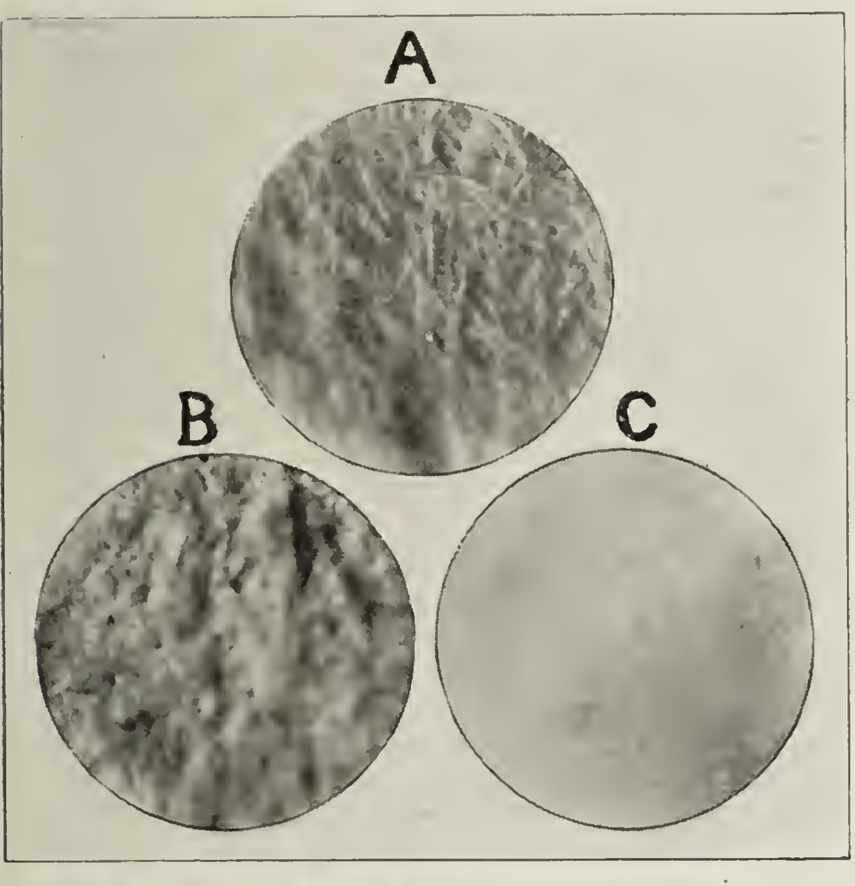
REQUIREMENTS OF A WALL-PAINT

In order that a paint may be thoroughly suitable for the protection and decoration of hospital walls, it must be of such a nature as to form on drying a hard, elastic and impervious surface that may be washed with water or antiseptic solutions, or subjected to the fumes of formaldehyd and sulphur dioxid. The pigments in such paints must be of a permanent type, unfading, nondarkening and unaffected, even when tinted to the most delicate hue, by the caustic lime that may exist in cement and plastered walls.

Flat Finishes.—In public and private wards where the patients' eyes must find restful surroundings, the modern sanitary flat wall-finishes, fulfilling, as they do, the above requirements, are preferable on account of the non-reflective mat surface which they present. These flat wall-finishes as they appear on the market are made of lithopone, zinc oxid, sublimed white lead, barytes, silica, and other non-poisonous pigments ground in a treated oil which dries to a flat, waterproof and washable surface.

Enamels.—For the decoration of operating-rooms and for the general trim of a hospital, satin or gloss finish enamels are to be recommended. The highest grade enamels produced are those made from American zinc oxid ground in a pale, hard-drying varnish and thinned with a light, lustrous varnish of the dammar type (see C in illustration). The hard, ultra-white surface produced by such enamels is not only highly sanitary, but very durable.

When hospital authorities have had such paints applied, they may rest assured not only that lasting and durable results will be obtained, but also that they are securing the most hygienic coatings yet devised. The painter, however, should bear in mind that sufficient time must be allowed for each coat to dry firm and hard, before the application of subsequent coats. The initial set of a paint, in which only the tackiness has disappeared, is but a part of the drying process which requires considerably more time before subsequent coats should be applied.



Microscopic views of walls. A, wall-paper, showing fibers; B, surface painted with water paint, showing disintegrated surface, and C, surface painted with sanitary paint.

Painting Cement.—With the introduction of cement for the construction of hospital floors, problems have arisen in decoration, which have been successfully solved by the paint technologist. The surface wearing of cement floors, with the consequent dusting, makes necessary the application of properly designed cement coatings. These should be made largely of hard, abrasion-resisting pigments ground in an oil that will not saponify when placed in contact with the alkali-bearing cement, and still be of such a nature as to produce a hard, glossy surface that may be flushed with water or dilute antiseptic solutions at any time.

A PROSTATOMETER

AN INSTRUMENT DEVISED FOR ESTIMATING THE SIZE OF AN ENLARGED PROSTATE *

HENRY J. SCHERCK, B.S., M.D.

ST. LOUIS

This instrument, which I devised for the measurement of the prostate, is based on the principle of ordinary calipers used by workmen, adapting it to the immediate needs of the object to be obtained in prostate examination. It consists of two arms, the rectal arm *B* and the vesical arm *A* (Fig. 1).

The rectal arm is long enough and so curved that it may be introduced readily into the rectum. The tip of this arm ends in a small knob in order to make gentle pressure over the rectal projection. The curve of this arm is sufficiently ample to take an oblique measurement. The distal or external end, marked *C* (Fig. 1), ends in a movable joint which is held together with a thumb-screw to a short arm to which the bladder arm is attached by means of two smooth pivots.

The vesical arm consists of a flexible metal sound for about two-thirds of its length. The flexible portion allows itself to be bent with some manipulation and is equal in size to a No. 20 French sound. The object in making this of flexible metal is to make it available in cases in which it is found necessary to adapt it to the shape of the tumor. The extravesical or lower third is made of rigid metal perforated by holes, nine in number, at equal distance from each other in which to lock the pivots on the short arm connected with the rectal arm and either increase or diminish the length of the sound as the operation requires (Fig. 1, *A*).

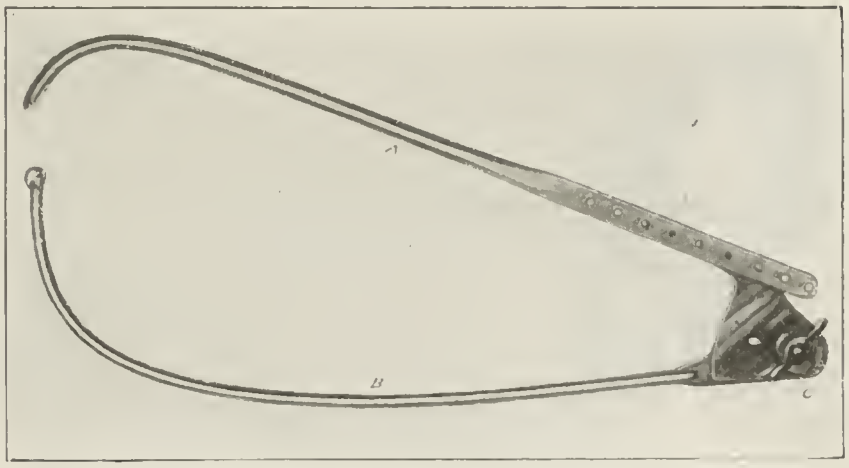


Fig. 1.—Prostatometer, an instrument devised for the measurement of the prostate.

METHOD OF APPLICATION

The patient is placed in a recumbent position and brought to the edge of the examining-table. The lower limbs are supported by leg-rests or stirrups. The bladder is then irrigated and distended comfortably with boric acid solution. The tip of the flexible bladder arm is now bent to conform with the probable shape of the urethra or vesical tumor, giving the tip as much curve as is found possible. After the sound has gained access into the bladder, the instrument is reversed, its beak made to point downward and gradually moved backward and forward until it reaches the highest point of the intravesical projection (Fig. 2, *A*). When this is accomplished an assistant holds it firmly in the position obtained.

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* From the Department of Genito-Urinary Surgery, St. Louis University School of Medicine.

The rectal arm is now introduced into the rectum with the index finger of the examining hand, and the knob on its extremity held against the most prominent portion of the rectal tumor (Fig. 2, *B*), making slight pressure in order to overcome the thickness of the rectum. The short arm is now moved to a point which allows it to be easily locked with the bladder arm, this is done by simply fitting the two pivots into the convenient holes in the bladder arm, at the same time taking note of the number of each hole.

Finally, the operation is completed by firmly locking the two arms by means of a thumb-screw (Fig. 2, *C*). The bladder arm is then unlocked, this portion of the instrument reversed and withdrawn. The rectal arm is removed and the bladder arm is again locked over the pivots of the short arm and the distance between the extremities of both arms accurately measured.

The position in which the extremity of both arms are held enables one to estimate either the anterior-posterior measurement or the oblique measurement. If it is desired to take a measurement from the floor of the prostatic urethra to the point of the greatest projection into the rectum, the tip of the flexible sound is bent perfectly straight.

In addition, the bladder arm can be used to determine the presence of stone, as well as to gain whatever information is obtainable from the method of the introduction of a sound in the bladder with the fingers in the rectum, before locking it to the short arm of the rectal arm.

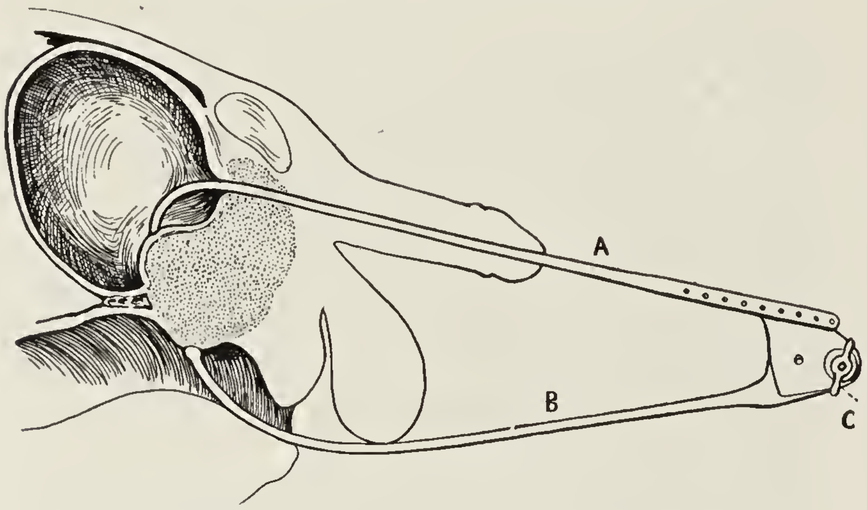

Fig. 2.—Prostatometer introduced into the bladder and rectum.

Several colleagues to whom this instrument has been shown have suggested its application in other conditions —notably, to differentiate a dilated or distended bladder from a prevesical tumor. In such a case the rectal arm would rest against the anterior abdominal wall.

309 Century Building.

Combined Roentgen-Ray and Daylight Glasses for Extraction of Foreign Bodies.—The November *Bulletin de la Société de Radiologie de Paris* contains an account of a combined fluoroscope devised by L. R. Deslongchamps. One eye looks into a dark chamber closed below by a fluorescent screen for observing the shadows cast by the Roentgen rays, while there is nothing to obstruct the vision of the other eye. By using each eye in turn, the operator is thus able to inspect the region with the Roentgen rays or daylight, and the inventor says that the eyes soon accustom themselves to the task. He claims that his radioscope is particularly useful for extraction of small foreign bodies, especially needles in the feet or hands, and for reduction of fractures and dislocations. His efforts to make a radioscope in which both eyes could be used simultaneously in turn for the Roentgen rays or daylight were not successful.

MAGNIFIED HEART SOUNDS DUE TO EXTRACARDIAC CONDITIONS

WITH REPORT OF AN UNUSUAL CASE

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It is a well-known fact, frequently mentioned in the literature, that a gas-containing cavity in proximity to the heart may act as a resonating chamber and greatly increase the intensity of the heart sounds as heard on auscultation or even render them audible at a short distance from the chest. The conditions producing such cavities are (1) pneumothorax, (2) pulmonary vomicæ, (3) tympanites, (4) gastric dilatation. The former two require to be properly placed with relation to the heart in order to act in this way. Air or gas may increase the loudness of the heart sounds in two additional conditions, differing mechanically from the preceding; that is to say, in pneumopericardium and in subcutaneous emphysema. These obviously do not present the same favorable conditions for resonating action. In fact, pneumopericardium does not truly intensify the normal heart sounds, but produces abnormal sounds quite pathognomonic of the condition; these sounds being spoken of as the water-wheel murmur due to its churning, splashing character and the metallic tinkling which may be audible at a distance from the chest. These sounds are similar in character and etiology to the succussion splash and metallic tinkle heard in a hydropneumothorax. An article by James,[1] in 1904, in which he analyzed thirty-eight cases of pneumopericardium, is of extreme interest.

With regard to the influence of subcutaneous emphysema, an interesting case is reported by Keats,[2] in which the emphysema followed a fracture of the third and fourth ribs on the right side near the sternum, and extended over the whole precardiac area except toward the apex. At the apex the cardiac sounds were normal, but over the emphysematous area the sounds were very loud. Keats proved that the increase was due to the emphysema by reducing the emphysema by pressure and observing a return of the heart sounds to normal. This is a clinical curiosity of no importance.

Still another condition which may increase the intensity of heart sounds to such a great degree as to render them audible to an observer at a short distance from the chest is described by Bramwell.[3] In the case he reports there was consolidation of the lower two-thirds of the left lung and "the heart sounds could be readily heard, when the patient sat up, without applying the ear to the chest."

The mechanical principles of the gas-containing cavities which may intensify the heart are the same in each and the rule applies that the cavity does not have to be interposed between the heart and the ear to act as a resonator.

1. Pneumothorax quite commonly acts in this manner, and a number of cases have been reported—seven in one paper by Galliard.[4] It is usually thought that only left-sided pneumothorax can act in this manner, but Beau[5] reports a right-sided pneumothorax which exaggerated the sound of a pericardial friction to such an extent as to make it audible at the distance of a

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[1] James, W. B.: Am. Med., July 2, 1904, p. 23.

[2] Keats, W. C. J.: Lancet, London, 1904, i, 1721.

[3] Bramwell: Diseases of the Heart, p. 156.

[4] Galliard: Traité de médecine et de thérapeutique, viii, 219.

[5] Beau: Traité d'auscultation, Paris, 1856, p. 192.

meter. This case occurred in a man following a knife-thrust which opened the right pleura and wounded the pericardium with resulting hydropneumothorax and pericarditis.

2. Pulmonary cavities very commonly give a metallic timbre to the heart sounds, but very rarely cause much increase in intensity. A case in which the cavity was in the left lung in the mammary region and caused some increase and a distinct amphorometallic quality to the heart sounds is reported by Sabourin.[6]

3 and 4. Tympanites can well be considered with gastric dilatation, since the two conditions act similarly and often synchronously. The close relationship between the apex of the heart and the stomach makes it certain that in the presence of a dilatation of the stomach the large air-containing cavity would influence the heart sounds, and especially is this true if there is a coincident hypertrophy of the heart. Of more importance than the added intensity or amphorometallic timbre of the heart sounds is another phenomenon very rarely seen, which occurs in such cases. This consists of an abnormal sound, cardiac in rhythm and systolic in time, due to the transmission of the cardiac impulse against a dilated stomach containing some fluid. This phenomenon was markedly present in the case I wish briefly to mention here. A complete history of the case is later appended. The patient, a boy of 14, had suffered with endocarditis for several years resulting in a greatly hypertrophied heart, with badly damaged mitral and aortic valves. When I first saw him his condition was very serious, there being distinct loss of compensation, with dyspnea and edema. After a few days of moderate cardiac stimulation and careful hygiene his condition had slightly improved. I will quote my office note on the sixth day after first seeing the patient:

> June 12. To-day for the first time I was able to observe what patient and mother have described to me as occurring frequently. Their description was that at times there was a sound, audible through the room, beating with his heart and sounding like a splash, coming and going. Following their description to me I had carefully considered a hydropneumothorax or hydropneumopericardium, but there was no evidence of either. To-day I was present during the sound's occurrence. The patient was lying a trifle lower than before and was perfectly comfortable (smilingly saying: "It is going on now"). As I stood on the opposite side of the room about 10 feet distant I could plainly hear a sound synchronous with the pulsation I could see in his neck. The sound was a mixture of tympanic note with a slight splashing element. I uncovered the patient and the sound increased in intensity, with its maximum point near the apex. In time it was systolic, short and sharp. The action and sounds of the heart were just as on the previous visit. On auscultation the sound was very loud and tympanitic and was readily traced to the gastric region, all over which it could be heard clearly. The sound can best be reproduced by percussing very forcibly a dilated stomach half full of fluid. In effect it was this that the heart was doing. On pressure just below the left costal margin the sound ceased and the impulse of the heart's apex could be felt against the finger-tips. The boy had eaten and drunk within a few minutes before my arrival. The sound continued throughout my entire visit and examination.

The patient was transferred to the University Hospital for observation, but this phenomenon was never markedly present again, owing in all probability to improved dietary. Death occurred very suddenly a month later and no autopsy was permitted. The very meager results of a search through the literature for descriptions of such cases led me to make this report. In 1907, Spillman and Perrin[7] state that although they know cases showing this phenomenon had been observed, they are unable to find any such mentioned in the literature. The case they report is very similar to mine. It occurred in a girl, aged 22, whose heart was hypertrophied as a result of an aortic insufficiency. The heart sounds and murmurs were so greatly intensified by a dilated stomach that they could be distinguished with the ear several centimeters from the chest. In addition there was present after the ingestion of liquid a systolic *clapotis rhythmé*, loud enough to be audible to one at the bedside and at night disturbing the patient's sleep. This was increased by recumbency. The authors consider it due to the shock of the heart, aided perhaps by the abdominal aorta.

In a case reported by Sabourin[6] the author states that the heart sounds were so accentuated by a dilated stomach that they could be heard a yard away from the chest and had an amphorometallic tone which he compares to the sound produced by striking with a padded drum-stick the inside of a metal jar. It is probable that he confuses the heart-sounds with the phenomenon described above. In his case treatment directed toward relief of the gastric condition soon restored conditions to normal.

The assertion has often been made—first I believe by Laennec,[8] in 1826—that at times the normal heart sounds could be heard at a short distance from the chest with the unaided ear in the absence of any gas-containing cavity to act as a resonator. This has also been denied in the case of normal sounds, although it is admitted that the systolic impact of the normal heart against the thoracic parietes may be audible at a short distance.

Three interesting cases of traumatic nature were reported by Guido Bell,[9] in 1891, in an article entitled, "A Peculiar Noise of the Heart Heard at a Distance and Claimed to be Due to Shock." Although the author's interpretation of the phenomenon as a pathognomonic symptom of the condition of shock appears questionable, yet the description of the cases leaves no doubt as to the existing conditions. All three cases are similar. In each a severe trauma was followed by shock, as one symptom of which a tympanites or gastric dilatation developed against which the dilated heart was slapping. The author describes the peculiar noise as systolic in time and of a loud smacking character, audible at a distance of two yards.

The preceding five cases are the only ones to which I have been able to find reference in a brief review of the literature, although an occasional author makes passing mention of the condition. The case that I was fortunate enough to observe seemed worthy of being reported on account of this rarity of the phenomenon, and also on account of the clear etiology of the sound in this case and its extreme loudness. A complete history of the case is here detailed.

REPORT OF CASE

History.—L. R., a boy aged 14, gave as his chief complaint, dyspnea, palpitation and pain in his right shoulder. The present condition was first noticed about two years previously when his mother observed that he was rather weak and looked ill. He commenced to complain of pain in both ankles, knees and right shoulder, and at times had some edema of his ankles. He continued, however, to attend school and be active until about six months before coming under observation, when a more severe attack of rheumatic pain, with great weakness, caused him to go to bed. After two weeks' rest he improved but did not return to normal. About five months later he became very dyspeptic and edematous and remained in bed from that time. The dyspnea was so severe that he required to be propped up and his weakness was intense. His previous medical history was of considerable interest. He had had measles and whooping-cough in childhood. At 6 years of age a doubtful attack of meningitis was followed by chorea. At the age of 9 he suffered a severe attack of acute articular rheumatism which affected his ankles, knees and shoulders. His family history was of no importance and the social history was that of an active school boy.

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[6] Sabourin, C.: Rev. gén. de clin. et de thérap., 1910, xxiv, 264.

[7] Spillmann and Perrin: Province Méd., xx, No. 34, p. 429.

[8] Laennec: Auscultation médiate, 1826, ii, 453.

[9] Bell, Guido: Lancet-Clinic, Sept. 19, 1891.

Physical Examination.—The patient was an underdeveloped boy with a slight frame, poor musculature and little panniculus adiposis. He was markedly anemic. There was no general adenopathy and no osseous deformity. The skin was cool and moist, showing no eruption. There was marked edema of the ankles. The ocular movements were free in all directions; pupils reacted normally to light and in accommodation. The conjunctivæ as well as all visible mucous membranes were very pale but showed no signs of jaundice. The tongue was coated, the throat normal, and the teeth in good condition. There was distinct pulsation of the veins and arteries in the neck, but the veins were not very prominent. A blowing, systolic murmur was audible over the carotids. The thorax was narrow and thin-walled, with prominent ribs and clavicles. The superficial veins were conspicuous. The precordia bulged somewhat and seemed to pulsate with each beat of the heart. Expansion was poor, being greater on the left than on the right. The lungs were resonant throughout and the breath-sounds were puerile, especially at the apices. A few râles were heard at the bases. The boundaries of the heart were the second rib above, the sixth interspace in the anterior axillary line to the left, while the right border extended 3.5 cm. to the right of the sternum. On auscultation double mitral and double aortic murmurs were heard, the muscular elements being very weak. There was no pericardial friction. The liver extended from the fourth rib to 2.5 cm. below the costal margin. The abdomen was distended, the walls weak and thin. Splenic dulness was normal and the organ was not palpable. The extremities, save for the edema, were normal. The radial pulses were synchronous and equal, but very weak and irregular, only every other heart-beat being transmitted at the wrist.

Laboratory Examinations.—Blood: Hemoglobin 58 per cent.; white blood-cells, 12,100. Urine: amber, light flocculent precipitate; Sp. gr. 1.025; acid; albumin, a faint trace; sugar, negative. Sediment showed hyaline and many dark granular casts, many cylindroids, much mucus.

The patient was under observation for six weeks and seemed to respond slowly to treatment, although he continued to run a hectic temperature and a rapid pulse. No blood-culture was taken. The daily notes on the case are of no special interest except the one already quoted. Death occurred suddenly and no autopsy was obtained.

1811 Spruce Street.

MENSTRUAL SUPPRESSION DUE TO HYPOTHYROIDISM

CATHARINE MACFARLANE, M.D.
GERMANTOWN, PA.

Mrs. F., aged 25, came to my clinic at the Woman's Hospital Jan. 28, 1911, complaining of amenorrhea of eight months' duration.

History.—Menstruation had been established at 13 and had always been regular, profuse and painless, the periods lasting four or five days. The patient married at 18 and three years later became pregnant, but miscarried at four months, cause unknown; a second early miscarriage followed a fall. After the miscarriages she continued to menstruate regularly until 1910, when she missed her periods in March and April; a normal period occurred in May, 1910, after which there was no return. During these eight months of amenorrhea, she suffered from almost constant headache, backache and nausea, numbness of the hands and arms and vertigo; she complained of feeling stupid and sleepy; she put on flesh steadily, finally weighing 230 pounds, and her abdomen was noticeably increased in size.

Examination.—The patient was 5 feet 6 inches tall and appeared large and clumsy; her face was bloated, eyelids puffy, eyes heavy, lips thick and complexion pasty; her skin was dry and rough, the flesh swollen, firm and inelastic; her mental state was dull and listless. Pelvic examination revealed normal organs with no signs of pregnancy; the abdominal enlargement was evidently due to accumulated fat; systolic blood-pressure registered 120 and the red cells numbered over six million.

Treatment.—The whole aspect of the patient was so striking and so like myxedema that, in view of the negative blood and pelvic findings, the possibility of the amenorrhea being due to deficient thyroid secretion at once suggested itself and she was accordingly directed to take 5-grain tablets of the dried thyroid gland three times a day.

March 25, 1911, after eight weeks' treatment, the patient menstruated for the first time in ten months; the flow was dark in color and moderate in amount, lasting five days; the headache, backache and numbness were all relieved. From this time on the patient menstruated regularly every four weeks, with the exception of May, 1911, and her symptoms gradually disappeared. Nov. 22, 1911, she weighed 216 pounds, her features were clearly defined and her expression and conversation, when compared with last January, seemed animated.

5808 Greene Street.

A SPORADIC CASE OF INFECTIOUS HEMOGLOBINURIA *

W. G. LITTLE, M.D.
OKMULGEE, OKLA.

Definition.—An infectious disease of the new-born, occurring during the first two weeks of life, and of an epidemic nature.

Historical Data.—This disease seems to have been described first by Charrin, of Paris, in 1873, with a report of fourteen cases. In 1879 Winckel, of Dresden, reported twenty-three cases in the Foundling's Hospital, and described the disease in detail, from which time it has been known as "Winckel's disease."

Etiology.—In regard to the etiology, little of certainty is known, but the disease is generally conceded to be of an infectious origin, and occurs in epidemic form in institutions. The nature of the infection is unknown, but Garrod, of London, included it under diseases of the kidney, and states that it is probably due to bacterial toxins. It is not due to infection of the umbilical cord.

Pathology.—There is a yellow staining of the skin and internal organs. The spleen is large, hard and darkened, and filled with blood-pigment, which is diffused throughout the pulp and free in the blood-vessels. The kidneys are dark brown in color, the tubules being filled with granular pigment, which shows under the microscope to be crystals of hemoglobin, and small hemorrhages show in their substance. The liver and heart are sometimes found to be fatty. The umbilical vessels show no sepsis. The urine is brown, albuminous and contains methemoglobin and deposits a sediment composed of epithelium and tube-casts. The blood shows an increase in leukocytes and many free granules.

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* Read before the Okmulgee County Medical Society, September, 1911.

Symptoms.—These are intense and fulminating in character, seldom lasting longer than two days, often only one. The early symptoms are restlessness, rapid pulse and respiration, prostration, cyanosis and general icterus, the skin having an intense bronze hue. There may be a slight fever, up to 101 F., or the temperature may remain normal. The respiration is labored and more or less rapid. The urine may be passed frequently and imparts a dark bronze or copper color to the napkin. Gastro-enteric symptoms may occur. There is rapid asthenia and a termination often in coma or convulsions.

Treatment.—This disease is practically always fatal, and the treatment is to be directed against the individual symptoms as they arrive.

CASE REPORT

Baby C, born May 20, 1911, at 7 p. m., a well-developed girl baby. The mother was a strong young woman, very well, having worked up to the time the labor pains began, and had given birth to the child before I reached the home. I tied the cord and delivered the placenta. The conditions were all right until May 23, when about 9 a. m. a neighbor woman telephoned that the baby was yellow and asked whether it would be all right to bathe her and give her some oil. To this I assented. The parents said that at 7 a. m. the baby was all right, the bowels having moved, showing a normal yellow stool, the kidneys were active and the child had nursed. At about 9:30 I was told that the baby was not breathing right and that I had better call, which I did, and found the conditions as follows: The heart action was very rapid and the face, hands and feet were cyanosed; there was gasping respiration with the intercostal spaces indrawn; the face was pinched in appearance; the fontanels natural and the temperature normal; the baby was light yellow in color.

As the disease progressed the yellow deepened to a light bronze; then to a dark bronze. There were hemorrhages from the mucous membranes two or three hours after the disease began. The urine was very dark, making a bronze stain on the napkin.

The general conditions grew steadily worse, till finally at 7 p. m. death occurred, the entire illness having lasted about ten hours. A diagnosis of infectious hemoglobinuria was made. As regards the treatment, aromatic spirits of ammonia were given, also alcohol baths and normal salt enemas.

New and Nonofficial Remedies

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

GONOCOCCUS VACCINE.—(See N. N. R., 1912.)

H. K. Mulford Co., Philadelphia.

Neisser Bacterin Mixed.—Each Cc. is said to contain approximately 100 million each of killed staphylococcus (aureus, albus and citreus) and 50 million each of streptococci, B. coli, B. pseudodiphtheriæ and gonococci. It is marketed in packages of four 1 Cc. ampules. Also marketed in vials of 20 Cc. and in 4 syringes, Syringe A being of the composition mentioned above and constituting the initial dose, while Syringes B, C and D contain, respectively, 2, 4 and 8 times the amount of bacteria contained in Syringe A.

PNEUMOCOCCUS VACCINE.—(See N. N. R., 1912.)

H. K. Mulford Co., Philadelphia.

Pneumo-Bacterin Mixed.—Each Cc. is said to contain 50 million killed pneumococci, 25 million killed streptococci and 50 million killed staphylococci. Also marketed in vials of 20 Cc. and in packages of 4 syringes, Syringe A being of the composition mentioned above and constituting the initial dose, while Syringes B, C and D contain, respectively, 2, 4 and 8 times the amount of bacteria contained in Syringe A.

STREPTOCOCCUS VACCINE.—(See N. N. R., 1912.)

H. K. Mulford Co., Philadelphia.

Scarlatina-Bacterin (Scarlet Fever Vaccine).—It consists of a suspension of killed streptococci obtained from scarlet fever cases. It is marketed in packages of 4 syringes, Syringe A containing 50 million killed streptococci, while Syringes B, C and D contain, respectively, 2, 4 and 8 times the amounts of bacteria contained in Syringe A. The initial dose is from 10 million to 50 million.

Scarlatina-bacterin is also marketed for immunizing purposes in packages of 3 syringes, Syringe No. 1 containing 250 million killed streptococci and constituting the first dose, while Syringes No. 2 and No. 3, consisting, respectively, of the second and third doses, to be injected at intervals of seven days following the first dose, contain 2 and 4 times the amount of bacteria in Syringe No. 1.

Also marketed in vials of 20 Cc., each Cc. containing 500 million killed streptococci and sufficient for immunizing 5 persons.

TYPHOID VACCINE.—(See N. N. R., 1912.)

H. K. Mulford Co., Philadelphia.

Typho-Bacterin Immunizing.—The immunizing package of typhobacterin contains 3 syringes, Syringe No. 1 containing 500 million killed typhoid bacilli, while Syringes No. 2 and No. 3 each contain 1,000 million killed typhoid bacilli. The contents of these syringes should be injected subcutaneously at intervals of ten days. Also marketed in hospital-size packages of 30 ampules, in sets of three, each set being sufficient for the complete immunization of one patient.

STAPHYLOCOCCUS VACCINE.—(See N. N. R., 1912.)

H. K. Mulford Co., Philadelphia.

Staphylo-Bacterin Mixed.—Staphylo-bacterin mixed is composed of a suspension of bacteria, each Cc. of which contains 25 million killed streptococci, 100 million killed staphylococci and 50 million killed B. coli.

It is marketed in packages of four 1 Cc. ampules, each Cc. of the composition given above. Also in 20 Cc. vials. Also in packages of 4 syringes, Syringe A being of the composition given above, while Syringes B, C and D contain, respectively, 2, 4 and 8 times the amount of bacteria contained in Syringe A.

TUBERCULIN.—(See N. N. R., 1912.)

H. K. Mulford Co., Philadelphia.

Von Pirquet Test for Tuberculosis.—Old tuberculin marketed in capillary tubes in packages of three and of ten. Each tube contains old tuberculin sufficient for one test.

ANTIRABIC VACCINE.—(See N. N. R., 1912.)

H. K. Mulford Co., Philadelphia.

Rabies Vaccine.—Rabies vaccine is prepared according to the method of Pasteur and is a complete treatment, consisting of 25 doses, to be administered during 21 days. Each day's injection is shipped in a Caloris vacuum bottle. Complete description and directions accompany each outfit.

Bass Test for Typhoid

Bass test for typhoid fever is a modification of the method of Widal.

H. K. Mulford Co., Philadelphia.

Bass Test for Typhoid Fever.—The outfit for testing blood for typhoid fever according to the Bass method consists of the following items: a. Suspension or emulsion of killed typhoid bacilli, each Cc. containing approximately 10 billion killed bacteria.

b. Glass slide on which to mix the emulsion with suspected blood.

c. Slide with dried smear of infected blood. This slide is to be afterward used for mixing the emulsion and suspected blood on Slide B.

d. Needle for pricking ear or finger to obtain suspected blood from the patient.

e. Pipette for dropping typhoid emulsion and water on slide, previous to mixing with suspected blood.

Widal's Test—Borden's Modification

In this test the serum of the blood is mixed with salt solution and then with a suspension of killed typhoid bacilli, so as to bring the dilution up to 1 to 50. The positive reaction is determined by noting that the clumps of bacteria sink to the bottom of the test tube and leave a limpid, clear fluid above a small, white, flocculent mass of agglutinated bacilli.

H. K. Mulford Co., Philadelphia.

Mulford's Widal Test Outfit (Widal Reaction for Serodiagnosis of Typhoid Fever).—The outfit consists of the following items, all packed in a box containing fixed test-tube rack: (a) 30 Cc. stock bottle of suspension or emulsion of killed typhoid bacilli; (b) 30 Cc. stock bottle of physiologic salt solution, containing 1 per cent. of phenol; (c) 10 Cc. dropping flask for salt solution; (d) 10 Cc. dropping flask for typhoid suspension; (e) 6 graduated test-tubes; (f) 1 graduated pipette; (g) 12 small capillary bulbs or tubes to collect blood-serum, and (h) 1 needle.

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[*For other information see second page following reading matter*]

SATURDAY, FEBRUARY 3, 1912

ALTITUDE AND BLOOD-CORPUSCLES

The response of the human organism to altitude, as exemplified in an increase in the number of red blood-cells (erythrocytes) in the circulation, is familiarly pointed out as a useful compensatory reaction. The effect of a diminished partial pressure of oxygen accompanying the rarefaction of the atmosphere is equalized by the larger absorbing surface furnished by the increased number of oxygen-carrying cells. The facts here cited have played a part in the attempt to explain the physiologic effects of mountain resorts and elevated plateaus; and various therapeutic gains have been ascribed to them. The published statistics for the numbers of erythrocytes observed under such conditions give figures reaching 8,000,000 corpuscles per cubic millimeter, in contrast with the conventional 5,000,000 counted at lower levels.

Data of this sort have been attacked repeatedly as misleading. It has been asserted, for example, that these high figures do not represent a true gain in red blood-cells, but are the outcome of alterations in their distribution in the blood of various vascular areas. Or again, changes in the water-content (concentration) of the blood at altitudes have been made responsible for a relative increase in the number of corpuscles — a gain in hemoglobin which is apparent, rather than real. The debate is one of several years' standing.

It cannot be denied that in the past blood-counts have often been attended with a not inconsiderable percentage of error. It is interesting, therefore, to find the mooted question of the increase in erythrocytes at altitudes subjected to investigation by a careful student of the technic involved. Professor Bürker of Tübingen, to whom we owe the introduction of a new and efficient hemocytometer, has supervised a systematic examination of the blood of four trained observers at Tübingen (1,000 feet) and at Davos on the Schatzalp (5,600 feet), and subsequently at the lower altitude again. The location at Davos was not such as to induce the complications of mountain sickness. Although the investigation[1] has confirmed the current view of the influence of altitude on the blood, the effect was found to be decidedly less marked than is commonly assumed. A month's stay at the elevation of five thousand feet occasioned an increase of only about 5 per cent. in the number of red corpuscles and 7 per cent. in the hemoglobin content of the blood. This change came about rather speedily; and a decrease promptly followed the return to a lower atmospheric level. An examination of the blood of the same individuals a month later, in Tübingen, showed a persistence of rather high figures for the blood constants under consideration. The investigators believe that the electrical properties of the atmosphere and the insolation peculiar to mountain resorts can be excluded as causes of the physiologic effects reported. It was noted incidentally that the hemoglobin content of the blood was increased with falling temperature and the cold season — an effect assumed to be associated with acceleration of the oxidative changes in the organism. This is, perhaps, a typical response.

It may be objected that the results just reported must be discounted because of the small number of individuals examined. Nevertheless they have been the outcome of a careful study and are not without corroboratory evidence from other recent investigators. Herein lies the suggestion that the influence of altitude on the blood has perhaps been somewhat overvalued in climatologic discussions.

FOSSIL MEDICAL WORDS

Words often have petrified within them whole chapters of history, literature, orthography, etymology or philology. So simple a word as "parson," for instance, carries with it a number of valuable hints as to history, etymology, orthoepy and the like. In the time of Chaucer, who wrote "The Persone's Tale," it was spelled with an *e*. The *e* before *r* was first pronounced as in "parson," and then the word was spelled with an *a*, this tendency being illustrated in the pronunciation of such names as "Berkley" and "Derby," and the spelling of "Clark," which is, of course, derived from "clerk." The word "person" comes from the Latin *persona*, which was originally used for the masks worn by the characters of a play and then was applied to the characters themselves —*personæ dramatis*. It was derived from *personare*, "to sound through and through," because the player's voice sounded through the mask, which was so constructed as to increase the apparent volume of sound. From a character in a play *persona* came to mean a character in life, an individual; and then, in the Middle Ages, the ecclesiastical representative of a parish was first called the "person" and later the "parson" of the village.

We have here a bit of the history of orthoepy, of drama and of social and political customs as well as of language, all condensed in the story of the word "person." There are many of our medical words that come to us trailing clouds of knowledge in the same way and it would be unfortunate if the hints of medical history and science and the vicissitudes of terminology which they carry with them were altogether lost. A few examples will suffice to illustrate this and perhaps prove an incentive to those who care to follow up an interesting subject. To begin at the beginning of the alphabet, our word "amnion," the accepted word for fetal membrane, is rich in significance. It evidently comes from the Greek word for a lamb, ἀμνός. As the fetal membrane of the sheep embryo allows the parts of the fetus to be seen very clearly, it early became a subject for curious study and the outer membrane was called the amnios or amnion. Later when the study of the embryos of other animals and men was taken up, this word was transferred to them also. In the course of medical development at least half a dozen other good words, more directly significative, have been suggested, but "amnion" maintains itself and will probably continue to do so.

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[1] Bürker: Die physiologische Wirkungen des Höhenklimas auf das Blut, Verhandl. d. deutsch. Kongr. f. inn. Med., 1911, xxviii, 566.

To go down a little in the alphabet, "carbuncle" is a very expressive word when its derivation from the Latin, *carbunculus,* a small glowing coal, is known. This exactly fits the fiery red lesion for which it was chosen as a name. There is a precious stone of a fiery red which is called by the same name for the same reason.

Occasionally we have two words in medical English from the same Latin or Greek original and sometimes there has even come a distinction of meaning into them: "palsy" and "paralysis" are typical examples. Both are derived from the Greek word παράλυσις. "Palsy" came into English long ago and "paralysis" much more recently. Horne Tooke's rule is that when a long word is derived from a foreign language some of the letters inevitably drop out in the course of time, "letters, like soldiers," as he quaintly says, "being apt to desert or drop off in a long march." "Alms," which is derived from the Greek ἐλεημοσύνη, is a typical example. Hence we have palsy as the old form for the word "paralysis," and now popularly at least there is a shade of difference in the meaning of the two words. "Paralysis" stands for the more serious organic lesions of the nervous system; "palsy" is more frequently referred to functional disturbance, tremors and the like that do not necessarily imply a complete loss of power over a part.

Sometimes it is very difficult to find the derivation of a term and then all sorts of imaginary derivations may be suggested. A typical example is the word "saphenous" as a distinguishing epithet for the large superficial vein of the leg. This used to be considered as probably derived from the Greek σαφής, meaning clear, evident, because, particularly whenever it is in a pathologic condition, it is so much in evidence. Hyrtl, in his work on Hebrew and Arabian words in anatomy, calls attention to the fact, however, that none of the ancient Greek medical writers — Hippocrates, Galen, Oribasius, or Theophilus — uses the word, which is of Arabic origin and derived from a root *safu,* which means exactly the opposite. It is the hidden vein because it runs in a portion of the body that is usually kept covered. Contradictory derivations of words such as this are not unusual. Sometimes the false derivation has quite satisfied scholars for the time.

"Uvula," to come down to the end of the alphabet, is a Latin word meaning a little bunch of grapes. It is a direct translation from the Greek σταφυλή, so familiar now in bacteriology in the word "staphylococcus," the coccus, or berry-form microorganism, which grows in bunches like grapes. Aristotle used the word σταφυλή for the uvula only when that organ was inflamed and swollen so as to resemble a grape on its stalk. Certain muscles attached to the uvula are still called staphyline from the Greek original.

Evidently there is as much curious information to be derived from the study of our medical words as Horne Tooke, in his "Diversions of Purley," showed there was to be obtained from the ordinary words of the language. Our fossil medical words are quite as rich in suggestion as any set of words in the language, and they carry in them, for those who can read the indicia, treasures of information in history, science, language, word-lore and folk-lore that make their significance deeper than before.

STREPTOCOCCUS TONSILLITIS ("SEPTIC SORE THROAT") AND MILK

In March, 1908, there occurred in Christiania an epidemic of streptococcal angina which was traced to the milk-supply. In this case the question whether the milk became contaminated from streptococcus infection of the udder or from infection of the throat of a dairymaid was not definitely settled, both possibilities being considered by the authorities who investigated the epidemic without agreement being reached.[1]

The disease was marked by acute onset with a rapid rise of temperature and acute tonsillitis and pharyngitis, often associated with loosely attached shreds of membrane; the glands in the neck sometimes became greatly swollen. In most cases the infection terminated by crisis after two or three days, but exceptionally there developed severe complications such as pyemia, acute nephritis, abscesses about the throat and otitis, and several deaths occurred. The bacteriologic examination revealed what seemed to be the same streptococcus in all the cases examined, but no minute study of the streptococcus seems to have been made, so that it is not possible to say whether it could have been differentiated from other streptococcal strains or not.

In May, 1911, a similar epidemic occurred in Boston and its vicinity.[2] The epidemic began on May 8, rose to a maximum in about six days and was practically at an end in two weeks. The cases were concentrated in families, and the distribution coincided exactly with that of one of the two main milk-supplies of the Deerfoot company. A similar form of tonsillitis prevailed during the months of April and May in the region of Marlboro and in this case the disease seemed to spread slowly from person to person. The Deerfoot milk associated with the epidemic in Boston was derived from farms in Marlboro and adjacent regions. Nevertheless, it was not possible to obtain a record of any well-defined case of tonsillitis coming in direct contact with the milk, nor is it known that any disease occurred among the cattle on any of the farms supplying the incriminated milk, so that the exact manner in which the milk became contaminated is not known. At least 1,043 cases occurred in Boston and forty-eight deaths are attributed to the epidemic. Symptomatically the disease corresponds with the septic sore throat of the English, many small epidemics of which connected with the milk-supply have been described in England. Early there is a diffuse redness of the tonsils and adjacent regions and later follicular changes may develop. Swelling of the cervical glands and abscesses occur and diverse complications such as nephritis, pneumonia, pericarditis or general streptococcus infection may develop. In the case of the Boston epidemic also we lack detailed study of the streptococcus involved. In both these epidemics it is difficult to see how the contamination of the milk could have been prevented because all the usual precautions were taken. This is especially true in the case of the Deerfoot milk, as in this case the facilities for handling of the milk are of the very best, the entire process being under a close supervision by sanitary experts.

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[1] Melke Epidemien i Kristiania, Norsk Mag. f. Lägevidenskaben, 1908, lxix, 585, 811.

[2] Winslow, C. E. A.: An Epidemic of Tonsillitis or Septic Sore Throat in Boston, Mass., and Its Relation to an Infected Milk-Supply, Jour. Infect. Dis., 1912, x, 73.

The lessons to be drawn from these outbreaks are the following:

1. Epidemics of streptococcus infection, localizing in the throat especially, may be due to contaminated milk-supply.
2. Streptococcus throat infection—"septic sore throat"—must be recognized as one of the dangers connected with the supply of raw milk even when this is most carefully supervised.
3. As pointed out by Winslow, the only real safeguard against such otherwise unpreventable outbreaks would seem to lie in pasteurization, carried out preferably by the holding system and in the final packages.

DIET IN TYPHOID FEVER

The problems of diet in typhoid fever are perennial. Between the extremes of starvation on the one hand and a liberal mixed diet on the other, the virtues of a great variety of regimens have been warmly debated by ardent advocates from time to time in the columns of The Journal. Well-known clinicians have insisted that there is a temptation to give too much rather than too little food, and have often maintained that as a rule patients are over- rather than underfed.[1] If one attempts, however, to ascertain the justification for these statements by calculating the available nutrients in the dietaries reported, it is usually difficult to discover more than a fraction of the energy requirement of the patient in the concoctions devised. Indeed, it cannot be emphasized too often that two quarts of milk—a large volume for bedside feeding—yield only 1,500 calories, a figure somewhat lower than that furnished by the metabolism of an adult man at complete rest. The lowest figure reported by Grafe[2] in a study of the heat production of typhoid patients was forty calories per kilogram of body weight.

Despite the appreciation of the self-evident facts of undernourishment the dangers, both real and anticipated, of too liberal use of food have stood as a barrier to what must seem to many as a rational amplification of the diet in typhoid fever. When, however, some one has ventured to enlarge its nutritive value, this has usually been attempted by adding some form of protein (eggs, albumin water, etc.) to the dietary, in apparent ignorance of the fact that protein is the very component which the restricted milk regimen furnishes in adequate amount. It was natural, therefore, to find much interest displayed in the researches of Coleman and Shaffer[3] showing that by the use of diets of high fuel value, especially when rich in carbohydrates, it was possible to diminish and even to prevent the febrile loss of body protein which on previous diets has been so characteristic of the disease.

The interval of several years has permitted the accumulation of clinical experience regarding the "high-calorie diet" advocated by Coleman; and he has lately published a most interesting report on the subject.[4] The broad conclusion is drawn from these data that "there is probably no infective disease, except those which affect the alimentary tract locally, which is benefited by partial or complete starvation." Recent nutrition studies strongly suggest that metabolism in typhoid fever follows normal laws. What, then, are the objections to the more liberal feeding? According to Coleman they relate to the ability of patients to digest and absorb the amounts of food recommended. A practical illustration of what these mean is given by the following simple 3,000 calorie diet, furnishing eight feedings per day: milk 1½ quarts, cream 1 pint, milk-sugar 8 ounces. In view of the fact that, according to the experimental data furnished by Coleman, the digestive capacity of typhoid patients is surprisingly good, the objections raised do not hold so long as no patient is given more food than he requires or is capable of utilizing. The contra-indications are characteristic and the individual needs must be studied in every case. This is, after all, the little-appreciated secret to success in all dietotherapy.

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[1] McCrae: Osler's Modern Medicine, 1907, ii, 211.

[2] Grafe: Deutsch. Arch. f. klin. Med., 1911, ci, 209.

[3] Arch. Int. Med., 1909, iv, 538; The Journal A. M. A., 1909, liii, 1145.

[4] Coleman: The High Calorie Diet in Typhoid Fever, Am. Jour. Med. Sc., 1912, cxliii, 77; abstr. in The Journal A. M. A., Jan. 20, 1912, p. 224.

Coleman clearly states that there is no reason to think that the high-calorie diet has any influence on the duration of the febrile stage of typhoid fever, but there is strong evidence that in the cases observed it modified the course of the disease favorably, shortened convalescence and reduced mortality. His own conclusions may be summarized in this statement: The clinical guides to the food requirement are the weight of the patient and the state of his appetite. A patient who is losing weight should be given more food if he can digest and absorb it. A patient who is hungry should be given sufficient food to appease his appetite. In the early stage of severe cases it is always difficult to give more than 3,000 calories a day; in the steep-curve period and convalescence, patients readily take more. If any article of food causes persistent disturbances the quantity should be diminished or the food stopped; if he cannot meet his requirement, the patient should be given all that he can digest and absorb. Carbohydrates should furnish the bulk of the energy. The daily protein ration should not exceed 95 grams. Clinical evidence points to the utilization of much fat with benefit.

Elaborate experimental studies like the foregoing are a credit to American medical science. They may be charged with the flavor of radicalism, but they can no longer be overlooked. Indeed things move along so rapidly now-a-days that people who say "It can't be done" are interrupted by somebody doing it.

UNIQUE FOOD PRESERVATION

In commenting on the ethics of sophisticating foods a well-known American agricultural chemist was wont to remark that although the addition of carrot color to butter is manifestly wrong, yet when carrots are fed in order to improve the color of the milk fat the viewpoint is altered; for this now involves adulteration with the connivance of the cow. A similar complication may arise in connection with new experiments by Dr. Oscar Riddle.

Bearing in mind the familiar fact that certain substances which are not readily oxidized or destroyed in the body may reappear in the secretions, such as milk, and in the eggs of animals, he has attempted to ascertain whether compounds exhibiting a preservative action are eliminated in this manner. Physiologically this question is of interest in relation to the permeability of the ovarian egg-membranes and the passage of substances from the blood through both follicular and vitelline membranes. The transportation of the fat-soluble dye Sudan III into the yolk of the hen's egg can easily be demonstrated, the coloring-matter appearing as rings of pink in a cross-section of the egg of a hen which has received the dye. Such pigments, insoluble in water, travel dissolved in fat in the organism, being deposited with it in characteristic locations such as adipose tissue or egg yolk, or being excreted with the fat of milk or dissolved in the special solvents of the bile.[1] In other words, compounds which are comparatively inert and not destroyed in the body may tend to find a suitable solvent and thus travel from place to place until eliminated in some way.

The migrations of hexamethylenamin are well known, for they form the basis for the rational use of this antiseptic drug internally in a variety of infectious conditions. The compound is known to reach the various lymphs of the body, such as the cerebrospinal fluid, and to be excreted in the bile and urine. The efficiency of hexamethylenamin is assumed to depend on the ready formation of formaldehyd therefrom. Riddle has found that the compound can permeate the egg-membranes of the fowl when it is fed to laying hens.[2] It undergoes decomposition in the eggs in which it is deposited and acts as a preservative, so that the time which ordinarily intervenes between the fresh and the unpalatable egg is lengthened. Here, then, is exemplified the "natural" production of eggs "capable of maintaining themselves against the ravages of time and the decomposing influence of temperature"!

Other preservatives, sodium salicylate and sodium benzoate, were similarly tested by feeding to hens. Their presence could not be detected chemically in the eggs; but it must be recalled that these compounds enter into new combinations in the organism and may reappear in some masked form. Riddle has obtained some evidence, though it is scarcely conclusive, that the eggs of hens thus dosed also withstand summer temperature better than do untreated control eggs.

Thus hath Science spoken; as for the revelations, the investigator declares: "To some veteran doubters it may seem that the triumph of the experiment would bring no blessings whatever; and some there may be who would even assert that its success and utilization really but spells new calamity to egg-users. We do not know; we repose in our innocent intentions, in our wonder and in our questions."

THE FINAL REPORT ON THE WILEY INVESTIGATION

The "Wiley investigation" is completed and the committee which conducted it — technically known as the Committee on Expenditures of the Department of Agriculture — has submitted its report to Congress. The public long ago exonerated Dr. Wiley, before even President Taft's letter to Secretary Wilson, dealing with the same problem, did so. Still it is worth while briefly to recall the salient points of the inquiry. The investigation was instituted because of an alleged conspiracy between Dr. H. H. Rusby on the one hand and Drs. Wiley, Kebler and Bigelow on the other, by which Dr. Rusby was to get a higher rate of compensation for his services than the law allowed. The committee heard the evidence and decided that there was no conspiracy. As their report states:

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[1] Mendel and Daniels: The Behavior of Fat-Soluble Dyes in the Organism, Proc. Soc. Exper. Biol. and Med., 1911, viii, 126.

[2] Riddle: The Permeability of the Ovarian Egg-Membranes of the Fowl, Science, Dec. 22, 1911, p. 887.

> "We therefore find from the evidence adduced that the charges of conspiracy have not been established, but, on the contrary, that the accused officials were actuated throughout solely by a desire to procure for the Bureau of Chemistry an efficient assistant in the person of Dr. H. H. Rusby under terms and conditions which those officials believed to be in entire accord with the law, regulations, and practice of the Department of Agriculture."

It will be remembered that President Taft, in his letter to Secretary Wilson, discussed the disadvantages to which the government was subjected by being strictly limited in the amount which it could pay experts who were to appear in its behalf. As the President said, these limitations "are of doubtful legislative policy." The committee agrees that the government should not be so hampered, but it points out that the intolerable situation that at present exists "is not a result of a legislative policy, but arises from an executive order issued by Secretary Wilson." The executive order referred to is the one in which Mr. Wilson gave Solicitor McCabe the power of "fixing the compensation of the men after they have been chosen by Dr. Wiley," and thus practically put McCabe in control of Dr. Wiley's department. The committee recommends the abolition of this method of regulating fees and compensation and expresses the opinion that Congress should enact laws to deal effectively with the situation.

The criticism of Secretary Wilson — which was expected, and deserved—does not materialize. This may have been due to the desire on the part of the committee to save the feelings of an old man who, while having done valuable work in the past, has outgrown his usefulness in government service. Or, more likely the softening of the report is due to political expediency which the nearness of a presidential campaign has engendered. At any rate, the committee charges Wilson with nothing more serious than a fundamental "misconstruction of the law":

> "From the beginning, however, the honorable secretary has apparently assumed that his duties in the proper enforcement of the pure food law are judicial in character, whereas in fact they are wholly administrative and ministerial."

As The Journal has often pointed out, Secretary Wilson's attitude has always been: When in doubt, favor the manufacturer. Dr. Wiley, on the other hand, has taken the diametrically opposite view, namely: When in doubt, favor the public. It was Dr. Wiley who suggested that, as there is more than a reasonable question about the wholesomeness of sodium benzoate, saccharin, sulphites, etc., they should not be permitted in the people's foodstuffs until it has been proved beyond a doubt that these things are harmless. Secretary Wilson, however, gave permission that all of these drugs might be used in foods until further work had been done to determine their harmlessness or harmfulness. In this connection, the following, by the committee, is interesting:

> "Congress, in enacting this law, did not provide that its provisions shall remain in abeyance until we shall have completed any given course of scientific research."

The legal status of the Referee Board is discussed at some length. Attention is called to the fact that Assistant Attorney-General Fowler prepared a formal opinion in which he held that there was no legal authority for the creation and maintenance of the Referee Board. The Fowler opinion was not adopted, and McCabe, who was made solicitor of the Department of Agriculture, by his chum's father, Secretary Wilson, was called on to prepare a memorandum, giving the legal status of the Referee Board. McCabe's memorandum held that the board was entirely legal. After considering these two opinions, together with the opinion of Attorney-General Wickersham and the provision of section 161 of the revised statutes, the committee concludes:

> "Your committee is of the opinion that there may be authority under the law for the creation and maintenance of such board to aid the secretary in the discharge of any duty enjoined on him in his official capacity, but raises the question as to its legality on the sole ground that the determination of the general questions submitted by the secretary to the Referee Board is not enjoined upon him under the law."

The committee further questions "the necessity, wisdom, or sound policy of maintaining such a board at a heavy expense to the government, when the work done by it is largely a duplication of work performed, or which might be performed, by the Bureau of Chemistry." The committee's opinion of the legal status of the findings of the Referee Board are thus expressed:

> "The functions of this board as at present constituted are purely advisory. Their decisions have no legal or binding effect upon anybody. The secretary can follow or ignore their recommendations as he sees fit."

In spite of the fact that the members of the Referee Board "are merely the personal advisers of the secretary on the scientific questions submitted to them for determination," the committee says:

> "The honorable Secretary of Agriculture seems to have regarded the findings of this board as conclusive in all cases, over the opinions and the findings of the Bureau of Chemistry, the tribunal which by express terms of statute is vested with authority to determine the questions of adulteration and misbranding within the meaning of the act."

Attention is called to a further anomaly, namely, that the Bureau of Chemistry has been prevented by Secretary Wilson "from examining any specimens of foods and drugs under any general subject which is submitted to the Referee Board." This, the committee states, has resulted in another remarkable situation:

> "That under the practice of the department the decisions of the Bureau of Chemistry, if in opposition to the findings and opinions of the Referee Board, cannot be referred to

> the courts and thus permit a judicial decision to be made, as is comprehended under the plain provision of the law. It would thus happen that, if the Bureau of Chemistry were right and the Referee Board were in error, violation of the law would receive protection through the supposed enforcement of the law; because the effect of such a policy is to give this advisory board, created by executive order, paramount authority over the Bureau of Chemistry and lodges in the personal advisers of the secretary the power to annul the decisions of the bureau within the Department of Agriculture, which was created by law."

It is not surprising that the committee, having arrived at these conclusions, states that it "cannot recommend its [the Referee Board's] further maintenance under its present status." In short, it is the opinion of the committee that:

> "A board exercising functions such as are exercised by the Referee Board, its decisions being given such far-reaching effects by the honorable secretary, ought not to rest on the authority of an executive order. If such board be deemed necessary or advisable in the proper administration of the pure food law, its authority should be expressly conferred, its scope and jurisdiction clearly defined, and the effect of its decisions declared, by act of Congress."

The report closes with the statement that while the members of the committee are unanimous in their conclusions "they are not in full accord as to all of the reasons by which these conclusions are reached."

Current Comment

THE PROPOSED ROYAL COMMISSION ON QUACKERY —A PROPHECY

There seems to be little doubt that the propaganda against "patent medicines" in Great Britain has reached the place where a royal commission will be appointed to investigate the nostrum evil. This investigation will doubtless prove interesting and instructive and may be counted on to throw much light into dark places. While the recommendation for the appointment of such a commission has been fathered by the British medical profession, we venture to predict that if the investigation is broad and impartial, the medical profession of Great Britain will not be held entirely blameless for the very evil it deplores. While the British Medical Association has done splendid work in the last few years in exposing fraudulent "patent medicines," it has, unlike the American Medical Association, neglected to clean its own skirts first. No attempt has been made, so far as can be seen, to purge the British medical profession of the innumerable fraudulent proprietary remedies with which it is afflicted. American and European nostrums of the "ethical proprietary" type hold high revel in the advertising pages of high-class medical journals in Great Britain.' Even advertisements of the notorious Antikamnia, which practically all American medical journals of any standing — the esteemed New York *Medical Record* always excepted — have for years debarred from their pages, is still carried by such English journals as the *Practitioner*, the *Lancet* and the *Medical Press and Circular!* It is perfectly evident that the "patent-medicine" men's organization in Great Britain will attempt to defend its members, and one of the first questions that will be raised is: Wherein is it any worse for the public to buy medicinal preparations about which it knows nothing, than it is for medical men to prescribe medicinal preparations about whose composition they know nothing? There can be only one answer to this question and we believe not only that the British medical profession will find difficulty in justifying its position on the nostrum question, but also that this very difficulty will do much to offset the good that such a royal commission might otherwise accomplish.

THE NEW ORLEANS SCHOOL OF TROPICAL MEDICINE AND HYGIENE

Beginning with the September term, 1911, the medical department of Tulane University inaugurated laboratory and systematic courses in tropical medicine, hygiene and preventive medicine. It is the intention of the university to develop this feature of the medical school and obtain a sufficient endowment to broaden it into a full school of tropical medicine and hygiene, embracing all the divisions of such an institution. New Orleans is peculiarly well located for the establishment of such a school, being a semitropical city in which numerous cases of the semitropical and tropical diseases appear and being in close proximity to and in the line of travel from the Central and South American countries. The opening of the Panama Canal with its traffic from the south and the east will also doubtless furnish much material and opportunity for the study of tropical diseases. Already the university has developed some efficient men in the study of these diseases, notably in leprosy, hookworm, pellagra and malaria, Bass, in his recent study and cultivation of the plasmodium of malaria, having opened up a new avenue in the study of tropical protozoan diseases. The enterprise and scientific foresight of Tulane University in establishing the first school of tropical medicine in America should be encouraged by a sufficient endowment to enable it to carry on the work with the greatest effectiveness. With the nearness of the opening of the Panama Canal and the consequent stimulation of travel to and from tropical countries the time is particularly opportune for the establishment of such a school.

THE AUTOMOBILE NUMBER

Manuscripts and illustrations are being received for our Automobile Number. In addition to the topics suggested in our comment two weeks ago,[1] various correspondents have asked that the following points be taken up: the efficiency of the various self-starting devices; the use of the automobile during the winter; means of increasing winter comfort by wind shields, removable tops, foot-warmers, etc.; a shop for home repairs by the physician himself, to save the large expense of having repairs made at public garages and the repair shops; the best kind of a car for hilly, rough roads; the best means of tire-economy; the physician's part in a good-roads movement, and other practical topics. As to illustrations, we desire those which — in addition to a clear view of the physician and his motor car—show his house or garage or family or office, the local medical society's library building or laboratory (if the society is so fortunate), some notable bit of local scenery, or some other feature that will add interest. Drawings of garages, repairs, accessories, tools, etc., which the physician has devised and which will be of aid to other physicians will also be welcomed. We shall be glad to hear promptly from all who intend to contribute to the Automobile Number, so that space may be saved for them.

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[1] The Journal A. M. A., Jan. 20, 1912, p. 198.

JUST ONE EXAMPLE

Such newspapers as are not above sharing the blood-money of the "consumption cure" frauds are carrying an advertisement that makes the following claim:

"DUFFY'S PURE MALT WHISKEY CURES CONSUMPTION."

In addition to this cruel lie are others equally false, but not so cruel, such as: "The greatest known heart tonic," "It stimulates the blood," "Cures asthma." What do you think of newspapers that will sell advertising space to such a fraud as the Duffy Malt Whiskey concern? We know the answer. Let us ask another. What do you think of medical journals that will carry advertisements for the same fraud? We are not so sure of the answer. The following are some of the publications which — theoretically — are supposed to represent the medical profession and which yet carry the Duffy's Malt Whiskey advertisement:

Buffalo Medical Journal
Massachusetts Medical Journal
Medical Standard
Medical Summary
Medical Brief

Mere advertising sheets that are a disgrace to the profession, do you say? Agreed. And yet not wholly agreed, either; for at least one of these—the *Buffalo Medical Journal* — has potentialities for better things and its reading pages are to be commended. In general, however, the criticism holds, and these journals are kept alive because physicians patronize them! To the general public one medical journal seems very much like any other medical journal. Is it any wonder that the decent element in the profession has difficulty in persuading law-makers that its fight against nostrums is in the public interest?

SHERLOCK HOLMES ON THE OWEN BILL

Sherlock Holmes, as portrayed by his gifted creator, Dr. A. Conan Doyle, was able to accomplish wonders in deduction by elimination. In solving a problem, he considered all possible explanations until he had eliminated all but one. The remaining explanation must be the correct one. Let us apply this process to the opposition to a national department of health. The National League for Medical Freedom was incorporated, according to its own statement, about May 1, 1910. The public first knew of its existence on May 18, 1910, when a large display advertisement appeared simultaneously in the leading newspapers of the entire country. At this time, the organization could not have had a large membership, as it was only two weeks old; indeed, it must have been entirely unknown to the great mass of the public. Yet the initial advertising contract, as estimated by one of the leading advertising agencies, amounted to nearly $50,000 ($49,410 are the exact figures). Who contributed or advanced this large sum? Obviously, some person or persons willing to pay $50,000 to see the Owen bill defeated. Then there must be something in the Owen bill that some persons were willing to pay $50,000 to prevent. You can fool a mob or a sect, by vague talk about "personal liberty," "trusts," "medical tyranny" and such bugaboos, but when a group of business men put up $50,000 they have a sound reason for it. Now the only thing the Owen bill does is to transfer three existing bureaus to a new department. These bureaus are the Public Health and Marine-Hospital Service from the Treasury Department; the Division of Vital Statistics from the Bureau of the Census and the Bureau of Chemistry from the Department of Agriculture. Any one can verify this by reading the bill. The first two bureaus could have no great influence on business, no matter in what department they were located. Their transfer would not menace any business interests. Therefore, the only remaining explanation for the opposition is to be found in the transfer of the Bureau of Chemistry, now in the Department of Agriculture, to the proposed Department of Health. But why should business interests be willing to pay $50,000 to keep the Bureau of Chemistry in the Department of Agriculture? Because Dr. Wiley, who is head of the bureau, might be controlled or hampered in the Department of Agriculture, but could not and would not be hampered in a Department of Health. So the "patent-medicine" and adulterated food manufacturers and their advertising agents, who, hiding behind the misled and misinformed Christian Scientists, sectarians and faddists, are pulling the strings, were willing to contribute $50,000 to keep Wiley where he is. The real reason for the opposition to the Owen bill is that its passage will untie Wiley's hands. "Elemental, my dear Watson, elemental."

ARE CHILDREN WORTH SAVING?

Are the children of the United States worth one-eighth as much as the bugs? Hon. Andrew J. Peters, a member of Congress from Massachusetts, asked this rather startling question at Louisville last Sunday at a mass-meeting on child labor. Mr. Peters showed that the Bureau of Animal Industry costs the country $1,654,750 a year, and that the Bureau of Plant Industry costs $2,051,686. The proposed children's bureau would cost $29,440 and would investigate child labor, infant mortality and other important phases of child conservation. It is being opposed, of course, by some manufacturers who want to employ babies in cotton-mills, coal-mines and other places admirably adapted for the growth of mind and body and the development of sturdy American men and women. In some quarters the investigation of child labor is regarded as an unwarranted invasion of personal liberty. Certainly! Public schools were so regarded in their early days.

No doubt we shall soon have a National League for Juvenile Freedom, secretly financed by the coal and cotton barons, and demanding for the child the right to labor when and where it pleases. In the meantime, if Congress thinks the baby crop is worth as much or one-tenth as much as the fruit crop, a children's bureau should be established without delay.

FARM WELFARE AND HUMAN WELFARE

Sixty-two railroad trains, operated by officers of experiment stations of the Department of Agriculture, traveled over 35,000 miles during 1911. Public meetings held by these officers were attended by nearly 1,000,000 persons. Traveling schools to the number of 149 were attended by 40,000 farmers and farmers' boys. Farmers' institutes held 15,000 sessions, attended by 2,000,000 people. These interesting facts and many more appear in the annual report of the director of this department to Secretary Wilson, recently made public. A summary of this report appears in a current newspaper, and, by a peculiar coincidence, in the adjoining column is a summary of the mortality report of the Census Bureau for 1910, issued about the same time. From this it appears that, in the "registration area," tuberculosis killed 86,309 persons in 1910, that 805,412 persons died in the same territory, and that in about one-half of the United States no effort is made to find out how many people die each year, to say nothing of running special trains and holding public meetings or schools to teach the people how to live.

HONORS ARE EVEN

We learn from our British contemporaries that among those who shared in the honors distributed on the occasion of the Durbar ceremony were two British "patent-medicine" exploiters, who have made their millions from the gullible sick, and who have now received the order of knighthood from King George. The occasion seems one that is pregnant with opportunities for sarcastic comment, at the expense of royalty and monarchical governments. But then we unwillingly remember that genial personage whose relationship to the Duffy's Malt Whiskey outfit and the canning company that sold short-weight products has often been the subject of comment—the gentleman whom a free people elected to the second highest office it has to give, namely the vice-presidency of the United States. After which, it seems, the less said the better.

EPIDEMIC CEREBROSPINAL MENINGITIS

The appearance of cerebrospinal meningitis in serious epidemic form in Texas[1] and sporadically in numerous places in other states has intensified interest in this dangerous disease. In the last issue of the Public Health Reports is a timely paper by Dr. W. H. Frost[2] which covers the history, the etiology, the diagnosis by lumbar puncture, the epidemiology, the prophylaxis and the treatment, and sets forth concisely our present knowledge of this disease. Through the studies of recent years four vital points concerning this disease have been practically settled, namely, the identification of the causative organism, the diagnosis by examination of the spinal fluid, its effective treatment by the antimeningitis serum and the location of the infective agent on the nasopharyngeal mucosa of those afflicted as well as on that of many healthy carriers. The determination of this latter point, however, has not aided much in prophylaxis or in the establishment of efficient isolation or quarantine measures to prevent the epidemic spread of the disease. It has been stated by Flügge that healthy carriers are ten times more numerous than recognized cases of meningitis, and are more than ten times as prolific as a source of infection for others. It will thus be seen that a determination of all carriers by examination, or even isolation of all associates of every recognized case, would be a most difficult matter, and, as Frost says, the rigid quarantine of either houses or communities on account of cerebrospinal meningitis seems ordinarily unjustified. Bacteriologic examination to discover all carriers would be impracticable, and if this could be carried out they would be difficult of control. There are, however, some general measures that will undoubtedly aid in preventing the spread of this disease and among them are the early diagnosis and isolation of suspected cases and prompt serum treatment, perhaps in special hospitals during epidemics. The following of proper hygienic regulations by individuals no doubt will aid. The infective agent is found only in human beings and is believed not to survive long after separation from the host. Notwithstanding this fact, however, its somewhat erratic spread during epidemics is still much of a mystery. The article by Frost is such a complete, though brief, presentation of our present knowledge of this disease that it should be of extreme interest to physicians at this juncture.

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[1] Department of Medical News, under Texas, THE JOURNAL A. M. A., Jan. 20 and 27, 1912.

[2] Pub. Health Rep., Jan. 26, 1912.

Medical News

ALABAMA

Personal.—Dr. Floyd G. Donehoo, Oneonta, is reported to be critically ill.——Dr. John W. Watts, Birmingham, has been appointed physician to the State Convict Camp at Flat Top, vice Dr. George Hogan, Birmingham, resigned.

New Officers.—The following elections of officers in county medical societies are announced: St. Clair County, at Odenville, recently, president, Dr. Jesse O. Gray, Pell City; vice-president, Dr. William B. Johnson, and secretary and treasurer, Dr. James P. Turner, Cropwell.——Coosa County, at Rockford, December 12, president, Dr. Julius Jones (reelected).——Bibb County, at Centerville, December 13, president, Dr. M. B. Williams, Centerville; vice-president, Dr. M. C. Thomas, Belle Ellen; secretary and treasurer, Dr. James F. Alexander, Blockton.——Pike County, at Troy, December 14, president, Dr. Lee Roy Boyd, Troy; vice-president, Dr. Huey Watson, Banks, and secretary, Dr. Homer S. Stallings, Goshen.——Lauderdale County, at Florence, recently, president, Dr. Louis W. DesPrez; vice-president, Dr. E. Burke Hardin, and secretary and treasurer, Robert M. Davis, all of Florence.——Montgomery County, at Montgomery, December 9, president, Dr. Robert N. Pitts; vice-president, Dr. Philip B. Moss, and secretary and treasurer, Dr. Paul S. Mertins, all of Montgomery.——Cullman County, at Cullman, president and treasurer, Dr. Gottlieb Hartung, Cullman; vice-president, Dr. Luther Hays, Cullman, and secretary, Dr. James W. Cullpepper, Cranehill.

——Calhoun County, at Anniston, December 5, president, Dr. Erastus T. Barker, McFall, and vice-president, Dr. Samuel J. McCurry, Anniston.

CALIFORNIA

New Instructors at Stanford.—The following additions to the faculty of the Medical School of the Stanford University were announced: Drs. Rufus L. Rigdon and Albert B. McKee, professors of clinical surgery; Dr. Emanuel C. Fleischner, instructor in pediatrics; Drs. Herbert H. Yerington and Florence M. Holsclaw, assistants in pediatrics; Dr. Morton R. Gibbons, instructor in medicine; Dr. W. B. Boardman, instructor in the medical clinic, and Drs. F. H. Adler and C. E. Hyde, assistants in the medical clinic.

The Hitchcock Lectures.—Dr. Richard Mills Pearce, professor of research medicine in the University of Pennsylvania, delivered a course of five lectures on the Hitchcock Foundation, on the evenings of January 22-26, inclusive, at the University of California, Berkeley. The general subject of the series was "Research in Medicine" and the individual lectures were on the following subjects: "Antiquity to 1800. The Efforts of Isolated Investigators"; "The Development of Laboratories for the Medical Sciences"; "Pasteur and the Rise of Bacteriology"; "Present Day Methods and Problems," and "Medical Research in American Universities; Present Facilities, Needs and Opportunities."

Personal.—Dr. Thomas W. Huntington, San Francisco, president of the Medical Society of the State of California was the guest of honor at the dinner of the San Diego County Medical Society, January 18.——Dr. Frederick W. Browning, Hayward, has been appointed president of the committee of public health standards of California.——Dr. James W. Clark, Santa Rosa, has been appointed one of the managers of the Napa State Hospital.——Dr. Elmer E. Stone, Napa, medical superintendent of the Napa State Hospital, has resigned.——Dr. William E. Alumbaugh, Napa, is reported to be seriously ill at his home.——Dr. Harold A. Thomson has been elected city bacteriologist of San Diego.

ILLINOIS

Honor Old Practitioner.—The annual banquet of the Peoria City Medical Society was held in the Creve Coeur Club, Peoria, January 23. The guest of honor was Dr. Otho B. Will.

Oldest Physicians in Illinois.—The State Board of Health in its last bulletin devotes considerable space to the aged physicians of the state, and states that Dr. F. R. Pitner, Jacksonville, is the oldest living practitioner. It also gives a list of one other physician above 90; of nineteen above 80, and of six above 75 years of age; and also a list of three who graduated prior to 1850, and of thirty-three who graduated in the decade between 1851 and 1860.

Hospital News.—At the annual election of the Oak Park Hospital, January 20, Dr. William F. Scott, Maywood, was elected president; Dr. Anthony Rud, Austin, vice-president, and Dr. Arthur Loewy, Oak Park, secretary and treasurer.——The Sycamore Hospital has been thoroughly renovated and refurnished and is now ready to receive patients.——Bids have been asked for on the construction of Dr. Alpheus A. Bondurant's Sanitarium, Cairo.——The East St. Louis Board of Health has passed resolutions favoring a municipal hospital, with ambulance service.

Personal.—Dr. Alton J. Higgins, Huntley, who has been ill in St. Joseph's Hospital, Elgin, on account of hemorrhage following the extraction of a tooth, has recovered.——Dr. Henry Reis, Jr., Belleville, had a narrow escape from drowning, January 19, in a cistern in the basement of the building in which his office is located.——Dr. Frank K. Hill, Rockford, has recovered from an attack of inflammatory rheumatism.——Dr. Dwight E. Burlingame, Elgin, who has been seriously ill, is reported to be improving.——Dr. Frank J. Otis, temporary superintendent of the Tri-City Sanitarium, assumed charge of the institution, February 1, and has located in Moline.——Dr. Elizabeth Matthews, Springfield, has returned from Europe.——Dr. Elwood A. Kingston, Lockport, is in the Silver Cross Hospital, Joliet, suffering from an infected wound of the arm.——Dr. Ralph P. Grimm, Glasford, who was operated on for appendicitis several weeks ago, was again operated on in the Canton Hospital recently on account of adhesions.

New Officers.—Mason County Medical Society, at Mason City, January 8: president, Dr. Edward W. Paul, Forest City, and secretary-treasurer, Dr. Frederick F. Garrison, Havana (reelected).—Jo Daviess County Medical Society, at Warren, January 10: president, Dr. William H. Miller, Galena, and secretary-treasurer, Dr. Domer G. Smith, Elizabeth.——Winnebago County Medical Society, at Rockford, January 9: president, Dr. Daniel Lichty, and secretary-treasurer, Dr. Frank W. Hanford, all of Rockford.——St. Clair County Medical Society, at Belleville, January 8: president, Dr. Frank E. Auten, and secretary, Dr. Buenaventura H. Portuondo, both of Belleville.——Sangamon County Medical Society, at Springfield, January 8: president, Dr. Samuel E. Munson, and secretary-treasurer, Dr. Harry C. Blankmeyer, both of Springfield.——Coles County Medical Society, at Charleston, January 2: president, Dr. Robert H. Craig, Charleston, and secretary-treasurer, Dr. James G. Baker, Mattoon.——Aurora Medical Association: president, Dr. D. De Les Culver, and secretary-treasurer, Dr. G. B. Schwatgen.

Chicago

The Travelers.—Drs. D'Orsay Hecht and Edmund J. Doering, Dr. and Mrs. Fenton B. Turck and Dr. and Mrs. Albert H. Hoy have sailed for Europe.——Dr. and Mrs. James A. Harvey and Dr. Elmer L. Kenyon have returned from Europe.——Dr. Jacob Frank has sailed for South America.

Want Million Dollar Endowment.—The trustees of Wesley Hospital have inaugurated plans for increasing the endowment of Wesley Hospital to $1,000,000. This campaign is to be conducted in connection with the twenty-fifth anniversary of the granting of the charter of the hospital in October, 1888.

More Land for Medical School.—Northwestern University has concluded a series of purchases on Dearborn Street between Twenty-Fourth and Twenty-Fifth streets, by the acquisition of a lot 48 by 106 feet, partially improved, for $15,000. It has acquired a total of 624 feet frontage, at a cost of about $160,000.

Personal.—Dr. Waldemar Koch is reported to be seriously ill in Wesley Hospital.——Dr. William D. Clark, an intern in St. Luke's Hospital, was held up and robbed January 21.——Dr. Egil T. Olsen, medical examiner in charge attached to the Civil Service Commission, has been appointed temporary head of the bureau of hospitals, baths and lodging houses.——Drs. Edwin Pynchon and J. Frank McKinley are both suffering from Colles fractures.——Dr. and Mrs. Daniel A. K. Steele sail from San Francisco, February 6, on a trip round the world.

Contagious Disease Hospital Soon to Open.—The "Annie W. Durand Hospital, in Charge of the Medical Institute of Infectious Diseases," at the corner of York and Wood streets, is now under construction and will be ready for occupancy in the early fall, with an endowment and full equipment for forty-five patients. The building is to be a three-story structure with a basement and sun parlor. It is stipulated in the agreement as well as in the donation of the two funds by which this hospital has been constructed and is endowed, that there are to be no pay patients in the institution.

The Chicago Tribune-Chicago Medical Society Free Lecture Course.—The *Tribune* has joined with the South Side Branch of the Chicago Medical Society in furtherance of a movement for the enlightenment of the public along the line of general health. Arrangements have been completed whereby a series of free lectures is being given for the benefit and better understanding of those who care to attend. The lectures began February 1 with a lecture by Dr. John M. Dodson at the Lincoln Center, Langley Avenue and Oakwood Boulevard, on "What the State of Illinois Is Not Doing for Children." The succeeding lectures will be held on successive Thursday evenings as follows: "The Prevention of Blindness and the Conservation of Vision;" discussion by Drs. Thomas A. Woodruff, Frank Allport, William H. Wilder, George B. Young and Caroline Hedger and Messrs. D. P. McMillan, R. J. Young and J. R. Cravatt and others, February 8. "Medical Dangers to the Youth of Chicago," by Dr. G. Frank Lydston, February 15. "Occupational Diseases," by Dr. George W. Webster, February 22. "The Relations of the Midwife to the Community," by Dr. Charles E. Paddock, February 29, and "The Infant and What the World is Doing for It," by Dr. Isaac A. Abt, March 7.

NEBRASKA

State Sanatorium Soon to Open.—The Nebraska State Tuberculosis Sanatorium at Kearney is completed, but not yet entirely equipped. It is expected that it will be ready to receive patients in a few days.

County Medical Society Wants Club.—At the recent meeting of the Lancaster County Medical Association in Lincoln, the members expressed their preference for a club with an accompanying library, provided that suitable accommodations could be obtained. The State University is no longer able to give space to the library of the State Medical Association.

Vital Statistics.—The State Board of Health reports that during the year 11,499 deaths and 26,819 births were recorded. Of the deceased, 222 were caused by accident; 142 by suicide; 101 by railroad casualties; forty-eight by firearms and forty-two by drowning. The chief death causes were; infantile diseases, 1,843; pneumonia, 1,248, and heart disease, 1,110.

New Officers.—Elkhorn Valley Medical Association, at Norfolk, January 17: president, Dr. Arthur C. Stokes, Omaha; secretary, Dr. Harry L. Wells, West Point.——York County Medical Society, at York, January 6: president, Dr. Jerome C. McKinley, and secretary-treasurer, Dr. James N. Plumb, both of York.——Hall County Medical Society, at Grand Island, January 3: president, Dr. Leopold Phelan (reelected), and secretary-treasurer, Dr. William T. Engleman, both of Grand Island.——The Nebraska State Medical Association has elected Dr. Joseph M. Aikin, Omaha, secretary, vice Dr. Alonzo D. Wilkinson, Lincoln, deceased.——Lincoln County Medical Society, at North Platte: president, Dr. Fyfield H. Longley, and secretary, Dr. William W. Saddler, Hershey.——Nuckolls County Medical Association, at Nelson, January 19: president, Dr. Edward D. Been, Hardy, and secretary, Dr. Frank Mitchell.

Personal.—Dr. Otto E. Longacre, Loup City, who was operated on recently in St. Francis' Hospital, Grand Island, has recovered.——Dr. Thomas C. Boler, Omaha, suffered severe contusions of the shoulders and head in a collision between a taxicab, a coalwagon and a street car, January 16.——A banquet was given by the medical profession of South Omaha to Dr. Clinton E. Sapp, January 13, who is soon to leave the city and locate in San Diego, Cal.——Dr. E. P. W. Chaloupka, South Omaha, has been elected medical director of the Western Indemnity Company.——Dr. Henry D. Boyden, Grand Island, is reported to be seriously ill in the Clarkson Hospital, Omaha.——Dr. Godfrey C. Fritchel, Grand Island, has been appointed local surgeon for the Burlington System.——Dr. Thomas Kelly, South Omaha, was stricken with cerebral hemorrhage recently.——Dr. Arthur F. Conery, Neligh, who slipped and fell January 1, sustaining serious internal injuries, is reported to be improving.

NEW YORK

Personal.—Dr. Walter G. Ryan, assistant superintendent of the Willard State Hospital, has been appointed medical inspector of public and private institutions for the insane.——Dr. Edward S. Willard has been reappointed health officer of Watertown.

University to Build Dispensary.—The board of trustees of Syracuse University, at its mid-winter session, January 16, voted to establish a dispensary for the use of the medical college, to cost $75,000. The dean, Dr. John L. Heffron, Syracuse, was named as chairman of the committee to formulate plans and he will name three members of the faculty of the College of Medicine to act with him.

Civil Service Examinations.—The State Civil Service Commission will hold examinations on February 24, for the following positions: Bacteriologist, female, to the Health Officer of the Port of New York; Inspector, State Board of Pharmacy; Physician, Homeopathic and Regular; Veterinarian and Physician, Erie County Lodging House. Detailed information and application blanks may be had by applying to the State Civil Service Commission, Albany, N. Y.

Clash on Vaccination.—As the result of a clash between the local board of health and the board of education of Olean, N. Y., 1,400 children have returned to school without being vaccinated. The board of health ordered all children vaccinated while the board of education told them they might return whether vaccinated or not. As small-pox is prevalent in that section the board of health claims that the children are being exposed to the disease, but waives its order, under protest, until the legislature shall clear up this conflict in the law.

New York City

Harvey Society Lecture.—The eighth lecture of the present course of Harvey Society lectures given February 3 at the New York Academy of Medicine by Prof. T. W. Richards of Harvard University is on "The Relations of Modern Chemistry to Medicine."

New Officers.—The Flatbush Medical Society was organized in Brooklyn, January 12, and the following officers were elected: president, Dr. Burt D. Harrington, and secretary, Dr. William H. Bayles.——Brooklyn Medical Association at its annual meeting, January 10, elected Dr. George F. Maddock, president, and Dr. Adolph Wieber, corresponding secretary.

McKinley Stamps on Sale.—The William McKinley Memorial Hospital League has put stamps on sale at 1 cent apiece which are to be used after the fashion of the Red Cross seals. It is hoped by this means to eventually raise $7,000,000, half of which will be used for a McKinley Memorial Hospital in New York City and half for a national campaign against tuberculosis.

Vanderbilt Home Opened.—The group of apartment buildings erected by Mrs. W. K. Vanderbilt and rented for a nominal sum, intended for persons suffering from incipient tuberculosis, have been opened for public inspection. The buildings will accommodate 383 families in flats of from two to five rooms. The buildings are provided with roof gardens and sleeping-porches.

Health Board Bars Wood Alcohol.—At its meeting on January 23, the board of health adopted a new section of the sanitary code which prohibits the sale or use of wood alcohol in any food or drink or in any preparation or mixture intended for internal or external use by man. This amendment has as its aim not only the prevention of the use of wood alcohol in foods but its use in hair tonics, face lotions and other external applications.

Dr. Wiley Dined.—The evening of January 23 was "Doctors' Evening" at the University Club in Brooklyn and Dr. Harvey W. Wiley was the guest of honor. Among the other speakers were Dr. William M. Polk, dean of the Cornell Medical College; Dr. Eugene H. Porter, formerly state health commissioner; Dr. Edward E. Hicks, Brooklyn; Dr. Elias H. Bartley, Brooklyn, of the Kings County Medical College, and Zachary T. Emery, formerly health commissioner of Brooklyn.

To Educate Young Mothers.—The statement of physicians that at least 25 per cent. of the babies born on the East Side die as the result of improper feeding or care has led to the organization of a society in connection with the Jewish Maternity Hospital to be known as the "After-Care Circle." They propose to conduct an educational campaign among mothers by employing nurses to visit the various homes for the purpose of instructing the mothers, and where the mothers are ill they will provide medical treatment.

Personal.—Dr. Edward A. Stapleton, Brooklyn, sailed for Europe, January 13.——Dr. Marguerite Darvas, New York City, has been appointed junior medical assistant in the Memorial Hospital, Worcester, Mass.——Dr. Sara Josephine Baker, head of the child hygiene work of the Department of Health who broke down with the work, is reported to be improving.——Dr. Albert Warren Farris, formerly president of the State Commission in Lunacy, has been appointed a resident physician of the Glen Springs, Watkins, and will assume his duties in February.

Social Service and the Hospitals.—At a meeting of social workers and hospital officials held at the New York Academy of Medicine, January 24, plans were formulated for a permanent conference on hospitals and social service in this City. The purpose of the conference is to stimulate the growth of social work departments in all the hospitals and to standardize the work of these departments after they have been established. Dr. John Winters Brannan, president of Bellevue and the Allied Hospitals, was elected permanent chairman of the conference.

Vote Down Vaccination Appropriation.—At a recent meeting of the aldermen of this city the finance committee recommended that $10,000 in special revenue bonds be issued to pay for the employment of special medical officers to visit the schools and tenements and vaccinate children. Alderman Dowling, the Tammany leader, opposed the resolution stating that he "objected to city doctors visiting the homes of the poor and scratching the arms of children in the tenements" and he added that he thought vaccination a fad anyway. The other Tammany men voted with Alderman Dowling and the appropriation could not be raised.

Old Landmark Disappears.—The old Mott Memorial at 64 Madison Avenue, a landmark which has figured in the medical and surgical history of New York City for nearly half a century, was sold at auction February 1. The Memorial was founded in 1866 by the widow of the late Dr. Alexander Mott. It contained mementoes of the life of Dr. Mott and a library of more than 4,000 volumes, exclusively on medical and surgical topics, which were consulted freely by students and physicians. In the will of Mrs. Mott there was a provision that, in the event the property became burdensome, the trustees should sell it. After several years of uncertainty, the Memorial was closed in 1909, and the books, instruments and plates were transferred to the New York Academy of Medicine.

Aids Medical Research.—The New York Academy of Medicine has appointed a committee on public health, hospitals and budget, by the generosity of Mrs. E. H. Harriman. A trained statistician has been employed, who will carry on most of the practical details of the committee's work. Among the duties of the committee are to organize a bureau to collect facts in regard to public health, sanitation and hygiene; to cooperate with all public health activities in the city; to advise the medical profession of current public health conditions; to give authoritative medical opinions on public health matters; to keep in close touch with city health officials; to hold public meetings and to give adequate publicity to the results of its researches.

Milk Tests Show Value of Pasteurization.—Dr. Wm. H. Park, in addressing the meeting of the committee of women's organizations on the milk question, described the results of observations conducted by the Rockefeller Institute for Medical Research as to the comparative health of 500 babies fed on five different qualities of milk. There were 100 babies, each fed on mother's milk, pasteurized milk, certified milk, ordinary dairy milk, or the poorest quality of milk obtained from grocers. The experiments demonstrated beyond question the superiority of mother's milk. The results from pasteurized milk were better than from certified milk, while the danger from the ordinary milk and the poorer qualities was shown in that seven deaths resulted during the summer months among babies fed on the poorer milk as compared with but one death in each of the other three classes.

OKLAHOMA

University Hospital Opened.—The new hospital of the State University School of Medicine, Oklahoma City, was opened with impressive ceremonies, January 17. The institution is the old Rolater Hospital, which has been leased by the state and to which three wings have been added and which has been entirely remodeled. The institution has accommodations for sixty patients.

Personal.—Dr. Joseph B. Rolater, Oklahoma City, in memory of the late Dr. William R. Pryor, New York City, has donated $500 to the New York Polyclinic Medical School and Hospital, and has erected a memorial tablet in the new building of the institution.——The state health employees made a Christmas present of a gold watch to Dr. John C. Mahr, Shawnee, state health commissioner.——Dr. James L. Shuler, Durant, was thrown from an automobile, January 21, dislocating his right shoulder.

New Officers.—Tillman County Medical Association, at Frederick, January 11: president, Dr. Francis E. Rosenberger, Grandfield, and secretary and treasurer, Dr. Lang A. Mitchell, Frederick.——Logan County Medical Association, at Guthrie, January 8: president, Dr. Louis A. Hahn, and secretary-treasurer, Dr. Ralph V. Smith, all of Guthrie.——Central Oklahoma Medical Association, at Enid, January 9: president, Dr. Sylvester N. Mayberry, Enid, and secretary, Dr. Walter M. Jones, Enid.——Washington County Medical Society, at Bartlesville, recently: president, Dr. George W. Woodring, and secretary, Dr. Wilbur E. Rammel, both of Bartlesville.——Oklahoma County Medical Association, at Oklahoma City, January 20: president, Dr. Arthur W. White, and secretary-treasurer, Dr. William R. Bevan, both of Oklahoma City.——First District Medical Society, at Shawnee, January 21: president, Dr. J. Asa Walker, Shawnee, and secretary-treasurer, Dr. William E. Licken, Oklahoma City.——Kay County Medical Society, at Ponca: president, Dr. William W. Lemmon, Nardin, and secretary, Dr. Roy E. Waggoner, Ponca (reelected).——Muskogee County Medical Society, at Muskogee, January 18: president, Dr. Harry T. Ballantine, and secretary-treasurer, Dr. Oscar C. Klass, both of Muskogee.——Grady County Medical Society, at Chickasha: president, Dr. Paul D. Vann, and secretary-treasurer, Dr. Martha J. Bledsoe, both of Chickasha.——Pittsburg County Medical Society, at McAlester: president, Dr. Richard K. Pemberton, Krebs, and secretary-treasurer, Dr. H. Earle Williams, McAlester (reelected.——Garfield County Medical Society, at Enid: president, Dr. Walter H. McKenzie, and secretary-treasurer, Dr. Frederic E. Diemer, both of Enid.

PENNSYLVANIA

New Organ of Medical Society.—The first issue of the *Journal of the Jefferson County Medical Society*, published monthly in the interest of the organized medical profession of the county, made its appearance January, 1912. It is an eight-page journal and contains the program of the meeting, the result of the election of officers, the president's message, synopsis of the papers read at the December meeting, list of non-members and news items.

Biddle Exonerated.—The special committee of the board appointed by the trustees of the Fountain Springs Hospital to investigate charges made by a number of Shamokin physicians against Dr. Jonathan C. Biddle, superintendent and surgeon in chief of the hospital, at its meeting at the hospital, decided that the charges were not preferred in good faith, as not one of those who preferred charges was present at the meeting. The committee reports that, if anything, the charges have placed the hospital and Dr. Biddle in a stronger position before the public.

Medical Staff Organizes.—The staff of Mercy Hospital, Johnstown, met January 4 and elected Dr. John B. Lowman, president, and Dr. Henry J. Cartin, secretary. The following staff members were elected: surgery, Drs. John B. Lowman and John L. Sagerson; medicine, Drs. Harry H. Penrod and Clarence B. Millhoff; ophthalmology, Dr. Olin G. A. Barker; laryngology, Dr. Charles E. Hays; diseases of children, Dr. Henry J. Cartin, and pathology and roentgenology, Dr. Frank Massey. Drs. Robert J. Sagerson and James M. Jefferson were elected assistant surgeons.

Personal.—Dr. James C. King, Reynoldsville, who was operated on in the Dubois Hospital, Pittsburgh, Dec. 31, 1911, for appendicitis, is reported to be convalescent.——Dr. Henry B. Walter has been appointed chief physician for the Pennsylvania System at Harrisburg, vice Dr. Eugene H. James, resigned.——Drs. George B. Kunkel and Harvey F. Smith have been appointed as associated surgeons for the Pennsylvania System at Harrisburg.——Dr. Edward R. Plank has been appointed city physician of Carlisle.——Dr. George F. Potteiger, Hamburg, has been appointed Major Medical Corps, N. G. Pa., and assigned to the Fourth Infantry, succeeding Major Morris F. Cawley, Allentown, deceased.

State Medical Bureau Will Demand That Students Attend Obstetric Cases.—The Bureau of Medical Education and Licensure held its first meeting, January 12, and fixed May 20, 21, 22 and 23 for examination of medical students who are about to be graduated, and May 24 for examination of students who have been studying for two years. The examinations will be held in Philadelphia and Pittsburgh. The bureau adopted a resolution that after January 1, 1913, it will require evidence from each candidate for a doctor's degree that he or she has attended at least six obstetric cases. Steps were also taken by the board toward obtaining reciprocity with other states in the matter of physicians' licenses, and the secretary of the board was instructed to prepare books for registering all medical practitioners in the state, as required by the act creating the new bureau. The medical colleges, six in Philadelphia and one in Pittsburgh, will be inspected by the board, February 12-16.

New Officers.—Franklin County Medical Society, at Chambersburg, January 16: president, Dr. Frank N. Emmert, Chambersburg; secretary, Dr. John J. Coffman, Scotland.——Lycoming County Medical Society, at Williamsport, January 12: president, Dr. Edward Lyon, Jr.; secretary, Dr. Clarence E. Shaw (reelected), both of Williamsport.——Luzerne County Medical Society, at Wilkes-Barre, January 11: president, Dr. Clarence W. Prevost, Pittston, and secretary-treasurer, Dr. Delbert Barney, Wilkes-Barre.——Bradford County Medical Society, at Sayre, January 9: president, Dr. John E. Everett, Sayre, and secretary, Dr. Cyrus L. Stevens, Athens.——Chester County Medical Society, Dr. John A. Farrell, West Chester, president, and Dr. Joseph Scattergood, West Chester, secretary (reelected).——Northumberland County Medical Society, at Sunbury, January 5: Dr. Charles H. Swenk, Sunbury, president, and Dr. Horatio W. Gass, Sunbury, secretary and reporter (reelected.——Lackawanna County Medical Society, at Scranton, January 9: president, Dr. William Rowland Davies, Scranton, and secretary, Dr. F. Whitney Davis, Scranton.——Lehigh County Medical Society, at Allentown, January 9: president, Dr. George F. Seiberling; secretary, Dr. Jacob Treichler Butz, both of Allentown.——Lehigh Valley Medical Society, at Easton, January 4: president, Dr. William A. Seibert, Easton, and secretary, Dr. S. Clarence Swartz, Allentown.——Lebanon County Medical Society, at Lebanon, January 9: president, Dr. Samuel P. Heilman, Heilmandale, and secretary, Dr. Charles M. Strickler, Lebanon.——Indiana County Medical Society, at Indiana, January 9: president, Dr. Benjamin F. Coe, Dixonville, and secretary, Dr. Charles E. Rink, Shelocta.——York County Medical Society, at York, January 4: president, Dr. Joseph H. Bittinger, Hanover, and secretary-reporter, Dr. Julius H. Comroe, York.——Montgomery County Medical Society, at Norristown, January 4: president, Dr. George F. Hartman, Port Kennedy, and secretary, Dr. H. H. Whitcomb, Norristown.——Schuylkill County Medical Society, at Schuylkill Haven, January 2: president, Dr. George R. S. Corson, Pottsville, and secretary, Dr. George O. O. Santee, Cressona.——Allegheny County Medical Society, at Pittsburgh, January 9: president, Dr. Theodore Diller, and corresponding secretary, Dr. Sidney A. Chalfant, both of Pittsburgh.——Jefferson County Medical Society: president, Dr. John H. Murray, Punxsutawney, and secretary-treasurer, Dr. Norman C. Mills, Big Run.

Philadelphia

Personal.—Dr. Leonard D. Frescoln, late assistant chief resident physician at the Philadelphia General Hospital, has been elected chief resident physician at the Episcopal Hospital.——Dr. William L. Rodman has been elected to fill the vacancy in the directorate of the Philadelphia County Medical Society, caused by the election of Dr. Levi J. Hammond to the presidency.

Hospital to Honor Lincoln.—James Doak, a contractor, has had placed in his hands plans for a $50,000 building that is to be erected on the site of the Mercy Hospital and School for Nurses at Seventeenth and Fitzwater Streets, as a memorial to Abraham Lincoln. The first shovelful of dirt will be excavated on Lincoln's birthday, February 12, 1912. In order to start this new building, the hospital has asked aid of the public through the *Public Ledger*.

Phipps Hospital Conveyed to University.—Henry Phipps, of Pittsburgh, has conveyed to the trustees of the University of Pennsylvania, the large hospital now being erected at the northeast corner of Seventh and Lombard Streets, to be known as the Phipps Institute for the Study and Treatment of Tuberculosis. The property was conveyed for a nominal consideration, subject to a irredeemable ground rent on one of the lots of $60. The hospital building, nearing completion, occupies a lot with a frontage of 143 feet on Lombard Street, and a depth to Addison Street of 153 feet. The cost of the building will be about $300,000. It is endowed in addition by the donor, the whole project representing about $1,000,000.

Public School Physicians Chosen.—On January 16, Dr. Joseph S. Neff, Director of Public Health and Charities, made a provisional appointment of fifty-five medical inspectors for the public schools, to serve pending the examination and rating of 400 applicants for the positions. Those who were temporarily appointed reported to Dr. Walter S. Cornell on January 17 and commenced at once the inspection of school children. The examinations of the 400 candidates for the permanent appointments were held January 20, under the supervision of a board of physicians named by Dr. Neff, as follows: Dr. Charles Lincoln Furbush, president; Dr. Ward Brinton, Dr. William E. Hughes, Dr. J. Leslie Davis and Dr. Elizabeth L. Peck.

New Officers.—Philadelphia County Medical Society, January 17: president, Dr. Levy J. Hammond, and secretary, Dr. William S. Wray.——North Branch: chairman, Dr. Jesse O. Arnold, and clerk, Dr. John Bernhard Mencke.——South Branch: president, Dr. John D. McLeron; clerk, Dr. Paul B. Cassidy.——Kensington Branch: Dr. Joseph W. Moore, chairman, and Dr. William P. Grady, clerk.——Germantown Branch: Dr. George A. Cameron, chairman, and Dr. J. Paul Austin, clerk.——Southeast Branch: Dr. Aaron Bray, chairman, and Dr. Maurice B. Cooperman, clerk.——Northern Medical Association, January 12: president, Dr. Paul F. Bremer, and secretary, Dr. Lee Boyce.——Philadelphia Medical Club: president, Dr. S. Lewis Ziegler, and secretary, Dr. William S. Wray.——West Philadelphia Medical Association: president, Dr. A. Wiese Hammer, and corresponding secretary, Dr. Henry G. Munson.——Pathological Society of Philadelphia, January 11: president, Dr. Allen J. Smith, and secretary, Dr. Oliver H. Perry Pepper.——Philadelphia Neurological Society: president, Dr. John H. W. Rhein, and secretary, Dr. George E. Price.——Section on Otology and Laryngology of the College of Physicians of Philadelphia: chairman, Dr. Arthur A. Bliss, and clerk, Dr. Ralph Butler.——Wills Hospital Ophthalmic Society: chairman, Dr. William Zentmayer, and secretary, Dr. Burton Chance.——Philadelphia Medical Examiners' Association: president, Dr. A. T. Gaillard, and secretary, Dr. John Lawrence Eisenberg.

RHODE ISLAND

Plans for Centennial.—Extensive plans are being made for the centennial celebration of the Rhode Island Medical Society, which will take place in Providence, June 12 and 13, and during which the new library building, which has been erected at a cost of more than $30,000, will be dedicated. On the first day there will be an excursion down Narragansett Bay and in the evening a public reception will be held in the new library building. The exercises of the second day will include clinics in the morning at the Rhode Island, City and St. Joseph's hospitals, after which the president, Dr. Frederick T. Rogers, will entertain the delegates. At the public meeting in the afternoon Dr. Abraham Jacobi, president elect of the American Medical Association, will deliver an address and the regular business session will be held. The proceedings will close with a banquet given at the Eloise in the evening.

TENNESSEE

New Hospital.—A new hopital was opened in McMinnville, Tenn., January 1, known as the Cooperative Infirmary. It is a semi-public institution, built and operated by Dr. Thomas O. Burger.

Interest Growing in New Hospital.—The Galloway Memorial Hospital movement is exciting great interest in Nashville. The medical faculty of Vanderbilt University has been made into one committee of physicians, with Dr. William L. Dudley, Nashville, the dean, as its chairman. Up to the present time $46,045 has been subscribed of the $150,000 required.

Permanent Home for Society.—It is promised that permanent quarters are to be furnished for the Hamilton County Medical Association and the Chattanooga Academy of Medicine in a new business block to be erected in the center of the city at an early date. A medical library will be installed and rooms will be furnished for meetings and for social purposes.

New Officers.—The Chattanooga Academy of Medicine and Hamilton County Medical Society, at Chattanooga, Dec. 29, 1911: president, Dr. Frank Trester Smith, and secretary-treasurer, Dr. Hampton L. Fancher, both of Chattanooga.——Greene County Medical Society, at Greenville, January 8: president, Dr. Horace M. Taylor, Greenville, and secretary, Dr. Martin A. Blanton, Baileyton.——East Tennessee Medical Society, at Morristown: president, Dr. T. E. Bales, Morristown, and secretary-treasurer, Dr. William E. Howell, Morristown.——Phi Chi Medical Fraternity, at Chattanooga: president, Dr. J. C. Brooks, and secretary-treasurer, Dr. Miles D. Davis.——Memphis and Shelby County Medical Society, at Memphis: president, Dr. William T. Black, and secretary-treasurer, Dr. Buford N. Dunavant (reelected), both of Memphis.——Sumner County Medical Society, at Gallatin: president, Dr. Bruce S. Galbraith, Hendersonville, and secretary-treasurer, Dr. Walter S. Dotson, Gallatin.——Jefferson County Medical Society, at Jefferson City; president, Dr. William L. Tadlock, Talbott, and secretary, Dr. Buford M. Tittsworth, Jefferson City.

WISCONSIN

State Society Meeting.—The date for the meeting of the Wisconsin State Medical Society is fixed for May 22-24 at Wausau.

Prohibits Common Drinking-Cups.—A rule issued by the State Board of Health, January 8, prohibits the use of common drinking-cups in public buildings.

Nitrate of Silver on Free List.—Nitrate of silver has been added to the list of free supplies given to the poor by the health department of Milwaukee. It is to be used for the prevention of ophthalmia neonatorum.

The Travelers.—Dr. and Mrs. Norman P. Mills, Appleton, have started on a trip to Florida Keys and Cuba.——Dr. and Mrs. William E. Minahan, Fond du Lac, sailed for Europe, January 20.——Dr. Frank F. Newell, Burlington, has returned from Europe.

Damage by Fire.—The residence of Dr. John R. Minahan, Green Bay, was destroyed by fire, January 15, with a loss estimated at $20,000, partially covered by insurance.——A fire at Hilbert, January 10, destroyed the barn of Dr. Charles F. Lawler, with a loss of $1,500.

Medical Staff Resigns.—The entire medical staff of the Social Workers' Tuberculosis Sanatorium, Keefe Avenue, Milwaukee, consisting of Drs. Alfred N. Baer, Milton M. Spitz, Sidney H. Wetzler, Adolph G. Beyer, Arthur J. Patek, William H. Washburn, Harry Greenberg, David H. Lando, Maurice Altman, Joseph Kahn, Lewis G. Nolte, Thomas C. Phillips and Carl Holty resigned in a body, January 24, it is alleged, because they were not consulted in the appointment of the chief of staff.

Personal.—Dr. Russell J. C. Strong, Beloit, assistant physician at the State Tuberculosis Sanatorium, Wales, has resigned and will practice in Milwaukee.——Dr. William H. Bartram, Jr., Green Bay, has been appointed local surgeon for the Green Bay and Western Railroad.——Dr. E. H. Mensing has been appointed first assistant coroner of Milwaukee County, vice Dr. Robert O. Friedrich, resigned.——Dr. Maurice Altman has been appointed deputy coroner of Milwaukee County, vice Dr. Arthur F. Reitman, deceased.——Dr. Thomas R. Hastings, Limeridge, has purchased and remodeled the new Commercial Hotel, Reedsburg and will open it as a sanatorium.

New Officers.—Portage County Medical Society, at Stevens Point, January 23: president, Dr. John D. Lindores, and secretary and treasurer, Dr. Wayne F. Cowan, Stevens Point.——Brown County Medical Society, at Green Bay, January 18: president, Dr. Thomas J. Oliver, and secretary-treasurer, Dr. Isaac E. Levitas, both of Green Bay.——Superior Clinical and Social Society, January 15: president, Dr. Henry A. Russell, and secretary-treasurer, Dr. Charles D. Conkey.——Milwaukee Medical Society, January 12: president, Dr. Horace M. Brown, and secretary, Dr. Clarence A. Baer.——Manitowoc County Medical Association, at Manitowoc, January 10: president, Dr. John E. Meany, and secretary-treasurer, Dr. Adolph J. Shimek, both of Manitowoc.——Washington County Medical Society, at West Bend: president, Dr. Willibald J. Wehle, West Bend, and secretary-treasurer, Dr. Sylvester J. Driessel, Barton (reelected).——Dane County Medical Society, at Madison, January 25: president, Dr. Joseph F. Dean, and secretary-treasurer, Dr. Charles S. Sheldon, both of Madison.——Rock County Medical Society, at Janesville: president, Dr. William J. Allen, Beloit, and secretary-treasurer, Dr. Edwards B. Brown, Beloit.——Ashland County Medical Society, at Ashland, January 13: president, Dr. Adellon P. Andrus, and secretary, Dr. John M. Dodd, both of Ashland.——Wood County Medical Society, at Marshfield, January 17: president, Dr. Jean A. Jackson, Rudolph, and secretary, Dr. James B. Vedder, Marshfield.——Grant County Medical Society, at Fennimore, January 11: president, Dr. William P. Hartford, Cassville, and secretary-treasurer, Dr. Mina B. Glasier, Bloomington.——Racine County Medical Association, at Racine, January 22: president, Dr. Walter S. Haven, and secretary-treasurer, Dr. Susan Jones.

GENERAL AND FOREIGN

Chattahoochee Physicians Meeting.—At the annual meeting of the Chattahoochee Valley Medical and Surgical Association held in La Grange, Ga., January 17-18, Dr. George M. Niles, Atlanta, Ga., was elected president; Dr. O. Velpeau Langley, Camp Hill, Ala., vice-president, and Dr. William J. Love, Opelika, Ala., secretary and treasurer. The next meeting will be held in Atlanta in July.

Personal.—Dr. Victor G. Heiser, Manila, director of health for the Philippine Islands and chief quarantine officer, has returned after a trip around the world.——Dr. Wiley E. Woodbury, Ionia, Mich., formerly of Detroit, has been appointed superintendent of the Philippine General Hospital, Manila, P. I.——N. C. Comfort, for two years superintendent of the Philippine General Hospital, Manila, P. I., resigned and has been made disbursing officer of the Quarantine and Marine-Hospital Service, in the same city.——Drs. Benjamin Burdette and Donald Gregg have been appointed surgeon and physician, respectively, at the University Hospital, Manila, vice Dr. A. M. Saleeby, who is about to open a private hospital.——General A. C. Girard, M. C. U. S. Army, retired, who was seriously injured two weeks ago by a fall on the ice, and was a patient at the Walter Reed Hospital, Washington, has returned home convalescent.

Congress for the Protection of Infants.—Nathan Straus, New York City, in his report to the President of the United States, as delegate to the Third International Congress for the Protection of Infants, noted the keen interest taken by the Empress of Germany in the efforts being made in the United States to protect the lives of infants and in the efficient work that is being done by the government to promote the public health. Mr. Straus made a report to the congress on "The Progress Made in America in the Protecting of Child Life" and also submitted a paper on "Twenty Years' Experience in Modifying and Pasteurizing Milk for Infant Feeding." He found that Drs. Walter Wyman and Milton J. Rosenau were regarded abroad as typical of authority and progress and as putting America in the very front rank in the nations that are seriously grappling with the problems of the prevention of disease. The news of the death of Surgeon-General Wyman was received with genuine grief in foreign health offices and his absence from his sphere of beneficent activity was regarded as a calamity to the world at large. What most impressed Mr. Straus was the vital importance of directing the attention of the world at large and of the health officers of cities and nations to the duty of preventing disease. America, he states, is in advance of the times, having in Harvard University the only scholastic department in the world devoted to the prevention of disease. He suggests that the President call an International Congress for the Prevention of Disease and believes that by calling together the great sanitarians, health officers and others identified with the work of prevention of disease rich blessings would be brought on the world.

Calleja's Golden Jubilee.—The dean of the medical department of the University of Madrid, Professor J. Calleja, was recently tendered a banquet and ovation in honor of the fiftieth anniversary of his entering on his medical career—as the *Siglo Medico* expresses it, his *bodas de oro con la profesion.* He is professor of anatomy and was the president of the XIV International Medical Congress held at Madrid in 1903.

The Quack Portrayed in the Drama.—*Münchener medizinische Wochenschrift* states that Dr. A. E. Thiele of Chemnitz, Germany, has written several popular plays and in his latest, the "Ahrsdorfer Frau," recently produced in a local theater, he subtly holds up to ridicule the practices of a charlatan with the eventual enlightenment of his clientèle, as the background to an entertaining little drama.

Severe Typhoid Epidemic in Spain.—There have been more than 2,500 cases of typhoid or typhus at Gigon, a town in the northwest of Spain, and daily for weeks from twenty to twenty-seven persons died. A flying sanitary squadron, in charge of Dr. Bejarano, was despatched in December, and advices received since from him report that days pass now without a death. The *Siglo Medico* states that the lay local and provincial press has contained no reference to the epidemic.

LONDON LETTER

(From Our Regular Correspondent)

London, Jan. 20, 1912.

The National Insurance Act.

The British Medical Association Reform Committee (The Journal, Jan. 27, 1912, p. 288) has issued a manifesto to the medical profession in general and to the members of the British Medical Association in particular, in which it is stated that the committee exists solely for the purpose of enforcing the avowed policy of the British Medical Association in contradistinction to the weakened version thereof expressed in the circular letter to the representatives (in which the policy of working the act and the endeavor to obtain those of the six points not granted in it by local regulations were set forth). The reform committee will continue to exist only until the interests of the medical profession under the national insurance act are adequately safeguarded without evasion, equivocation or reservation of any kind. The committee thinks that the best method of obtaining this end is by the promotion of an act of Parliament, through the British Medical Association, amending the act so as to embody the six points. The committee also alleges that in the negotiations with the government, the council allowed itself to be too much influenced by political considerations and by so doing has endangered the interests of the profession, and that "ending or mending" the present council is the only method by which the confidence of the members of the association in their official leaders can be restored. To reform the council, the committee suggests the enrolment in the reform committee of a sufficient number of members from each division and branch of the association to ensure that a representative be returned to the representative body and to the council who shall be in sympathy with, and will pledge himself to vote for, the policy laid down by the committee. It also suggests the establishment in London of an executive committee, composed of delegates of divisions, to control the business and finances of the reform committee. The committee is of the opinion that every member of the profession should be a member of the British Medical Association and will do its best to obtain new members, as well as to urge present members to continue in the association. In criticism of this manifesto, it may be pointed out that the request to the government for an amending act, such as is described, is hopeless, for the medical profession has very little power in politics, except advising in sanitary legislation. As a matter of fact, the council of the association did its best to obtain the six points and did obtain as many as could possibly be obtained by negotiation with the government. The allegation that they were influenced by political considerations is absolutely unfounded and is simply due to political malice, which is covertly entering into the agitation against the council. It is given some verisimilitude by the fact that the most prominent and strongest member of the council, Sir Victor Horsley, is a supporter of the government and the radical candidate for one of the London constituencies. To political opponents, with certain sorts of minds, this is sufficient for the aspersion that he would allow his political views to influence him in dealing with the act. But the truth is that he has always supported the profession in its demands. Indeed, it was through his instrumentality that the constitution of the British Medical Association was altered so as to give the rank and file a real controlling power. Further, it happens that he has taken no part, whatsoever, in the negotiations with the government. Finally, two-thirds of the council are conservatives, and therefore, opponents of the government, and if influenced by political considerations, these must have been hostile to the government, not favorable, as alleged. This introduction of political feeling into the question is doing much harm by tending to divide the profession, which necessarily contains members of both parties. If general politics have been introduced it is by the accusers, who are only imagining of their opponents motives which, consciously or unconsciously, influence themselves. On the other hand, some of the most outspoken and uncompromising denunciations of the act have come from physicians who are political supporters of the government.

The International Congress of Medicine

Arrangements are now complete for the International Congress of Medicine which is to be held in London from Aug. 6 to 12, 1913. The program of the congress and its various sections, including the arrangements for general meetings and for the general discussions in the sections, will be published not later than Sept. 30, 1912, and will be forwarded to all those who shall have at that time inscribed themselves as members. An appeal will soon be made to the profession for funds to meet the necessary expenses of the organization which it is estimated will not be less than $90,000, exclusive of the subscriptions of members. The president of the congress is Sir Thomas Barlow, F. R. S. The secretary-general is W. P. Herringham. Regular graduate physicians are eligible to membership in the congress on payment of the fee ($5), which should be sent to the treasurers, Seventeenth International Congress of Medicine, 13 Hinde Street, London, W., with designation of the section in which the member desires to register. Scientists nominated by their national committees or by the executive committee are eligible on the same terms. The advantages of the congress are extended to the wives and daughters of members on payment of half the fee. Information with regard to reduced railway rates, lodgings, excursions, etc., will be published up to April 30, 1913. The sections are (1) anatomy and embryology; (2) physiology; (3) general pathology and pathologic anatomy (subsection, chemical pathology); (4) bacteriology and immunity; (5) therapeutics; (6) internal medicine; (7) surgery (subsections, orthopedics and anesthesia); (8) obstetrics and gynecology; (9) ophthalmology; (10) pediatrics; (11) neuropathology; (12) psychiatry; (13) dermatology and syphilography; (14) urology; (15) rhinology and laryngology; (16) otology; (17) stomatology (18) hygiene; (19) legal medicine; (20) army and navy sanitary service; (21) tropical medicine; and (22) radiology.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Jan. 19, 1912.

The International Sanitary Conference

The International Sanitary Conference which opened November 7, last, has just closed its sessions. It was convoked on the initiative of the French government to revise the convention of 1903 to prevent the invasion and the propagation of plague, yellow fever and cholera and brought together official delegates from forty-one countries. The United States was represented by Dr. H. D. Geddings, of the Public Health and Marine-Hospital Service, and Dr. Jefferson R. Kean, lieutenant-colonel in the Army Medical Corps.

The three subjects under consideration were distributed among three special commissions who took them up both from the technical point of view and that of ways and means. Then an editing committee was charged with codifying all the desiderata on which the general sessions had established an agreement.

Dr. A. Calmette, professor of hygiene and bacteriology at the Faculté de médecine de Lille read the report on plague. It is admitted that the period of incubation of this disease in man does not exceed five days. Consequently, persons who have been in contact with patients should be submitted simply to observation for not over five days. They present no danger if they do not harbor biting and sucking parasites.

The report on cholera was presented by Dr. Van Ermengem, professor of hygiene and bacteriology at the medical school of Ghent. The most delicate question on the program of the cholera commission was that of the rôle of germ-carriers in the distribution of cholera and the practical importance, with regard to prophylaxis, of their detection. The conclusion of the report is that in the present state of our knowledge it is difficult to ascertain the amount of danger to the public in the carriers of cholera germs. It is probable that they play an important rôle in the development of local epidemics but no authentic instance has been reported of the transportation of cholera to a great distance by germ-carriers. It is therefore agreed that the detection of germ-carriers is among the most important prophylactic measures in the interior of a country at the beginning and during the course of epidemics. In international prophylaxis, however, generally speaking, it is impossible to pay much attention to isolated germ-carriers. The detection of germ-carriers seems indicated on maritime frontiers in the case of ships which have cholera on board or have had it during their voyage, and on land frontiers among travelers who have associated with cholera patients.

Dr. A. Agramonte of Havana, chairman of the commission on infectious diseases, reported on yellow fever. The conference endorsed the principal measures prescribed by the convention of Washington in 1905. The patients should be considered infectious only during the first four days of the disease. Ships going to yellow fever countries should be treated so as to give as little shelter as possible to the *Stegomyia*. The *Stegomyia* may practically be destroyed on board the ships by sulphur fumigation.

The Association of Anatomists and the Disturbances at the Medical School

The minister of public instruction has decided to close the Faculté de médecine to the students of the first and second years until the end of the first semester of the school year.

The Association des anatomistes has just addressed to the minister a protest against the actions of the first- and second-year medical students, expressing surprise at the assurance of these beginners in declaring the professor to whom they will not listen incompetent to instruct them, whereas the Association des anatomistes, which includes nearly all the scientific anatomists in France and French-speaking countries, as well as distinguished anatomists throughout the entire world and the majority of the professors of the medical schools, and which might seem qualified to pronounce judgment on Dr. Nicolas' qualification, has been willing to have him for its perpetual secretary as long as it has existed, that is, more than fourteen years. This protest bears 150 signatures.

Reversal of the Decision Against Dr. Bazy

A little over a year ago the civil court of the Seine condemned Dr. Bazy, surgeon of the hospitals, to pay $1,000 (5,000 francs) damages, for having left two compresses in the abdomen of a woman on whom he operated for an ovarian cyst (The Journal, Jan. 14, 1911, p. 130). The Paris court of appeals has just reversed this decision on the ground that the patient owes her life to Dr. Bazy and that moreover there is no proof that Dr. Bazy committed the professional fault with which he is charged.

Physicians in the French Senate

January 7, elections were held to fill 100 senatorial seats. Among those elected were sixteen physicians, of whom eleven were reelected and five are new members.

Death of Dr. Leven

Dr. Manuel Leven has just died, aged 81. He was head physician of the Rothschild Hospital of Paris. He published several works on diseases of the stomach in which he emphasized the influence of the nervous system.

Has the Attending Physician a Right to Fees for His Presence at an Operation?

A decision which seems to be the first rendered on the subject has just defined the rights of the physician in charge of a case of being present in a *maison de santé* at an operation and the fees that he should receive for this. A physician had included in his bill the sum of $20 (100 francs) for having been present at an operation on the patient (a child) and $32 for having visited him eight times after the operation. The patient's father maintained that he had never asked the physician to be present at the operation or to visit the patient at the *maison de santé*. The court decided that it was customary for the physician to be present at an operation that he had advised, but that the sum of $10 was considered sufficient to remunerate the physician who took no active part in the operation; and that the physician had no right to fees for his visits after the operation unless he had been requested to make them by the patient or the surgeon.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Jan. 12, 1912.

Personal

In place of Professor Uhthoff, Professor Hess of Würzburg has received a call as director of the eye clinic of the University of Berlin.

Professor Rubner, director of the Berlin hygienic institute, has received the large gold Rinecker medal of the University of Würzburg.

Professor Franqué has accepted the call to the chair of gynecology in Bonn as successor of Professor Fritsch.

Professor Heusner, for many years the able director of the surgical department of the municipal hospital of Barmen will retire April 1, on account of his advanced age.

The Fatalities in the Municipal Lodging-House

During the last week the origin and extent of the wholesale sickness at the municipal lodging-house has been the subject of discussion in three medical meetings. The first was held in the department of the interior and all physicians took part who had anything to do with the treatment of the sick and with the examination of the bodies. The two other discussions were in the internal medicine society (Verein für innere Medizin), on January 8, following an address by the well-known medical jurist, Professor Fritz Strassmann, and on January 10 in the Berlin medical society (Berliner medizinische Gesellschaft), in connection with an address by Professor Stadelmann, the director of the internal department of the hospital Friedrichshain, where most of the patients were received. As the result of this entire discussion which was in part extensive, it appears that the first cases of illness and death occurred December 26 of last year and the last January 2 of this year. In all there were 161 cases of illness and sixty-seven deaths, a mortality of 41 per cent. The clinical picture was uniform, only being more or less pronounced according to the severity of the illness. All the patients showed nausea, severe thirst, faintness, weakness in the legs, headache, fixity of the pupils and frequently disturbances of vision. Death occurred with great dyspnea. The necropsies gave insignificant findings. The patients were all of the male sex and with few exceptions inmates of the municipal lodging-house. There is little doubt that the wholesale illness depended on a poisoning and not on a communicable disease, and that the source of the poison was to be sought outside of the lodging-house. There was reason for the assumption of a poisoning by decomposed food, particularly smoked fish or sausages of horse meat, because a large proportion of those first taken ill had previously eaten fish or sausages. This assumption was the more probable as the symptoms were very similar to those produced by decomposed foodstuffs (Botulismus), and because the animal experiments instituted in the Institut für Infektionskrankheiten showed a powerful toxic action of the stomach contents and of the blood-serum of the patients, and because the poison lost its activity on the application of an antibotulismus serum. But before this investigation was concluded, the chemical experts of the police department found in the whiskey of a saloon where the men of the shelter resorted in great numbers, a large amount of methyl alcohol and ascertained that this and some other saloons in the neighborhood of the lodging house had obtained whiskey adulterated with methyl alcohol from a druggist who, as an investigation showed, had sold a large stock of methyl alcohol in place of the more expensive alcohol for drinking. The police authorities ascertained who were the customers of the druggist and either closed their shops or confiscated their stock of whiskey. The suspicion that the wholesale poisoning depended on the use of whiskey containing methyl alcohol was confirmed by the examinations which showed that the remains of the smoked fish and of the sausages which were found in the lodging-house contained no poison. Moreover methyl alcohol was demonstrated in the stomach contents of the patients. Further the symptoms in the poisoned individuals corresponded with those which have been exhibited in some wholesale poisonings by methyl alcohol which have been observed of late years in America, Russia and Hungary. In Germany similar cases have never been observed before. Interesting facts with regard to the causation of blindness were brought out by Professor L. Pick, the prosector of the municipal hospital at Friedrichshain, in the Berlin medical society. According to him in some cases there was a granular degeneration of the ganglion cells in the retina with a swelling of the fibrils of the optic nerve, both in the papilla and in the course of the nerve, changes which are entirely sufficient to explain the severe disturbance of function.

Which poison in the last analysis caused the wholesale intoxication remains for further investigation to determine. Both from the animal experiments, on which Dr. Wolff-Eisner has reported, as well as from the opinions of authorities, such as Professor Zuntz, there is a justifiable doubt whether methyl alcohol as such played the principal rôle.

Annulment of a Requirement for Cremation

Among the points to be decided according to the ministerial decree, before a permit is granted for cremation of a corpse, is one which requires that in the case of female bodies, a careful examination of the hymen shall be made. This requirement has aroused a vigorous protest, especially among women. It is urged that this requirement might injure extremely a woman's reputation, that it is purposeless from a legal and medical standpoint, that the determination of the virginity of a woman is impossible for the conscientious physician, and that by the insertion of a report of this sort in the death certificate, opportunity would be afforded for much gossip. Against this demand it was urged that the examination of the female genitals cannot be avoided in the regular inspection, since the burning of the body might obliterate most inoprtant changes for ever. Apart from cases of poisoning which have occurred through the vagina, deaths from criminal abortion are particularly important. Since physicians often have a part in these crimes, there would be danger that they would very willingly consent to a certificate for permission to cremate in order to conceal the traces of their crime. Finally, as far as the determination of virginity is concerned, it is essential, particularly in children, in order to exclude the occurrence of rape. That injury to the sentiments of the survivors may be occasioned by such an examination cannot be denied, but the official inspection of the body would be held in the absence of the relatives, so that this objection is of little moment. In all medicolegal necropsies the same investigation is made without raising any objection. In spite of these reasons, the minister decided to refer the matter to the highest scientific medical authorities in Prussia, the Wissenschaftliche Deputation für das Medizinalwesen, and after the deputation decided against the necessity of determining whether virginity is present or not, the requirement in question was abolished.

Determination of Myopia in the Higher Schools

A thorough investigation of the extent of myopia in the higher schools of Prussia has been ordered by the minister of education. Privat-docent Dr. Kraus, assistant of the eye clinic of the Charité in Berlin, has been entrusted with the carrying out of this investigation according to a special plan of examination.

A Weekly Review of Internal Medicine to be Issued Officially by the Organized Internists of Germany

In the latter part of January a *Zentralblatt für die gesamte innere Medizin und ihre Grenzgebiete* will appear, from the publishing house of J. Springer in Berlin, as the official organ of the German congress for internal medicine. The *Zentralblatt* is to be under the constant supervision of a committee appointed by the congress, which for the present consists of Prof. His of Berlin, Prof. v. Müller of Munich, Prof. v. Noorden of Vienna and Prof. Schwalbe of Berlin. It is to be edited by Dr. von Domarus, a former assistant of Prof. v. Müller and it is intended to present every week abstracts of all the publications worthy of notice, both in domestic and foreign literature, covering the entire field of internal medicine. Original articles will not appear in the *Zentralblatt*. An organ of this sort exclusively for internal medicine has not existed so far in the literature of the world.

Departure of the German Expedition of the Red Cross

The expedition of the German Red Cross intended for the support of the Turkish Red Crescent (Roter Halbmond) left Germany, January 10. It is under the leadership of Professor Goebel, the Breslau surgeon. The term of service is planned for three months.

Memorial Exercises

The laryngological society has arranged a memorial for its lately deceased honorary president, Prof. Bernhard Fraenkel, and the ophthalmologic society will similarly hold a memorial of Professor von Michel, who was for many years its chairman.

Marriages

Ernest Wilfred Ingle, M.D., Cape Town, South Africa, to Miss Eda Hankins of Claremont, South Africa, at Takoma Park, Washington, D. C., January 1.

Rudolph B. Watson, M.D., Ancon, Canal Zone, Panama, to Miss Rachel V. Hicks of Roslyn, L. I,, New York, at Ancon, January 15.

Walter L. Barbour, M.D., to Miss Barbara De Lange, both of Marmarth, N. Dak., at Aberdeen, S. Dak., January 9.

Mary Rebecca Baker, M.D., Columbia, S. C., and R. Golding Blackburn, M.D., of Whitmire, S. C., Sept. 6, 1911.

Sherman J. Jones, M.D., Hastings, Neb., to Miss Georgiana Wright of Portland, Ore., in Omaha, January 11.

George Frederick Sorgatz, M.D., Springfield, Ill., to Miss Katherine Wyth of Cedar Falls, Ia., recently.

Charles S. Stoakes, M.D., Battle Creek, Ia., to Miss Margaret H. Wolfram, at Sharon, Wis., recently.

Julian Raymond Blackman, M.D., Baltimore, to Miss Louie Ninita Ferris of Hastings, Neb., January 11.

Charles McRae Morgan, M.D., Camden, Ark., to Miss Ethel McKay of Monticello, Ark., January 17.

Luther Oakes Whitman, M.D., to Miss Adelaide Luby, both of San Antonio, Tex., January 17.

Gustav A. Heidner, M.D., to Miss Anna E. Butzke, both of West Bend, Wis., January 13.

Herman Hellenstein, M.D., to Miss Irene Adler, both of New York City, January 11.

Joseph M. Trigg, M.D., to Miss Emma May O'Bar, both of St. Louis, Dec. 30, 1911.

Deaths

John Augustus Lamson, M.D. Harvard Medical School, 1856; surgeon of the Forty-Second Massachusetts Volunteer Infantry during the Civil War; for two terms a member of the Massachusetts Volunteer Infantry during the Civil War; for two terms a member of the Massachusetts Legislature and for ten years a member of the Boston School Board; who was made chief medical inspector for Boston for the Equitable Life Insurance Company in 1880 and retired from general practice eighteen years later; died at his home in Boston, January 16, from senile debility, aged 80.

Gilbert Christian Greenway, M.D. University of Maryland, Baltimore, 1868; a member of the American Medical Association and one of the oldest and most-respected practitioners of Hot Springs, Ark., where he had practiced since 1874; died at his home in that city, January 19, from heart disease, aged 71. At a called meeting of the Garland County-Hot Springs Medical Society, January 19, resolutions of sorrow and respect were adopted and a number of the members of the society acted as honorary pallbearers at the funeral.

Friend W. Shaffer, M.D. Castleton (Vt.) Medical College, 1850; for more than fifty years a practitioner of Fulton County, N. Y., and formerly health officer, coroner and president of the medical board; at one time president of the Fulton County Medical Society and a life member of the Medical Society of the State of New York; until seven years ago a practitioner of Gloversville; died at the home of his son in Syracuse, January 10, from senile debility, aged 89.

Henri Benton Cole, M.D. New York University, New York City, 1860; assistant surgeon of the One Hundred and Twenty-Eighth New York Volunteer Infantry throughout the Civil War; medical director of the department of medicine of the Grand Army of the Republic in 1893-94; mayor of Black River Falls, Wis., for several terms; chairman of the Jackson County board of education and coroner; died at his home, January 14, aged 73.

Thurston Smith, M.D. College of Physicians and Surgeons, Chicago, 1899; once president of the Monroe County (Ind.) Medical Society; contract surgeon in the Army in 1900-03 with Philippine service and captain and assistant surgeon of United States Volunteers; died at his home in Bloomington, Ind., January 6, aged 45.

Bailie Brown, M.D. National Medical University, Chicago, 1897; Eclectic Medical College of the City of New York, 1900; died at his home in Jersey City, N. J., January 12, from pernicious anemia, aged 42.

John M. Stucky, M.D. University of Louisville, Ky., 1848; a member of the Kentucky State Medical Association; for more than sixty years a practitioner of Gosport, Ind.; assistant surgeon of the Fifty-Ninth Indiana Volunteer Infantry during the Civil War; from 1863 to 1865 representative in the Legislature from Owen County; died at his home in Gosport, January 17, from pneumonia, aged 86.

Robert Schuler Black, M.D. Medical College of Indiana, Indianapolis, 1880; once president of the Kansas Medical Society and the Franklin County Medical Society; died at his home in Ottawa, January 12, from diabetes, aged 61. At a special meeting of the Franklin Medical Society, January 13, resolutions were adopted testifying to the excellent personal and professional qualities of Dr. Black.

Ernest C. McGouldrick, M.D. Johns Hopkins Medical School, 1904; for five years a member of the medical staff of Barnes Hospital, Washington, D. C., and thereafter a practitioner of Brewer, Me., and for two years city physician; since the summer of 1911 a member of the medical staff of the Eastern Maine General Hospital, Bangor; died at his home in Machias, Me., January 9, aged 37.

David W. Hershey, M.D. University of Buffalo, N. Y., 1854; assistant surgeon of the Ninety-Eighth New York Volunteer Infantry during the Civil War; for three years school commissioner for the third district of Erie County, N. Y.; for several years county physician and coroner of Otoe County, Neb.; died at his home in Nebraska City, January 15, from senile debility, aged 81.

Harry B. Gantt, M.D. University of Maryland, Baltimore, 1880; of Millersville, Md.; a member of the Medical and Chirurgical Faculty of Maryland; for ten years a member of the staff of the University Hospital, Baltimore; died in that institution, January 20, from pneumonia due to a streptococcus infection received during an operation four months before, aged 54.

Charles H. Terry, M.D. Albany (N. Y.) Medical College, 1864; a member of the Medical Society of the State of New York; assistant surgeon of the Ninth New York Volunteer Calvary during the Civil War; surgeon to St. Mary's Hospital, Brooklyn, since its foundation, and a police surgeon for thirty years; died at his home in Brooklyn, January 18, aged 67.

Egon A. Koerper, M.D. University of Pennsylvania, 1867; surgeon of the Seventy-Fifth Pennsylvania Volunteer Infantry throughout the Civil War and a member of the Medical Corps of the Army from 1867 until 1904 when he was retired by operation of law with the rank of colonel; died at his home in Washington, January 10, aged 75.

Isaac Sparks Smith, M.D. Memphis (Tenn.) Hospital Medical College, 1909; (registration, fifth judicial district board, Texas, 1901); formerly a member of the American Medical Association and a member of the State Medical Association of Texas; died at his home in Rogers, January 14, from meningitis, aged 52.

Howard Cooper (license, Nebraska, 1892); for more than fifty years a practitioner; surgeon in the Confederate service during the Civil War; first probate judge of Kearney, Neb., and for thirty years a practitioner of Lowell, Neb.; died at his home near Lowell, January 18, from senile debility, aged 95.

Charles Harrison Abbett (license, Indiana, 1897); a practitioner since 1860; surgeon of the Thirty-Second and later of the Eleventh Indiana Infantry during the Civil War; for forty-five years a practitioner of Indianapolis; died at his home in that city, January 11, from cerebral hemorrhage, aged 73.

William Treacy, M.D. Rush Medical College, 1877; a member of the American Medical Association; of Helena, Mont.; local surgeon to the Northern Pacific Railroad and president of the Montana State Board of Health, and State Board of Meat and Milk Inspectors; died in California, January 18, from nephritis, aged 55.

Franklin Baldwin, M.D. New York University, New York City, 1877; a member of the Medical Society of the State of New York; formerly visiting physician to the Bushwick and Brooklyn hospitals and the Eastern District Dispensary; died at his home in Brooklyn, January 13, from pneumonia, aged 56.

William M. Ewing, M.D. Medical College of Ohio, Cincinnati, 1873; for thirty years a resident of Ottawa, Kan.; died at the home of his daughter in Des Moines, Ia., January 16, from senile debility, aged 80.

William T. Hensley, M.D. University of Nashville, Tenn., 1872; of Huntsville, Ala.; died in Newmarket, Ala., recently, from acute gastritis, aged 60.

Enoch George, M.D. University of Maryland, Baltimore, 1872; a member of the Medical and Chirurgical Faculty of Maryland, and once president of the Caroline County Medical Society; for many years county health officer; died at his home in Denton, January 12, from pneumonia, aged 61.

Samuel H. Westman, M.D. University of Toronto, Ont., 1896; M. R. C. S. England, 1903; surgeon to the Toronto General Hospital, and assistant surgeon of the Royal Grenadiers with the rank of captain; died at his home in Toronto, Dec. 29, 1911, from acute nephritis.

Sherman D. Maynard, M.D. George Washington University, Washington, D. C., 1904; a member of the Medical Society of the State of New York; died at his home in Roscoe, January 12, from traumatic pleurisy, following the kick of a horse several weeks before, aged 47.

George Hoxie Beebe, M.D. New York University, New York City, 1879; a member of the Connecticut State Medical Society; a member of the board of education of Guilford for more than twenty years; died at his home in that town, January 9, from nephritis, aged 56.

Marie Louisa Holloway, M.D. Medical College of Indiana, Indianapolis, 1887; formerly a member of the Indiana State Medical Association, and a practitioner of Decatur, Ind.; died at the home of her daughter in Branson, Mo., January 16, from nephritis, aged 75.

Ambrose Beach, M.D. Bellevue Hospital Medical College, 1879; a member of the Medical Society of the State of New York and vice-president of the Hermanns Memorial Library, Coxsackie; died at his home in that place, January 15, from arteriosclerosis, aged 57.

James W. St. John, M.D. Chicago Medical College, 1865; a medical cadet during the Civil War; mayor of Janesville, Wis., in 1875 and 1876, and for two years president of the board of education; died at his home in that city, January 15, aged 72.

Osea Perrone, M.D. University of Genoa, Italy, 1873; of San Francisco; who fractured his hip in a fall from a buggy on his ranch near Mountainview, several weeks before; died in the Lane Hospital, San Francisco, January 2, from embolism, aged 64.

Joseph W. Oliver (license, Iowa, years of practice, 1886); a veteran of the Civil War and a practitioner of Jefferson County, Ia., for forty-three years; died at his home in Fairfield, January 12, from cerebral hemorrhage, aged 75.

Samuel Oscar Sterrett, M.D. Jefferson Medical College, 1880; a member of the Medical Society of the State of Pennsylvania; formerly president of the First National Bank of Mars; died at his home in Downieville, January 12, aged 60.

John A. Walser (license, Indiana, 1897); a practitioner of Linn Grove and Anderson for thirty-one years; once a member of the board of aldermen of Anderson; died at his home in that city, January 7, from pneumonia, aged 59.

Charles W. Townsend, M.D. Jefferson Medical College, 1849; a member of the Pennsylvania Legislature from Washington County in 1883 and 1884; died at his home in Venetia, Pa., January 13, from senile debility, aged 89.

Harris A. Slocum, M.D. University of Pennsylvania, Philadelphia, 1879; emeritus professor of gynecology in the Philadelphia Polyclinic; died at his home in Philadelphia, January 15, from cerebral hemorrhage, aged 54.

Edward Joseph Schevcik, M.D. New York University, New York City, 1883; one of the best known Bohemian practitioners of New York City; died at his home, January 14, from cerebral hemorrhage, aged 46.

Jesse R. McAfee, M.D. Medical College of Georgia, Augusta, 1858; brigade surgeon in the Confederate service throughout the Civil War; died at his home in Dalton, Ga., January 14, from senile debility, aged 81.

William H. Battin, M.D. Rush Medical College, 1873; formerly of Oxford Junction, Ia., but for eighteen years a practitioner of Phoenix, Ariz.; died at his home, January 10, from cerebral hemorrhage, aged 62.

George Englebach Conrad, M.D. Eclectic Medical Institute, Cincinnati, 1878; of Johnstown, Pa.; died in the American Hospital for Diseases of the Stomach, Philadelphia, January 11, after an operation, aged 58.

Jane Spencer Miller, M.D. Homeopathic Medical College of Missouri, St. Louis, 1880; died at the home of her daughter-in-law, in Moline, Ill., January 9, from senile debility, aged 78.

John B. Banks, M.D. Meharry Medical College, Nashville, Tenn., 1885; died at his home in Natchez, Miss., Dec. 30, 1911, aged 49.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

PSEUDOMEDICINE

Gordon W. Rice, B.S., M.D.

CHAMPAIGN, ILL.

Although the medical profession is to-day better equipped by science for the relief of human suffering than it ever was before, and though it is accomplishing greater deeds than in any previous age, many cults and isms are seeking to break into the profession through the back door—Perkinism with its retractors, Stillism with its dislocated vertebræ, Mechanotherapy with its deranged functions of the circulatory system, Chiropractic with its nerve vibrations and spontaneity of thrust, Eddyism with its absent treatments, Wiltmerism with its thought concentrations, Dowieism with its bombast, Samuelism with its eye water, and commercialism with its destruction of medical ideals.

What has produced these cults and schisms? Is it constitutional gullibility, is it ignorance of medical achievements, or is it the failure of the medical profession to make good that causes the layman to take his suffering child to the person unfamiliar with the human body, and unlearned in the diagnosis and treatment of disease? In no other department of education in America is there such a difference between the best offered and the poorest as in medical education. When a young man seeks employment in any institution, educational or business, one of the first questions asked him is: "Where were you trained?" And unless he can produce evidence of satisfactory training he is turned down. How many people ask this question when they employ a physician, and how many would know the difference between the work done in the best, fully equipped medical school and that done in the half-baked business institution that turns out raw and ignorant practitioners for the profit received from fees?

After all, it is impossible for the individual citizen to acquaint himself with the quality of the work done in our medical schools or to be able to discriminate the good from the bad. The only protection offered him is that of medical practice acts, which, so long as they are dominated by the blighting influence of politics, will scarcely hasten the time when every M.D. degree granted in America will stand for culture and learning. We have at least three grades of legalized medical schools, classed as A, B and C by the Committee on Medical Education of the American Medical Association, and the product of the poorest is equal, in the eyes of the law and of the public, to that of the best. The public dubs a man "doctor" whether his training was an eight weeks' "optometry" course, a correspondence course from a "mechanotherapy" or "chiropractic" institution, a nine months' course in "neurology" or the course required by the best university in the land.

In order to get first-hand information as to the product turned out by some widely advertised so-called drugless institutions, I wrote several letters of which the following, to the "National School of Chiropractic and Physiological Adjustment," Chicago, is a sample:

> *Gentlemen:* Please send me information about your course. How long does it take, what chances are there for a man to make his living after taking your course? How much does it cost?
>
> I have a common school education, but never went to the high school but a short time. I am now working on a farm at twenty-five dollars per month, and want something better. Can one practice after getting your diploma, or does he have to take an examination like doctors?

I received a booklet and the following letter:

> *Dear Mr.* ———: Under separate cover we are forwarding you one of our booklets, and other literature, which explains CHIROPRACTIC in a nut-shell. We take it that the evidence

thus given as to the virtues and potency of the system, has been convincing and conclusive. . . .

The Howard System is to Chiropractic what Morse was to Franklin, and what the Edison system is to-day. Fulton introduced the steamboat, Stephenson the railway, and Arkwright the spinning frames; the present stage of development and efficiency of those systems was left to others to develop and perfect. . . .

We are teaching hundreds of busy operators, as well as students of the healing art, how to increase their efficiency in handling the many perplexing cases of sickness and disease. Many of these individuals have only a few minutes a day to spare, but the extra progress made each day by our definite and well tried plan of instruction has enabled them to double, treble and in many instances, add five and ten times to their income.

We offer you by this plan, a specialized training, more development of your capabilities, and a greater breadth of knowledge and experience, in exchange for a few moments of your time each day, at a cost of only 30c per day, for the year. . . . Remember it is not the time you put into a study that counts, but what you get out of it. It's the system you use; we teach the right system,—to use it means Success. . . .

Send your application in to-day with your first payment. A few months will bring you big interest on your investment

Yours very truly,

The National School of Chiropractic.

Per *Milton L. Smith, D.C.*

P. S. You will be able to do a great deal of this work. After you have finished the Home Study Course, you can come in and take the three-months post-graduate course, to finish up with. The matters taken up in our course, covers the topics taken up in a two-year course. With diligent the course can be covered in a period of from six to nine months. . . . This course will be $150, including preparation for the State Board Examination; concluding from your letter, you will have no difficulty in obtaining what is necessary in this respect. Act at once, and let us have your enrollment mail. If you cannot make full payment with your enrollment, pay what you can, and then make payments promptly, regularly every month.

Desiring a little more definite information as to what such a learned (?) man could expect before a state board, I wrote again as follows:

Gentlemen: Your letter received and it looks good to me. I was just going to send in the long green, but was talking to a friend that I wanted to go in with me, and he said he knew a man doing that kind of work and he got fined a hundred dollars and costs for not being "registered". What do you say about that? You say you can fix me so I can pass the state board examination. What does one have to do? If you will guarantee me that I will pass, you can count us on.

To this I received the following reply:

Dear Sir: It is evident from your correspondence, that we made you a special tuition rate for our Home Study, Post-Graduate, and State Board Course, that is, three courses at the tuition of one. As far as guaranteeing you to pass the State Board Examination in Illinois, we have made arrangements with Dr. Fomon to give our students special preparatory work, with a view of meeting the requirements of the State Board, as outlined under the act "Other-Practitioners" in the State of Illinois. Dr. Fomon's rate of tuition at the present time is $100.00, under a guarantee contract. Our course in Chiropractic, and Physiological Therapeutics, is $100.00 including the Extension and Post-Graduate work here, after having finished the Home Study Course. We would be pleased to make you a rate of $100 as suggested, for the Home Study, Post-Graduate, and work with Dr. Fomon's State Board Preparatory Course, but we would not care to undertake the guarantee agreement for this course in the combination. We would be willing however, to give you two courses in Chiropractic, that is, one for yourself, and one for your friend, at a joint tuition of $150 for the two courses in Chiropractic, and $50.00 each for the State Board Course. We would be willing to refund your money for the State Board Course, should it so happen that you would be refused the privilege of taking the State Board Examination, on account of inability to pass.

If this is agreeable to your circumstances, let us have your enrollment by return mail, as it would be necessary for you to have your enrollment in, if you wish to take the January Board, by November 1st, that is, you must be here to enter the State Board class by that date, in order to prepare for the January Board.

Trusting that this will meet with your circumstances, and that we shall have the pleasure of beginning you at once, we are Yours truly,

The National School of Chiropractic.

Per *John F. A. Howard.*

To another widely advertised drugless institution, I wrote as follows:

American College of Mechano-Therapy, Chicago, Ill.

Gentlemen:—I saw your add in one of the papers, and if a fellow can do what you say, just count me on.

Send me your dope on the subject so I can look it over.

How about this college educations, that some say a man has to have before taking up the study for a doctor? If you want that, I am afraid I cannot chin it, because I have only went through the eight grade. I am now writing insurance and can make a little more than a living on account of so much competition.

What does your course cost, how long does it take. I got a little money to put into my head and want it in stuff that will do me the most good financially. Can a man begin practice when he gets a diploma or does he have to take an examination before some fellow that don't know any more than he does. Let me hear soon. Can one begin at any time.

Yours truly

———————

In reply to this intellectual production I received the following letter:

Champaign, Ill.

Dear Mr. ———: In fulfillment of our promise, we are sending you, free of charge, under separate cover, our Prospectus of this College and full particulars regarding our instruction in the Science of Mechano-Therapy, the latest and best method of Drugless Healing, which, during the last few years, has assumed a commanding position in the confidence of the American people and which is rapidly replacing all other drugless methods. . . .

A graduate of this College, who masters the Science of Mechano-Therapy, studying only in his or her spare time, is dependent upon no one. He or she is master of their own time and energies—he or she is looked up to and ranks in the same social way as the clergymen or any other professional person.

To master this complete Science is simple, indeed, to those who possess a common school education. Our Course is so prepared as to insure success to all those who conscientiously desire to succeed and who will utilize their spare time in studying the instructions we send. . . .

When you have finished your course, we present you with a magnificently embellished diploma and confer upon you the honor and distinction of the degree of D. M. T. (Doctor of Mechano-Therapy).

To demonstrate to you how thoroughly practial a course in Mechano-Therapy is, from the standpoint of financial betterment, let us tell you that we have on file, in the Correspondence Department of this College, drawer after drawer full of letters from our graduates.

Before me lies the letter of a doctor in a Southern city, who is making from $25 to $35 per day; another from a young woman located in New York, who writes that she earned $80 in four days; still another woman is earning $10 per day, making private calls as a Mechano-Therapist; a number of our graduates have organized sanitariums in various parts of the country—have established themselves in the confidences of the community and are making big money. . . .

Upon receipt of your enrollment, with remittance, first lessons, together with a complete set of our Anatomical and Physiological Charts, and a Manual, explaining the charts, will be forwarded at once and your course will begin.

Yours sincerely,

American College of Mechano-Therapy.

Steno. 31 S. T. Page 3 *Dr. W. C. Schulze*, Pres.

Before taking up the next subject that I wish to discuss, I want to preface my remarks by stating that I recognize, honor, and respect the influence of the mind on the body, and in the hands of the person qualified to differentiate organic disease from functional disorders it is a valuable therapeutic measure, but the man or woman who, under the guise of religion, makes use of it to prey on the ills and ignorance of his fellow man is unworthy the respect accorded a collarless cur.

Eddyism, which I refuse to designate by the commonly accepted term because I would not pollute the sacred words "Christian" and "Science" by linking them to what Locke rightly calls "a miserable compound of Hindu pantheism and Brahmin theosophy, medieval mysticism and idealism, supreme selfishness, fantastic vagaries, grotesque nonsense, imbecile contradictions, anarchy and infidelity," would be unworthy of medical notice were it not for its possible influence on the spread of infectious disease and the opposition of its followers to needed sanitary legislation. Senator Works[1] attributes to the influence of this cult 60 to 75 per cent. of the 200,000 membership of the so-called League for Medical Freedom, whose object is to oppose any legislation tending to the establishment of a national department of public health, or to increase the efficiency of our state boards of health. We have the spectacle of a United States senator lauding on the floor of the senate chamber a cult that believes in such principles as the following: "When less thought is given to sanitary subjects there will be better constitutions and less disease."[2] "Treatises on anatomy, physiology and health sustained by what is termed material law are the promoters of sickness and disease."[3] "Truth handles the most malignant contagion with perfect assurance."[4] "If the case to be mentally treated is consumption show that it is not inherited, that inflammation, tuberculosis, hemorrhage, and decomposition, are beliefs, images of mortal thoughts, superimposed upon the body. Then these ills will disappear."[5] "Science can heal the sick who are absent from their healers as well as those present, since space is no obstacle to mind."[6]

Desiring to get some direct information as to how this business is worked I wrote the following letter, purposely misspelled and ungrammatical, describing an imaginary case and had it mailed from Murfreesboro, Tenn., to one of the prominent so-called healers in this community:

Dear Miss:—I heard a short time ago by a person I met on the train that you can cure sick folks. Now i've been sick nigh onto four year and don't get no better. I spent lots money and don't do no good. I don't know whats matter with me but tell you how I feel.

I have pain in my stomach and lots of hedache and can't walk up strait for something pulling in my stomach, I don't eat much don't care to. And now since three months there is a big sore on my left leg below the knee and the knee is getting crooked so I have to limp when I walk. My hed has been so bad it is now gone to my eye. The sight of one is bigger than the other and I don't see so good out it as out other eye. You see I am nervous by my writing I have to bare down so hard on my pen I can hardly write.

If you can cure me I can pay you for it as I have enough to live on and some besides.

What will you charge me to treat me, will I have to come there?

The person I met said you cured people when you was not near them. Can you do it? I lost her name, and can't remember it, write me at once.

I received the following letter:

Dear Mr. ————: No doubt you know something of Christian Science and what it will do for us. I know that science will help you, and will be glad to give you treatment beginning to-day, or I will wait until I hear from you. Treatment is $1.00 and is given each day. I can give you absent treatment and would like to hear from you every two days by letter. It is advisable to procure a copy of Science and Health and begin reading, giving a portion of each day to this.

The books are three (18c postage) and five dollars (no postage) a copy which I can forward from here.

There is an advantage in seeing and being with a practitioner, but it is not a necessity in many cases.

I have no doubt you will get along well with absent treatment. Kindly let me hear from you on receipt of this and oblige.

Very sincerely,

Elizabeth T. Wendland.

Champaign, Ill., Sept. 23, '11.

A few days after receiving the above, I wrote again, saying: "Since writing you I feel better. Have you been doing anything for me?"

I received the following reply:

Dear Mr.————: Replying to your inquiry as to whether I had been helping you, will say I have not been giving you treatment but I have tried to realize the truth about God's man when thinking of you, which I have done at times since writing and receiving no reply to my letter. This right thinking has been sufficient to relieve you for which I am very thankful.

Very sincerely,

Elizabeth T. Wendland.

I wrote also (this time from Urbana, Ill.) to a man who is associated with the above-mentioned woman, and who is, I am informed a "reader" in the "First Church of Christ, Scientist," Champaign, Ill. To him I described as follows, under the fabricated name of "appendixbogusitis," a hypothetical case of chronic recurrent appendicitis gone on to abscess formation.

Dear Sir:—I am awful sick, and a friend was in this morning and wanted me to try you. I have been sick off and on for almost a year every month or so. I would have pain in my right side, and it is low down and I would vomit and be awful sick for four or five days, then I would get better and be able to work for a while, but would soon get bad again.

About a week ago I got so bad that I had to go to bed. Had awful pain in right side, was constipated, had feaver, and vomited lots of times. The doctors say I got appendix-bogusitis and say I got to be cut open to let it out. There is for two days a big lump in my right side below ribs, it is so sore I can hardly touch it.

I don't want to have an operation, my friend wants me to see what you can do, but the folks don't hardly believe in it. Now do you think you can help me? If you can treat me by what they call absent treatment, I wish you would. My friend read this from Mrs. Eddy book. "Science can heal the sick when absent from their healer as well as present, since space is no obstacle to mind."

You can send your bill to me at general delivery, Urbana, as I am not letting the folks know I am writing. Answer right away.

I received the following letter in reply:

Dear Mr. ————: I received your letter this afternoon, and will give you treatment.

It is God that heals. His loving care is infinite. He fills all space and is the only mind. Trust him with all your heart.

Try to arrange to come to my office Monday afternoon. I will give you treatment to-day, to-morrow and Monday. Treatments are $1.00 each. Please let me hear from you.

With love,

B. F. Stoltey.

Here was a presumably dangerous condition calling for surgical intervention, which one B. F. Stoltey was willing to treat by sitting in his office, probably mumbling over some formula. Is this not a return to medieval exorcism? Frequently during my professional life I have found, that, from the standpoint of personal comfort, it would have been easier to sit in a comfortable room and give "absent treatment" than to go out into the storm and drive many miles to relieve the suffering of a fellow being. How can any intelligent person believe that a faker willing to make the pretense of "absent treatment" has the faintest conception of the spirit of Christ?

This is the institution which was landed on the floor of our United States Senate, and which, as above stated, furnishes 60 to 75 per cent. of the organized opposition to the establishment of a national department of health! During a career of forty years its adherents have never established a mission, a charity, or a school. They can number in their ranks no professor of anatomy, biology, geology, psychology, physics, chemistry, astronomy, logic or philosophy. "You can find in these chairs Catholics, Protestants, Jews, Unitarians, agnostics, and what not, but never a Christian Scientist." ("Eddyism," Locke.)

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1. Congressional Record, July 10, 1911.
2. Science and Health, p. 175.
3. Science and Health, p. 175.
4. Science and Health, p. 176.
5. Science and Health, p. 425.
6. Science and Health.

Oleum Telesphoros—A New Use for Oleomargarine

The following letter sent to The Journal by Albert P. Mathews, Ph.D., professor of physiologic chemistry in the University of Chicago, is interesting. Dr. Mathews' letter illustrates once more the much overworked scheme on the part of manufacturers of proprietary remedies of investing very ordinary substances with most extraordinary properties—and names.

"Under the name 'Oleum Telesphoros,' an animal oil is being recommended for use in abdominal surgery for the purpose of preventing adhesions. Whether oils of animal or vegetable origin may have such an action or not I am not competent to judge, but I am much amused at the name of this 'sacred oil' and the claims made for it. From the description of its origin it is obviously nothing more or less than 'oleo oil' or oleomargarine' as it is called abroad, and the chief basis of oleomargarine made in this country. Few would recognize it under the high sounding name of Oleum Telesphoros, and few probably would be willing to pay $2.00 a pint for it under its trade name. The statement that, being derived from the omentum and appendices epiploicæ, it is hence 'no more than natural that one of its greatest spheres of usefulness should develop in its application to abdominal surgery,' will carry great weight with those who believe that kidney beans are a panacea for kidney disease and that lunacy is due to the moon."

Correspondence

Home for Widows and Orphans of Physicians

To the Editor:—About two years ago some of us instituted a movement for the founding of a home for widows and orphans of physicians. Since that time we have worked steadily but quietly for the raising of funds and now, sooner than many thought possible, we have seen the realization of our hopes and wishes by the purchase in fee of a large and handsome building at 1615 Bolton Street in this city. The house is a three-and-a-half-story brick mansion with a frontage of 20 feet and depth of lot 132 feet. It is in the choicest residence section, off the lines of street cars yet easily accessible to several of them. There is a wide alley in the rear and the surroundings are exceptionally good. There is a tiled vestibule, and a handsome staircase extends from the wide hall to the third floor. There is a fine suite of rooms on the first floor admirably adapted for receptions, entertainments, etc. There are bath-rooms on the second and third floors. As soon as the building can be put in order we expect to open it for a number of applicants who are waiting to enter. We purchased this property in fee because we thought that the best plan and we did not wish to lose such an eligible offer. But, of course, this has involved us in considerable expense and we appeal to all members of the profession to aid us by gifts, large or small. We shall exercise the closest economy, but the maintenance of an institution of this size will demand large expenditures and we must depend very largely on the liberality of our friends, especially those of the medical profession. I am glad to be able to announce that we have just received a contribution of $100 from Dr. Hugh H. Young, president of the Medical and Chirurgical Faculty of Maryland, and that Drs. Jacobi, Welch and Harvey Cushing are also among our patrons.

Eugene F. Cordell, M.D., Treasurer.

257 West Hoffman Street, Baltimore.

The Army Canteen

To the Editor:—A correspondent in The Journal, Dec. 30, 1911, p. 2155, expresses a desire that the liquor canteen be reestablished at army posts, hoping that thereby this lounging-place may be made more attractive than the more disreputable drinking-places outside.

If our soldiers cannot find agreeable amusement without booze to make it attractive it is time that a determined effort to refine their depraved taste be made by the officers, who have plenty of spare time on their hands; for surely it cannot be possible that officers themselves can be dissipated and they therefore could, by both example and precept lent to their work, elevate the minds and morals of these debased men to enjoy wholesome sports and respectable amusements.

It is as absurd to furnish our soldiers beer to make them happy and keep them straight as to turn a lot of low women into the camp or to institute a legalized gambling hell.

The difficulty appears to be the lack of control exerted by the officers over the men, the last condition that should exist in a properly disciplined army, and the unwillingness or inability of the same officers to enforce the laws and clean up and clear out the saloons, speakeasies and brothels that infest like vermin the surroundings of an army post. If in times of peace our regular army cannot keep order within itself, or decency and law in its environment, is it worth maintaining for prospective wars? If we must allow the soldiers to drink in order to keep them sober when their services are not required, what good will they be when a cool head and steady, courageous nerve are essential.

Evan O'Neill Kane, M.D., Kane, Pa.

Addition to Article on Control of Typhoid

To the Editor:—Kindly note the following omission for which I am responsible in the article by Drs. Price, Rohrer and myself concerning "A Practical Method for the Control of Typhoid Fever" in The Journal, Jan. 20, 1912. On page 166, after "distilled water," in the third paragraph I should have added the following: "Enough of a 1 per cent. solution of azolitmin is then added to the medium to impart a lavender color to this solution."

William Royal Stokes, Baltimore,
Chief, Bureau of Bacteriology, State of Maryland Department of Health.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

PHYSIOLOGIC EFFECT OF COLOR OF GARMENTS

To the Editor:—What would be the physiologic or other effect of a light-colored garment with a dark inner surface, an arrangement somewhat analogous to the arrangement of pigment in the skin? Has there not been some work done along this line in the tropics, and if so, kindly quote conclusions briefly.

H. B. Forbes, Ogden, Utah.

Answer.—White cloth reflects the rays of the sun and does not absorb heat, but the effects of tropical climates are largely attributed to the actinic or ultraviolet rays, and it is not certain that white surfaces prevent the passage of these rays. White cloth is generally recommended as a proper color for outer clothing in the tropics. The use of dark cloth to lessen the effect of light would seem to be rational, in view of the protective action of pigment in the skin. This view has been especially developed by Major Woodruff. He considers that white men cannot become acclimated in the tropics and that they must be protected by clothing opaque to the blue and ultraviolet rays. For this purpose, he says, the outer clothing should be white, gray or yellow, because the heat will be least absorbed by these colors, while the underclothing should be black or yellow to stop the ultraviolet rays. A trial of orange-red underclothing was made in the United States Army in the Philippines and the results indicate that garments of this color are inferior in comfort to white and show no evidence of being protective against the sun's rays (The Journal, May 28, 1910, p. 1793).

TOILET VERSUS WATER-CLOSET

To the Editor:—Is it too late to nail to the counter a spurious neologism that has been insidiously working its way for some time into the currency of the King's English? In a word, shall "water-closet," a word so acceptable to civilized man that it has been welcomed to the vocabularies of almost all modern languages, give way to "toilet" as implying the like concept? Surely, physicians who carry the principles of asepticism into the practice of speech and abhor impurities in their mother tongue may still accomplish something by making a stand against the squeamishness of female patients and nurses on whose lips the offender is oftenest heard. The last straw in my own tolerance came the other day in the shape of a circular issued by the State Board of Health over the signature of its secretary, a physician, in whose virile mind a spade is usually that and nothing else. This was the shocking clause: "Plenty of running water, soap, convenient *toilets* to receive the dejecta from the patients."

> "O, what a fall was there, my countrymen!"

A water-closet, night-stool, bed-pan, urinal, privy, dejection—for the new word seems to connote all these things—are not and never can be a *toilet* by any stretch of metonymy. Time was, and not so long ago, when one might speak of a lady as being at her toilet without risk of ambiguity. Now the word is apparently taboo except when used in a mealy-mouthed attempt to estheticize an uncompromising act of nature.

> "Immodest words admit of no defence,
> For want of decency is want of sense."

But there is nothing more immodest than false modesty, and the offense against decency is aggravated a hundredfold when in addition violence is done to the genius of our English tongue.

When Pope wrote:

> "The merchant from the exchange returns in peace
> And the long labors of the toilet cease,"

there was no thought in the poet's mind of protracted travail at stool, which interpretation, if we are not careful, may one day be read into the couplet.

Help the profession, Mr. Editor, to hold fast to honest words and teach it to look askance at such as plead for acceptance, or thrust themselves on us, under the guise of a specious refinement; and let those of us who still pretend to chivalry make a supreme effort to prevent the dressing-table of a lady, her costume or her act of dressing from acquiring irrevocably the perverted significance as to which I have ventured to put the brethren on their guard.

B. G. A.

Answer.—We too deplore the danger of perversion of the language pointed out by our correspondent. What makes a bad matter worse is the fact that the linguistic disease of which he gives an instance is not self-limited in its course. As a matter of fact, several of the words cited by our correspondent as plain and unobjectionable synonyms ("water-closet" "privy") evidently began as intended euphemisms; and, by the same token, when (if ever) "toilet" becomes unmistakably associated with the acts of defecation and urination, such dainty persons as employ it to-day for a delicate evasion will find it disgusting and will reject it in favor of some other word of more refined associations. Thus the degradation of words may continue indefinitely; for a euphemism serves its purpose only while it is fresh. "To hold fast to honest words" is an ideal worthy of attainment.

On the other hand, we need not be too severe on the mistaken modesty which seeks refuge in such inappropriate language; it is the result merely of a kind of provincialism—an inability to see that conventionalities, legitimate and necessary as these may be in their proper and respective places, are not universal laws. Drawing-room conventionalities, ludicrously misapplied in spheres where they have no validity, do not necessarily indicate immodesty or false modesty, but merely a certain lack of *savoir vivre.*

METHOD OF PROCEDURE WHEN SUPPLANTED BY CONSULTANT

To the Editor:—Will you favor me with your opinion and advice concerning the case I am about to relate? A physician (A) had under his care a member of a family which he had attended for a number of years. When the case had continued about three weeks he called a consultant (B). A second consultation was held about a week later. Shortly after this the attending physician was called away on business and arranged with the consultant to care for the patient until the attending physician's return. The consultant very kindly agreed to do this. As soon as he took charge of the case, however, he had his wife take the patient nice things to eat and made special efforts to ingratiate himself into the patient's good favor. When A returned he received no report of the case. The next day he went to the physician who had substituted for him, expecting to take charge of his patient. B told him to call and see the patient some time during the day, which he did, and was informed by her that B had arranged to take care of the case for the future, which B has been doing since that time.

C. N. D.

Answer.—The above letter must be regarded as an *ex-parte* statement; the other side must be heard before judgment can be rendered. Evidently, the aggrieved Dr. A feels that Dr. B, who was left in charge of the patient, "stole" the case. This may or may not be true. One thing is certain—the patient has gone from A's care and it is not probable that B could, even if he would, induce her to return to A. Should A charge his loss to the expenses of the trip and let the matter rest, or should he take some action in the case, and if so what? Unless an understanding be reached, or unless A finds that there were extenuating circumstances, there is danger that the present strained relations of these physicians will develop into an open rupture. Consequently, it would be wise for A to tell B that he, A, has been seriously annoyed about this case; that, prior to this incident, he had always believed B to be "square"; and that, because he held this opinion, B had been called in consultation and had been asked to care for the patient; that A had heard that B had used the opportunity to supplant him and that with this end in view Mrs. B had served the sick one with dainties; that, at B's suggestion, A on his return had called on his former patient who had informed him that B "had arranged to take care of the case"; that naturally he had been much put out, but he felt sure there must be some explanation. It would be well for A to add that possibly some things he had heard were misstated, or that perhaps all the circumstances had not come to his knowledge; that because of all this, he thinks it best for them to talk over the matter, at first hand, and, if possible to come to an understanding; that, much as he regrets the loss of the patient, he would be far more grieved to lose confidence in a physician whom he had regarded as a gentleman.

As the result of such a frank conference, it may be found that B had earnestly endeavored to have A continued, but that the patient had declined to be returned to A's care; that neither would have been retained if B had withdrawn; and that the attentions shown by Mrs. B may have been really very slight courtesies that her relations with the patient warranted.

Of course, as the letter presents the subject, "the appearance of evil" calls for a statement from B. If any of the conditions suggested influenced his action, it would have been better if he had made the state of affairs plain to A when that physician returned from his business trip, and avoided the risk of A's receiving an erroneous impression from the patient's statement. It is the right of the patient to employ the physician of her choice and to dismiss one physician and to select another when she wishes, but in justice to all concerned and in the interest of harmony in the community, the patient should make such change in a manner that gives no just cause for unkind feelings between the physicians. In this case the language assigned to the patient is unfortunate. The patient is quoted as having said that B had "arranged to take care of the case for the future." This is precisely what B should not have done, but perhaps this is merely a question of verbiage.

It is worthy of note that many a physician, bearing in mind the possibility of misunderstanding, refuses to accept such a case, even though his refusal means that a third physician will be called. Such a conscientious physician once expressed himself thus: "I do not want such a patient under any condition, if there is the least chance that I thereby lose the friendship of Dr. ————." It would be well to advise the patient that it would be better for all concerned if the original physician were permitted to complete the care of the patient in this particular illness but that the consultant would accept a call at some future time, when a physician's services were required.

To return to the interview recommended—should it fail to establish an understanding, the subject should be referred for arbitration to the board of censors of a component county medical society where A's charges should be preferred and a trial conducted in the interest of "the good of the profession" rather than to uphold the "rights" of an individual. In other words, the object of the board of censors should be to establish the principle of conduct that all gentlemen recognize—that we should treat others as we ourselves would be treated.

SUGAR IN HYPERACIDITY

To the Editor:—I have read with much interest the article in the Department of Therapeutics, Jan. 6, 1912, on "Prescription Nonsense," and hope that it will accomplish much good in encouraging thought and care in prescription-writing. I should like further enlightenment on the statement (page 35) "Any sugar, even sugar of milk, is better not given to a patient in whom one is attempting to reduce hyperacidity." Is there authority for this statement? Einhorn in his "Diseases of the Stomach," p. 156, says: "The carbohydrates in the form of sugar (taken in large quantities) have been found by the painstaking investigations of Dr. William Gerry Morgan of Washington, to lessen the amount of acidity in the stomach. Sugar can, therefore, be administered with advantage in cases of hyperchlorhydria." In a considerable experience with gastro-intestinal cases I have seen no bad effects from sugars in hyperacidity and so am prompted to ask the above question.

J. Russell Verbrycke, Jr., Washington, D. C.

Answer.—1. It should be remembered that we were discussing the hyperacidity of ulcer of the stomach, and not simple hyperchlorhydria.

2. Sugar will not cause hyperacidity, but ordinarily clinically will not reduce it.

3. Sugar given alone is one of the most quickly absorbed of foods, but in combination with other foods, or in combination with drugs, it may not be digested or absorbed so readily.

4. If there is any tendency to nausea and vomiting, as there is with ulcer of the stomach (and with ulcer of the stomach a hyperacidity is likely to be present) the patient is better off without a sugar in the food or medicine given. This is not to affirm that sugar may not be advisedly used as a food but it is best given alone. Clinical experience seems to demonstrate distinctly that in the vomiting stomach, with or without hyperacidity, sugar generally adds to the trouble rather than diminishes it.

While on this subject, it is not inappropriate to remark that it is a frequent inconsistency of physicians, in fermentative disturbances of children, to prohibit sugars and sweets, and then to administer some drug in a sickish sweet syrup. Also, stomachs are frequently upset by a simple cough remedy because it is in a sweet, syrupy solution or mixture. Sugar is a food, and a valuable food, but when a patient is sick, the amount of sugar, and the way it is taken, should be carefully and properly regulated.

CREOSOTE IN PETROLATUM SAPONATUM LIQUIDUM

To the Editor:—What is petrogen? How is creosote petrogen (20 per cent.) made? Kindly give directions for making a creosote remedy that can be rubbed in instead of being administered internally.

C. TILLMANNS, Sigourney, Iowa.

ANSWER.—Petrogen is essentially a mixture of liquid petrolatum and soap liniment. This preparation does not widely differ from the preparation of the National Formulary called petrolatum saponatum liquidum (petrox) which contains:

Liquid petrolatum (U. S. P.)	100 parts
Oleic acid (U. S. P.)	50 parts
Spirit of ammonia (U. S. P.)	25 parts

Mix them by agitation.

It is proposed, in the forthcoming edition, to change the name to liquid petroxolin and to modify the formula as follows:

	Gm.
Liquid petrolatum	50
Oleic acid	28
Oil of lavender flowers	2
Stronger ammonia water	5
Alcohol	15

Mix the liquid petrolatum and oleic acid in a flask, add the alcohol and then the stronger ammonia water, and warm the mixture on a water bath, with frequent agitation until it becomes clear. Finally, add the oil of lavender flowers and mix thoroughly.

We have not the data for describing the exact method of preparing creosote petrogen, but the following formula is proposed for creosote petroxolin, which is an equivalent preparation:

	Gm.
Creosote	20
Oleic acid	5
Liquid petroxolin	75

As guaiacol, the principal constituent of creosote, is readily absorbed by the skin, it is probable that a solution of creosote in the petrox could be used for the purpose of introducing this remedy into the system by rubbing into the skin.

SINE QUA NONS

To the Editor:—In THE JOURNAL, Jan. 27, 1912, p. 278, the Latin phrase "sine qua nons" figures as the plural, I presume, of "sine qua non." Am I wrong in believing that "sine quibus non" would have been the correct version? Will you refer this to your department of philology for the enlightenment of one who has forgotten much Latin and more Greek?

A. C. CROFTAN, Chicago.

ANSWER.—This phrase, here used as a substantive, seems to have been a slight stumbling-block to several of our readers. We have no department of philology at present, but we can establish one if such interesting questions as this arise in sufficient number.

The phrase "sine qua non" has come to stand for the substantive idea, "a necessity," "an essential." It is commonly used with an article before it ("a sine qua non in this work"—"the sine qua non for success"), indicating that it is regarded as a noun. It is therefore pluralized as substantive phrases usually are in English, even when borrowed from other languages. To pluralize a part of the phrase would be contrary to custom and in many instances would not convey the desired meaning, as will readily be seen on examining a few instances. Try substituting "Hic Jacent" in the following from Tennyson:

> Among the knightly brasses of the tombs
> And by the cold Hic Jacets of the dead.

Other examples are: "Te Deums are sung by the choirs," "these men are a lot of do-nothings," "amid the I-told-you-sos of the wiseacres,"—or make your own list, as B. L. T. occasionally remarks in his delightful column, "A Line-o'-Type or Two," in the Chicago *Tribune*. Of course, phrases thus used substantively tend to become regular nouns, and the end of this process may be seen in such words as "subpoenas," "facsimiles," "fiats," "omnibuses," "carryalls" and "dreadnaughts."

We confess that it would have been better if we had not italicized "sine qua nons," for to use it in ordinary type would have indicated more clearly that we were using the Latin phrase as an English substantive.

The Public Service

Medical Department, U. S. Army

Changes during the week ended Jan. 27, 1912.

Wing, Franklin F., dental surgeon, ordered to return to Fort D. A. Russell, Wyo., on completion of temporary duty at Fort Robinson, Neb.

Grubbs, R. B., major, ordered to duty with troops from Fort Bliss, Tex., to Fort Benjamin Harrison, Ind.

Mills, R. W., M.R.C., ordered to duty with Co. K, 3d Cavalry, from Sam Houston to Fort Clark; then to proceed to Rio Grande, Tex., for duty.

Owen, Leartus J., captain, returned from duty with troops at Rio Grande, Tex., and to return to Fort Benjamin Harrison, Ind.

Davidson, William T., major, ordered to duty with troops from Fort McIntosh, Tex., to Fort Benjamin Harrison, Ind.

Long, Charles J., dental surgeon, returned to Fort Andrews, Mass., from duty as witness general court martial, Manila, P. I.

Stuckey, Harrison W., M.R.C., granted two months' leave of absence.

Koerper, C. E., major, leave of absence extended twenty days.

Gandy, Charles M., lieut. col., relieved from duty in the Philippines division and will repair to this city and report to the surgeon-general of the Army for duty in his office.

Ireland, M. W., lieut. col., relieved from duty in the office of the surgeon-general of the Army and will proceed to San Francisco and report to the commanding general, western division, for temporary duty; August 5 to sail for the Philippine Islands for duty.

Stallman, George E., dental surgeon, left Fort Clark en route to Fort McIntosh, Tex., for temporary duty.

Ireland, M. W., lieut. col., granted four months' leave of absence, to take effect after his arrival at San Francisco.

Crampton, L. W., colonel, leave extended seven days.

Davidson, Wilson T., major, relieved from duty at Fort McIntosh, Tex., and ordered to Fort Bliss, Tex., for duty.

Grubbs, Robert B., major, relieved from duty at Fort Bliss, Tex., and ordered to Fort Baker, Cal., for duty.

Wing, F. F., dental surgeon, returned to Fort D. A. Russell, Wyo., from temporary duty at Fort Robinson, Neb.

Stallman, George F., dental surgeon, reported for temporary duty at Fort McIntosh, Tex.

Dickenson, Clarence F., M.R.C., on abandonment of Fort Duchesne, Utah, will proceed to Whipple Barracks, Ariz., for duty.

Carcis, Leon C., lieut., relieved from treatment at Letterman General Hospital, San Francisco, and to return to the Philippine Islands.

Betts, Charles A., M.R.C., on expiration of leave of absence ordered to Fort William H. Harrison, Mont., for temporary duty.

Medical Corps, U. S. Navy

Changes during the week ended Jan. 20, 1912.

Rose, M. E., A. A. surgeon, appointed acting assistant surgeon from Jan. 12, 1912.

Changes during the week ended Jan. 27, 1912.

Hayward, A. B., P. A. surgeon, detached from the *South Dakota* and ordered to the *Maryland*.

Diehl, Oliver, medical director, detached from the naval hospital, Newport, R. I., and ordered to the navy recruiting station, Philadelphia.

Nash, F. S., medical inspector, detached from the navy recruiting station, Philadelphia, and ordered to the naval hospital, Newport, R. I.

Stone, E. P., medical inspector, ordered to the marine recruiting station, Denver.

Baker, M. C., P. A. surgeon, detached from the naval hospital, Mare Island, Cal., February 5, and ordered to the *Colorado*.

Valz, E. V., P. A. surgeon, detached from the naval hospital, Mare Island, Cal., February 5, and ordered to the *South Dakota*.

Brown, H. L., P. A. surgeon, detached from the *Baltimore* and ordered to the naval hospital, Norfolk, Va.

Stoops, R. E., P. A. surgeon, ordered to the naval disciplinary barracks, Port Royal, S. C.

Bacon, Sankey, P. A. surgeon, detached from the naval disciplinary barracks, Port Royal, S. C., and ordered to the *Baltimore*.

Mink, O. J., P. A. surgeon, detached from the *West Virginia* and ordered to the naval station, Guam.

Hayes, Oscar, A. A. surgeon, detached from the marine recruiting station, Denver, and ordered to the marine recruiting station, St. Paul.

Rose, M. E., A. A. surgeon, ordered to the marine recruiting station, Buffalo.

Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

WHY THE PRACTICE OF THE SPECIALTIES SHOULD BE CONTROLLED

Emil Amberg, M.D.

DETROIT

At the present time any person who chooses to call himself a specialist may do so. The only restriction lies in the character of the individual. This fact includes, it is true, a high tribute to the integrity of the specialist and, from the standpoint of individualism, this condition represents the highest type of development. From the standpoint of a well-regulated and well-governed community it represents anarchy. Anarchy, according to Webster, is "absence of government; the state of society where there is no supreme power; hence, a state of lawlessness or political disorder. . . ." It is scarcely necessary to be reminded of an almost anarchistic state of affairs in regard to the practice of medicine, which lies within our memory. Whether the regulations of the license to practice medicine in general are as good as they should be, or whether there is much opportunity for improvement, is a question familiar to all of us. We can say, however, that something is being done continually in this direction, and the progress within the last few years is commendable and encouraging. Gradually a number of physicians have undertaken obligations distinctly different from the general duties of medical practice. They confined themselves to certain branches of medicine, excluding all others. This specialization involves special preparation and application to the special branch in medicine. We are confronted with the question, to what extent the supervision of the state is applied to the practice of the specialties. The answer is as simple as it is dumfounding. It is evident that a state board of medical licensure, a body on which devolves the control of medical practice, must exercise this control not only in name but in fact. I do not know of a single instance in which such a responsible board has even asked for evidence of knowledge and fitness in regard to the practice of the specialties.

While these ideas may, and I hope will, be accepted generally, the question arises, Where shall all the specialists receive such training which should include hospital service? This might be given in the various medical centers, in special hospitals or in special departments of general hospitals, which should furnish the opportunity for such a special education. We have, of course, postgraduate schools which can aid in the instruction; especially is this done at present also in one of the foremost medical postgraduate schools, the Allgemeine Krankenhaus, in Vienna. Yet, only in exceptional cases, and by a long stay, can the whole instruction be received in such centers for postgraduate instruction. The main work should be done as assistant or intern in a hospital.

About ten years ago[1] I called attention to the fact that one cannot become proficient in a specialty in a few weeks; I demanded that before being allowed to practice a specialty and make it known, one should give proper evidence, either to a state board or to some recognized medical society, of the qualifications for doing so. Special attention was called to the question how the many eye, ear, nose and throat specialists acquired their knowledge and received their training. A knowledge of these specialties cannot be acquired from the mere study of books, but it is imperative that thorough personal instruction should be received in these branches, and it can be given only by actual training.

Recently, Dr. R. B. Canfield of Ann Arbor has called attention to the "Clinical Specialist, His Preparation and Relationship to the General Practitioner,"[2] and *American Medicine*,[3] editorially, commented on conditions existing and asked for their early correction, emphatically condemning the pernicious practice of inefficient and premature specialists. Since September last year I have endeavored to arouse the interest of the profession in this question again. I am well aware how difficult it is to awaken the interest of a greater part of the profession in some questions, even if they are of very great importance to the public and to themselves, if the question is somewhat complicated, unless an immediate result is plainly visible. This, however, should not deter those who have an insight in questions of this nature from coming forward and helping to emphasize subjects the importance of which they recognize. They should keep them ever uppermost in the minds of the medical profession until they have succeeded in convincing others that something must be done in the interest of all which will regulate anomalous conditions. I may add that in September, 1911, the Wayne County (Detroit) Medical Society instructed its delegates to the Michigan State Medical Society to ask the latter to appoint a committee to study the question and make suggestions.

There is one point which should not be lost sight of in agitating this question. Even if nothing is accomplished in the near future, the prospective specialist will know that the great body of the medical profession is aware of the situation, and he will see to it that his preparation will be more complete.

270 Woodward Avenue.

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[1] Amberg, E.: Philadelphia Med. Jour., March 22, 1902.

[2] Physician and Surgeon, November, 1911.

[3] December, 1911.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Sixth Month—Second Weekly Meeting

Secondary Anemia

Etiology: (a) Hemorrhage. Many causes. Rate and amount of hemorrhage. Age and sex. Recovery, elements restored. (b) Inanition. Lack of quantity or quality of food. Local causes. Elements reduced. (c) Excessive albuminous discharges. Chronic nephritis, prolonged suppuration, lactation, etc. (d) Toxic agents. Organic or inorganic poisons. Metallic poisons, course, elements involved. Acute and chronic infections. Pyrexia.

Microscopic Changes: Red corpuscles, oligocythemia, changes in shape and color, staining reactions, nucleated cells. Reduction and distribution of hemoglobin. Changes in white cells, increase and reduction. Reduction in blood-plasma.

Chlorosis[1]

Etiology: Age and sex. Heredity. Unhygienic surroundings. Copremia. Emotions.

Symptoms: Onset, complexion, respiratory and circulatory disturbances, digestive disorders.

Microscopic Changes: Oligocythemia moderate, oligochromemia marked. Size, shape and irregularities of red cells. Leukocytes.

Pernicious Anemia[2]

Pathologic Anatomy: Skin and subcutaneous fat. Heart, blood-vessels and hemorrhages. Liver, spleen, lymph glands. General fatty degeneration, deposits of iron pigment. Changes in bone marrow.

Changes occurring in "aplastic anemia." [3]

Symptoms[4]: Insidious onset, general symptoms, respiratory and circulatory disturbances, gastro-intestinal symptoms.

Blood Examination: Marked oligocythemia, color index, macrocytes, microcytes, poikilocytes, normoblasts, megaloblasts.

Leukopenia: Changes in white cells. Blood-plates.

Diagnosis: Differentiate from Addison's disease, nephritis, heart-disease, malignancy.

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[1] Cabot: The Journal A. M. A., Aug. 24, 1907.

[2] Emerson: Johns Hopkins Hospital Bulletin, February, 1907; Progressive Medicine, June, 1911, p. 259. Grawitz: Medical Record, Oct. 29, 1910. Crofton: The Journal A. M. A., Aug. 13, 1910.

[3] Thomas: British Medical Journal, Jan. 1, 1910. Lavenson: Am. Jour Med. Sciences, January, 1907; Progressive Medicine, June, 1907 and 1908.

[4] Melland: British Medical Journal, June 5, 1909.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Iowa: Capitol Bldg., Des Moines, February 6-8. Sec., Dr. Guilford H. Sumner, State House.

Kansas: National Hotel, Topeka, February 13. Sec., Dr. H. A. Dykes, Lebanon.

Nebraska: State House, Lincoln, February 14-15. Sec., Dr. E. Arthur Carr, 141 S. 12th Street.

Meeting of Confederation of Licensing Boards

Dr. George H. Matson, secretary of the National Confederation of State Medical Examining and Licensing Boards, announces that the twenty-second annual meeting of that organization will be held in Chicago, Thursday, February 29. This confirms the tentative announcement to that effect which appeared in The Journal, Jan. 13, 1912, page 135.

The American Medical Association's joint conference on medical education, legislation and public health will be held at the Congress Hotel, Chicago, Monday and Tuesday, February 26 and 27. It is also reported that the Association of American Medical Colleges will hold its annual meeting in Chicago, Wednesday, February 28. The programs will include topics of extreme importance to the cause of medical education.

California December Report

Dr. Charles L. Tisdale, secretary of the Board of Medical Examiners of the State of California, reports the written examination held at Los Angeles, Dec. 5-8, 1911. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 143, of whom 99 passed, including 16 osteopaths, and 44 failed, including 19 osteopaths. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Cooper Medical College	(1911)	81.7
University of California	(1910) 89.2; (1911)	78.1, 84.6, 85.7, 86.2, 87.5.
College of Phys. and Surgs., Los Angeles	(1911)	76, 91.6
College of Phys. and Surgs., San Francisco	(1910)	79
George Washington University	(1910)	80.7
Bennett Medical College	(1908) 85.5; (1911)	77.4
College of Physicians and Surgeons, Chicago	(1903) 82.3; (1910)	79.8, 79.8.
American Med. Missionary College	(1899) 91.5; (1903)	81.4
Rush Medical College	(1881) 88.9; (1899) 91.4; (1896) 90.2; (1901) 76.4; (1903) 83.4; (1911)	82.1, 89.6.
Northwestern University Medical School	(1879) 85.7; (1908) 91.2; (1911)	80.3, 81, 81.1, 83.4, 85.9.
State University of Iowa, College of Medicine	(1910)	76.2, 86.5
College of Physicians and Surgeons, Keokuk	(1897)	84
State University of Iowa, Homeopathic College	(1910)	81.3
Louisville Medical College	(1906)	77.6
Kentucky School of Medicine	(1891)	81.2
Tulane University of Louisiana	(1907)	85.5
Medical School of Maine	(1909) 75; (1911)	78.7
Johns Hopkins University	(1904)	87.4
Harvard University	(1900)	85.3
Baltimore Medical College	(1903)	80.2
College of Physicians and Surgeons, Baltimore	(1910)	78.3
University of Michigan, College of Med. and Surg.	(1894) 80, 90.3; (1903) 85.1; (1904) 87.2; (1905) 78.6; (1911)	89.4.
University of Minnesota, College of Medicine	(1903)	78.1
Kansas City Medical College	(1880)	98.1
Missouri Medical College	(1899)	88.5
Barnes Medical College	(1900)	91.8
St. Louis University	(1906) 80.2; (1908)	80.3
Columbia University College of Physicians and Surgeons	(1894) 88.1; (1909)	91.
Albany Medical College	(1907)	81.8
University and Bellevue Hospital Medical College	(1902)	82.1
Cornell University Medical College	(1903) 91; (1909)	91.8
Syracuse University	(1891) 78.9; (1898)	88.2
Cleveland Coll. of P. and S.	(1907) 75.7; (1911)	81.5
Western Reserve University	(1902)	82.2
Ohio Medical University	(1898)	77.8
Medical College of Ohio	(1896)	85.9
Medico-Chirurgical College of Philadelphia	(1904)	85
University of Pittsburgh	(1910)	83.9
University of Pennsylvania	(1902) 85.8; (1905) 78.7; (1906) 82.9; (1911)	83.9.
Jefferson Medical College	(1909)	82.4
Woman's Med. Coll. of Pennsylvania	(1908) 79.7; (1911)	92.4
Royal University of Turin, Italy	(1906)	78
Royal College of Phys. and Surgs., England	(1904)	90.5
University of Athens, Greece	(1902)	79.1
Royal College of Medicine, Edinburgh, Scotland	(1883)	85.2

FAILED

College	Year Grad.	Per Cent.
College of P. and S., Chicago	(1893) 31.1; (1895)	52.6
Northwestern University Medical School	(1880)	*77.2
Hering Medical College	(1910)	71
Rush Medical College	(1883)	65.8
Medical College of Indiana	(1902)	71.3
Sioux City College of Medicine	(1904)	58.6
College of Physicians and Surgeons, Keokuk	(1882)	64.2
University of Louisville	(1905)	56.8
Maryland Medical College	(1911)	51.5
College of Physicians and Surgeons, Baltimore	(1882)	54.9
Univ. of Michigan, Coll. of Med. and Surg.	(1892)	72.5
University of Minnesota, College of Medicine	(1903)	67.5
Medico-Chirurgical College of Missouri	(1903)	70.5
Missouri Medical College	(1898)	62.6
American Medical College, St. Louis	(1898)	62.4
Marion-Sims Beaumont Medical College	(1902)	67.4
St. Louis University	(1906)	69.5
Columbia Univ., Coll. of Phys. and Surgs.	(1896)	68.4
University of Oregon	(1905)	68.9
Meharry Medical College	(1904)	59.8
University of Nashville	(1909)	71.3
University of Athens, Greece	(1899)	59.7
Royal University of Naples	(1903)	51.2, 67.8

* Fell below 60 per cent. in one or more branches.

Book Notices

Technik der Thoraxchirurgie. Von Dr. F. Sauerbruch, Professor, Direktor der Chirurg. Universitätsklinik Zurich und Dr. E. D. Schumacher, Privatdozent, Assistent an der Chirurg. Universitätsklinik Zurich. Cloth. Price, 24 marks. Pp. 97, with 73 illustrations. Berlin: Julius Springer, 1911.

The work is divided into two parts, general and special. In the first part are considered the apparatus and instruments used, the preliminary preparation of the patient and the general technic of operating. The various devices which have been invented to permit respiration and anesthetization to be carried on when the chest cavity is open are illustrated and described and the advantages and disadvantages of each clearly set forth. As is well known, one of the authors, Sauerbruch, is the inventor of one of the devices and therefore favors the large operating chamber in which the patient is placed and in which the operator and his assistants work. The pressure in the chamber is diminished until the lung remains expanded when the chest is opened.

The other devices mentioned are so constructed as to permit the patient to breathe air under increased pressure so that the lung is kept distended. It is probable that all of these devices are too complicated and cumbersome to ever be widely used. The simpler method of insufflation of Meltzer and others is not described, as the authors say that they have had no experience with it. It is quite certain that the simpler methods are the ones which will eventually come into general use in operative work within the thorax.

In the special part are considered the various intrathoracic operations on the lungs, heart, esophagus, thymus gland, etc. The illustrations, most of which are full-page plates in colors, constitute an excellent feature of this part of the work. The work as it now stands simply presents a good description of the various devices used and of the classical operations which can be performed within the thorax. Much increased value would have been given to the work had some evidence been added in the shape of concrete cases, showing what had actually been accomplished in this line of work on the human subject.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second Series. Volume 16, Skinko-Stysanus. Cloth. Pp. 882. Washington, 1911.

The sixteenth volume of the second series of this index-catalogue contains 9,800 author titles, representing 4,670 volumes and 10,786 pamphlets, together with 3,892 subject-titles of separate books and pamphlets, and 24,135 titles of articles in periodicals.

Die Methoden der Untersuchung des Magens und ihre diagnostische Verwertung. Von Dr. Emil Schütz, Privatdozent an der Universität Wien. Paper. Price, $2.75. Pp. 240, with 29 illustrations. New York: Rebman Co., 1911.

This is a most interesting and complete monograph. It includes all of the various reliable methods which may be employed in the effort to establish a correct diagnosis of gastric disturbances. The various fallacies as well as the futility of many of these tests are pointed out and their bearing on the question of differential diagnosis is discussed at great length. An especially instructive section deals with the biologic methods applied to the diagnosis of carcinoma of the stomach and the point is well made that none of these are satisfactory. Other sections treat of the relation of the blood and urinary changes to gastric diagnosis and, also, of the application of Roentgen rays to such studies. The style is clear and concise. The methods discussed are the well-established ones. The illustrations, while adequate, might be much improved. This work is commended to those who may wish a book on methods of gastric diagnosis, which is especially complete and critical in its interpretation of the methods employed.

Medicolegal

Liability for Malarial Fever and from Unhealthful Nuisances

(A. Cohen & Co. vs. Rittimann (Tex.), 139 S. W. R. 59)

The Court of Civil Appeals of Texas first affirmed, then, on a rehearing, reverses a judgment for damages obtained by Rittimann for the death of a daughter from malarial fever complicated with asthma, which, as to the malarial fever, it was sought, in one way or another, to prove was due to the way that the defendant conducted the business of curing hides, filling the surrounding atmosphere with noxious odors and producing a pest of flies.

In its first opinion, the court said that unhealthiness, pain and sickness resulting from a nuisance are elements of damages, and those suffering in that way from a nuisance are entitled to recover therefor. The defendant may have had authority from the city to carry on the business of curing hides in the locality where he was engaged in such business, but the city did not, and could not, authorize him to engage in a business that would injure the lives, health or property of owners of property in the vicinity. And the fact that the plaintiff moved into proximity of the hideyard after it had been erected and the business was being carried on would not preclude him from a recovery of damages arising from the nuisance. Neither was it a defense that the business was a necessary one and useful to the public.

On the rehearing, the court says that the evidence indicated that the premises were not kept in as cleanly a condition as such places can be kept, and that the only question was whether it was shown that the stench and filth created by the defendant were a concurring cause with malaria in producing the death of the plaintiff's daughter. The court thought in delivering its former opinion that perhaps there was testimony on which a jury could find that the vile odors and stench were a concurring cause, but it now believes that the evidence was insufficient.

It was true that vast swarms of flies were bred about the hideyard and invaded the surrounding houses, and that one physician testified that "flies can communicate always anything that is carriable, that is transportable on their bodies"; but it cannot be inferred from that testimony that malaria, which is communicated through the veins and arteries, could be carried on the body of a fly, and communicated as is typhoid fever, an intestinal fever, by being deposited in food or drink, and by that means carried into the stomach and intestines. The medical theory of modern times is that a certain species of mosquito filled with malarial fever germs pricks the skin of a human being, inoculates the blood with the germs, and in due course of time the fever may appear. The court therefore infers that the witness did not intend to create the impression that malaria is borne by flies on their bodies, and by that means the disease is communicated to men, for the court understands it to be the theory, and one firmly established by the facts, that malaria is never communicated to a human being except through the medium of female anopheles, a species of mosquito. The evidence in this case tended to show that no mosquitoes were bred in or about the hideyard, but that they might have come from pools in a creek near the plaintiff's house, and that the plaintiff was not responsible for the malarial fever.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

United States Naval Medical Bulletin, Washington, D. C.

January 6. No. 1, pp. 1-160

1 Medical Man and Vital Statistics. J. D. Gatewood, U. S. N.
2 Plea for More Liberal Nomenclature for Naval Medical Service. A. W. Dunbar, U. S. N.
3 *Acid-Fast Bacilli in Circulating Blood of Lepers. G. B. Crow, U. S. N.
4 Relation of Second Hague Conference (1907) to Evacuation of Wounded in Naval Warfare. F. L. Pleadwell, U. S. N.
5 *Study of 3,268 Venereal Prophylactic Treatments. R. C. Holcomb and D. C. Cather, U. S. N.
6 Experience in Venereal Prophylaxis on Board U. S. S. *Georgia*, July 1, 1910, June 30, 1911. C. L. Moran, U. S. N.
7 Recent Advances in Prophylaxis and Treatment of Typhoid. M. W. Baker, U. S. N.
8 Naval Medical School Collections. P. E. Garrison, U. S. Navy.
9 Improved Cot for Hospital Ships and Sick Bays Aboard Ship. E. M. Blackwell, U. S. Navy.
10 Umbilical Hernia. H. F. Strine, U. S. Navy.
11 Case Resembling Gangosa in Which Treponema Pertenuis Was Present. P. S. Rositer, U. S. Navy.
12 Bunion Operations. A. M. Fauntleroy, U. S. Navy.
13 Late Positive Wassermann in Syphilis and Tuberculosis. W. B. Grove, U. S. Navy.
14 Salvarsan in Filariasis. G. F. Cottle, U. S. Navy.
15 Salvarsan in Frambesia. G. F. Cottle, U. S. Navy.

3. **Acid-Fast Bacilli in Circulating Blood of Lepers.**—Crow believes that leprosy bacilli may be found in the circulating blood of lepers in 80 per cent. of cases and possibly in every case, if sufficient care and diligence is used in the examination. The organism is in some cases extremely difficult to demonstrate. It is most easily found in the rapidly progressive tubercular type.

5. **Venereal Prophylactic Treatments.**—The 3,268 treatments for the prevention of venereal disease were given between May 1, 1910, and August 31, 1911. They are considered to be a fair index of the results of venereal prophylaxis. The treatment is as follows: 1. Wash the penis, head, shank and under frenum with 1-5,000 bichlorid of mercury solution with a cotton sponge. 2. Pass water. Take urethral injection of 2 per cent. protargol solution and hold to count 60. 3. Rub 50 per cent. calomel ointment well into foreskin, head and shank of penis, with particular care about the frenum. Treatment taken within eight hours after exposure in 1,385 cases shows nineteen infections, or but 1.37 per cent. In the interval of from eight to twelve hours after exposure in 741 cases shows twenty-five infections, or 3.31 per cent. Between twelve and twenty-four hours in 920 cases shows forty-six infections, or 5 per cent. Of the fifty-six cases of gonorrhea occurring in the first twenty-four hour interval, twenty-six were recurrent cases; the remaining thirty were primary infections. There were 1,385 exposures in which the treatment was taken within the first eight hours and among these men there were nineteen infections, or 1.37 per cent. There were 731 exposures in which the treatment was taken in the interval of eight to twelve hours after exposure and among these men there were twenty-five infections, or 3.41 per cent. There were 920 exposures in which the treatment was taken in the interval of twelve to twenty-four hours after exposure and among these men there were forty-six infections, or 5 per cent. In the first instance one man out of every 72.9 contracted an infection; in the second period one man out of every 30.2; in the third instance one man out of every twenty.

Maryland Medical Journal, Baltimore

December, LIV, No. 12, pp. 335-360

16 Breast Affections in 100 Cases. R. Winslow and N. Winslow, Baltimore.
17 Acetone in Inoperable Cancer of Uterus. A. Samuels, Baltimore.
18 Some Tendencies in Medical Education in United States. L. F. Barker, Baltimore.

January, LV, No. 1, pp. 1-26

19 Intravenous Administration of Salvarsan. S. H. Likes and H. Schoenrich, Baltimore.
20 Some Facts General Practitioner Ought to Know About Tonsils and Tonsil Operations. J. R. Winslow, Baltimore.
21 Prophylactic Inoculation Against Typhoid. F. W. Hachtel and H. W. Stoner, Baltimore.

Cleveland Medical Journal.

December, X, No. 12, pp. 970-1070

22 *Profuse Recurrrent Gastric Hemorrhage, with Description of Instrument for Viewing Gastric Interior at Operation. F. C. Herrick, Cleveland.
23 Application of Roentgenoscopy in Study of Intrathoracic Diseases. G. F. Thomas, Cleveland.
24 Orthodontia in Malformation of Dental Arches and Maxillæ. F. M. Casto, Cleveland.
25 Suppuration of Middle Ear with Some of Its Complications. S. H. Large, Cleveland.
26 Diagnosis of Acute Conditions of Upper Abdomen. J. Phillips, Cleveland.
27 Pharmacopeia from Therapeutic Standpoint. M. J. Lichty, Cleveland.
28 Acidosis. C. H. Lenhart, Cleveland.
29 Treatment of Stuttering and Stammering and Voice Defects Through Science and Art of Speech and Singing. B. Cadwallader, Cleveland.
30 Herpes of Larynx and Pharynx: Report of Case. D. A. Prendergast, Cleveland.
31 Use of Salvarsan. F. E. Cutler, Cleveland.

22. **Gastric Hemorrhage.**—After exposure of the stomach through as small an incision as feasible, Herrick places a purse-string suture an inch in diameter five or six inches from the pylorus. An incision is made, and the instrument, devised by him—a large direct vision cystoscope—is introduced and the purse-string tied about it with a bow knot sufficiently tight to prevent the escape of gastric contents. The light carrier is introduced, the eye-piece screwed on, the stomach slightly inflated, sufficiently only to keep its walls apart, the light turned on and the inspection begun. Herrick says that in this manner an ulcer or bleeding point of small size which would be discoverable otherwise only by chance can readily be found. This instrument is said to render inspection of the gastric interior far safer, without danger of soiling the peritoneum and with less injury to the stomach, than the usual method of inspection through a long anterior incision.

New Orleans Medical and Surgical Journal

December, LXIV, No. 6, pp. 411-490

32 Muscle Tucking Operation in New Orleans. T. J. Dimitry, New Orleans.
33 Administration of Nitrous-Oxid-Ether Sequence by Open Method. A. M. Caine, New Orleans.
34 Prolapse of Uterus. W. Kohlmann, New Orleans.
35 Epistaxis. A. I. Weil, New Orleans.

Journal of Infectious Diseases, Chicago

January, X, No. 1, pp. 1-128

36 *Pyemia Due to Anærobic Polymorphic Bacillus, Probably Bacillus Fusiformis. E. C. Rosenow and R. Tunnicliff, Chicago.
37 Cell Content in Milk. H. E. Ross, Ithaca, N. Y.
38 Bacillus Muris as Etiologic Agent of Pneumonitis in White Rats and Its Pathogenicity for Laboratory Animals. O. W. H. Mitchell, Columbia, Mo.
39 *Action of Staphylococcus Aureus on Klebs-Loeffler Bacillus. L. M. DeWitt, St. Louis.
40 Generalized Infection with Diphtheroid Organism. L. M. DeWitt, St. Louis.
41 Fixation of Soluble Antigen by Tissues. R. T. Pettit and A. J. Carlson, Chicago.
42 *Antipneumococcal Powers of Blood in Pneumonia. H. E. Eggers, Chicago.
43 Venom Hemolysis. v. Dungern and A. F. Coca, New York.
44 A Plague-Like Disease of Rodents Caused by Bacterium Tularense. G. W. McCoy and C. W. Chapin, U. S. P. H. and M.-H. S.
45 Outbreak of Tonsillitis or Septic Sore Throat in Eastern Massachusetts and Its Relation to Infected Milk-Supply. C. E. A. Winslow, New York.
46 *Production of Anaphylatoxic Substances by Autolysis of Bacteria and Their Relations to Endotoxins. E. C. Rosenow, Chicago.

36. **Pyemia Due to Anaerobic Polymorphic Bacillus.**—The authors believe that it has been their good fortune to see the first fatal general infection caused by the *Bacillus fusiformis*. The essential facts of the clinical history are as follows: The patient, a middle-aged man, died from pyemia following an attack of appendicitis. Early operation was refused. An operation five weeks later revealed a small pericecal abscess containing a sloughed appendix. Drainage at this time failed to check the septic temperature which the patient had had for some time previously and which continued until death six weeks later. Repeated blood examinations showed a leukocytosis of from 14,000 to 22,000. Three blood cultures were negative. Of these the third was kept under anaerobic conditions. A number of needle punctures of the liver failed to show liver abscess. One month before death metastatic abscesses began to appear over the thigh and tibia and two weeks before death the patient coughed up a large amount of a foul smelling pus. Microscopic examination of stained smears of the pus obtained from the abscess of the tibia before and after death, from a large abscess in the left lung and a retrocecal abscess after death and from infarcts, showed an organism which proved to be the *Bacillus fusiformis*.

39. **Action of Staphylococcus Aureus.**—Test-tube experiments by DeWitt with fifteen different strains of Klebs-Loeffler bacilli show that there is no inherent antagonism or incompatibility between *Staphylococcus aureus* and the Klebs-Loeffler bacillus. Experiments on animals with twenty-four different strains of diphtheria organisms show that in 40 per cent. of the cases the animals treated with *Staphylococcus aureus* got rid of their diphtheria organisms more quickly than did the untreated animals, while in 60 per cent. the cultures gave Klebs-Loeffler bacilli either the same time or longer. The clinical symptoms on the other hand were less severe in only 32.5 per cent. of the animals treated with staphylococcus; as in the six patients treated by Schiotz and the one by Page, the throat culture in his cases which had been persistently positive for Klebs-Loeffler bacilli quickly became negative. It would therefore seem advisable and effective to treat slowly convalescing diphtheria cases and diphtheria carriers with *Staphylococcus aureus* culture.

The animal experiments would indicate that a certain percentage of acute cases might clear up more quickly under the staphylococcus treatment than under the ordinary antiseptic treatment. The animal experiments, however, also indicate that it would not be always altogether safe and frequently not successful to use the staphylococcus treatment before the mucous membrane of the throat has become intact so that it may protect the patient against invasion of the deeper tissues by the pyogenic organisms; hence it seems to DeWitt that the treatment should not be used in acute cases, as Page advises, but only in those in which the diphtheria bacilli persist after the throat has healed and the patient is clinically well. Two negative cultures are not always sufficient for a discharge, especially after this treatment, as the diphtheria bacilli may reappear after an apparent disappearance. The reason for the apparently favorable action of *Staphylococcus aureus* on chronic diphtheria cases seems to be, not an antagonism or incompatibility between the two organisms, but an effort to reinforce the favorable, friendly throat flora in the cases in which they are unable to regain their natural, normal ascendency.

42. **Antipneumococcal Powers of Blood in Pneumonia.**—In most of the cases of lobar pneumonia studied by Eggers, he obtained by the plate method distinct evidence of increased antipneumococcal power, as a rule, greatest at or just after the onset of crisis, and lasting for variable periods afterward. He concludes that the antibodies are apparently in part at least opsonins and their activity can be manifested in proper circumstances even with organisms of some degree of virulence. The cases in which this apparently characteristic increase of antipneumococcal power did not occur presented irregularities either in course or termination.

46. **Production of Anaphylatoxic Substances.**—Rosenow found that when the *Streptococcus pyogenes*, the *S. mucosus*, the meningococcus, the gonococcus, the typhoid bacillus, the colon bacillus, and the spirillum of Metchnikoff are suspended in sodium chlorid solution the latter becomes very toxic at a certain period of autolysis. The time the acutely toxic substance appears in solution is directly proportionate to the activity of the autolytic ferment and the rate of disintegration of the microorganisms. In case of the *S. aureus*, in which little or no proteolysis took place, no toxic effect could be obtained with extracts in sodium chlorid solution alone, but when treated with washed leukocytes or serum the toxic substance is readily brought in solution. Extracts of the pyocyaneus bacillus, while toxic, never killed by producing symptoms resembling anaphylaxis. The symptoms and postmortem appearances produced by the injection of the previously formed bacterial anaphylatoxic substance, whether by autoly-

sis in sodium chlorid solution, or by the action of leukocytes, or by treatment with immune and then with normal serum, or by a combination of these methods, either in the peritoneal cavity of guinea-pigs, or by the injection of filtrates of serum and serum broth cultures when proteolysis has reached a certain stage and the immediate symptoms and changes following the second injection of protein in sensitized guinea-pigs, are identical. The acute death in each instance is asphyxia due to bronchial spasm.

Journal of Oklahoma State Medical Association, Muskogee

January, IV, No. 8, pp. 317-354

47 Treatment of Pelvic Abscess. W. E. Dicken, Oklahoma City.
48 Preventable Causes of Death in Early Infancy. E. V. Davis, Chicago.
49 Nasal Obstructions. J. H. Barnes, Enid.
50 Place of Psychotherapy in Healing Art. A. H. Steward, Lawton.
51 Successful Obstetrician. G. R. Gordon, Wagoner.
52 Value of Uterine Hemorrhage as Symptom. J. A. Hatchett, El Reno.

Journal of Nervous and Mental Disease, Lancaster, Pa.

January, XXXIX, No. 1, pp. 1-72

53 *Malignant Chordoma, Involving Brain and Spinal Cord. S. E. Jelliffe and J. H. Larkin, New York.
54 Tumor Involving Base and Substance of Left Temporal Lobe. F. X. Dercum, Philadelphia.
55 *Differential Diagnosis Between Manic-Depressive Psychosis and Dementia Præcox. A. Gordon, Philadelphia.

53. **Malignant Chordoma.**—This is said to be the seventh fatal case on record. A young woman, 36 years of age, with negative heredity, no history of infection and in previous good health, suddenly developed sixth nerve palsy on left side. She then had headache and pains in the region of the left trigeminus, then developed total internal and external ophthalmoplegia and signs of pressure on the optic tracts with blindness first in one eye and then in the other, with marked bulbar chemosis of the left eye. There was a loss of tendon reflexes of both lower extremities. This was the situation after four months when the first complete examination was made that indicated the presence of a foreign body pressing on the structures at the base of the brain. There was gradually increasing somnolence, with confusion and dreamy delirium; then a left facial palsy came in and a total left hemiplegia with hemianesthesia within the next month. Fifth nerve palsy supervened, both sensory and motor, of the left side, and there was a gradually developing paraplegia, with total loss of all functions. Involuntary urination and defecation were constant. To the marked left-sided chemosis there were added an equally persistent right-sided chemosis and right ptosis and some slight impairment of hearing. Hallucinations of sight, of hearing and finally of smell developed. Vomiting was irregularly present throughout. Finally, there was a sanguineous discharge from the right nostril, and after eight months of patient and terrible suffering, the patient died exhausted.

The autopsy, of the brain only, was performed the same evening and showed a tumor formation, which at first was taken to be a degenerated myosarcoma, but which, on microscopic examination proved to be a chordoma.

55. Abstracted in The Journal, July 19, 1911, p. 418.

Bulletin of Medical and Chirurgical Faculty of Maryland, Baltimore

January, IV, No. 7, pp. 105-120

56 In These Days of Specialism What Is Left for the General Practitioner? W. T. Watson, Baltimore.
57 Specialism from Obstetrician's Point of View. J. M. H. Rowland, Baltimore.
58 Specialism from Standpoint of the Laryngologist. R. H. Johnston, Baltimore.
59 Specialism as Viewed by the Ophthalmologist. H. Harlan, Baltimore.
60 Specialism as Viewed by a Surgeon. R. B. Warfield, Baltimore.

Philippine Journal of Science, Manila

October, VI, No. 4, pp. 259-341

61 Comparative Study of Amebæ in Manila Water-Supply in Intestinal Tract of Healthy Persons and in Amebic Dysentery. E. L. Walker, Manila.
62 *Immunity Reactions with Amebæ. A. W. Sellards, Manila.
63 *Typhoid in Philippine Islands. W. P. Chamberlain, Manila.
64 Wassermann Reaction in Syphilis, Leprosy and Yaws. H. D. Bloombergh, Manila.

62. **Immunity Reactions With Amebæ.**—The injection of cultures of amebæ into rabbits by Sellards resulted in the production of serum which was cytolytic for amebæ. This serum possessed only a low grade of activity. No inactivation resulted after exposure to a temperature of 60 C. for periods varying from thirty minutes to three hours, or 70 C. for thirty minutes. However, the antibodies of the serum were not proved to be thermostable, since normal serum became active when heated for one hour at 60 C. Of the sera produced by four cultures of amebæ obtained from parasitic and from saprophytic sources each serum was cytolytic for the corresponding culture but not for the other three. This specificity indicates that these amebæ are biologically distinct. Subsequent examination showed that these amebæ are also distinguishable from each other on a morphologic basis. Examination of the sera of amebic dysentery patients failed to demonstrate any production of immune bodies for amebæ during the course of the disease. However, the method which was employed was not satisfactory when applied directly to amebæ occurring in bloody mucous stools. Consequently, the results do not represent any reaction on amebæ which are known to be pathogenic. Tests on cultures of amebæ did not give any definite evidence of the presence of either cytolysins or agglutinins in the patient's serum. Sellards says that unfortunately these results do not lead to any definite conclusion but merely indicate that either immune bodies were not produced or that the cultures under consideration do not bear any etiologic relationship to amebic dysentery. Certainly there is no evidence of pathogenicity; on the other hand, there is nothing but negative evidence indicating their harmlessness.

63. **Typhoid in Philippines.**—This extended and thorough study by Chamberlain is summarized as follows: Typhoid is a widely scattered and common disease in the Philippines; its incidence in Manila is above the average rate for the United States and is exceeded by only a few of the worst American cities; the average admission rate among American soldiers in the Philippines exceeds that for the troops serving in the United States; medical officers from many regions report its frequent occurrence among the Filipinos. The statistics from the Filipino (native) Scouts show a much lower typhoid rate than for white troops, possibly due to failure to diagnose the atypical cases. Widal reactions performed on the blood of 591 healthy Filipinos suggest a comparatively recent attack of typhoid in about 6 per cent. of adults, but do not indicate that the disease is prevalent in childhood. Many epidemics have occurred among soldiers in the Philippines and three outbreaks among natives have been studied. Epidemics of great severity among the Filipinos are either rare or unnoticed. The occurrence of the disease in the Philippine Islands is quite evenly distributed throughout the year. The incidence is least in the second quarters. The appearance of the Widal reaction in typhoid fever in the Philippines is not as a rule delayed. Paratyphoid organisms are occasionally isolated in the Philippines. The leukocyte count in typhoid remains normal for whites and is slightly increased for natives. The differential count is normal for both races. The mortality for white troops in the Philippine Islands during the last five years has been no higher than at home. It appears somewhat higher for Filipinos but this may be due to failure to diagnose all the mild cases. More than a third of the cases of enteric fever, whether among Americans or Filipinos, are entirely atypical and cannot be diagnosed without laboratory methods. Chamberlain says that over one-half of the cases occurring in the Philippine Islands can be diagnosed clinically and differ in no essential particular from typhoid as seen at home. This is true for both American and Filipino cases.

Mississippi Medical Monthly, Vicksburg

January, XVI, No. 9, pp. 169-188

65 Etiology and Treatment of Eclampsia. J. L. Andrews, Memphis, Tenn.
66 Conservative Treatment of Ruptured Kidney; Recovery. A. W. Rhyne, Beulah.
67 Case of Purpura Rheumatica with Diplococci in Lesion. W. B. Johnson, Greenville.
68 Cranial Surgery. J. W. Barksdale, Winona.

St. Paul Medical Journal, Minn.

January, XIV, No. 1, pp. 1-72

69 Last Illness of Lord Byron: Study in Borderland of Genius and Madness, of Cosmical Inspiration and Pathologic Psychology. J. Knott, Dublin, Ireland.
70 Four Cases of Bilateral Abductor Paralysis of Vocal Cords. H. A. Beaudoux, St. Paul.

West Virginia Medical Journal, Wheeling

January, VI, No. 7, pp. 219-256

71 *Analysis of Cases of Goiter. S. McGuire, Richmond, Va.
72 Recent Surgical Progress. S. M. Mason, Clarksburg.
73 Surgical Shock and Other Distressing Diseases Following Abdominal Operations. A. K. Kessler, Huntington.
74 Lodge Practice and Means of Abolishing It. J. N. Osburn, Martinsburg.
75 Hypnotism as Therapeutic Agent. H. R. Fairfax, McComas.
76 Value of Early Diagnosis in Cases of Mental Disease. J. R. Bloss, Huntington.
77 Sphygmomanometer in Life Insurance. J. L. Dickey, Wheeling.

71. **Analysis of Goiter.**—Of the twenty-three cases in which McGuire operated, three were men and twenty women. The youngest patient was 17 and the oldest 53, the average age being 30. Twelve cases were simple goiter causing only mechanical symptoms. Eleven were of the exophthalmic type attended by marked symptoms of hyperthyroidism. In three cases the operation was on the left lobe, in seventeen on the right lobe and in three on both lobes. The anesthetic employed was cocain in one case, chloroform in five cases and ether in seventeen cases. Cocain was used in the one instance because the patient was obese and had a bad heart. Chloroform and ether were used with equal satisfaction in the other twenty-two cases, the choice of the agent being determined by who was to give it. One patient had some huskiness of the voice for several days. One patient had infection from imperfect drainage of a large cavity left after the dislocation of an intrathoracic goiter. One patient had a severe hemorrhage shortly after recovery from the anesthetic, requiring the wound to be reopened and the bleeding arrested. Two patients had hyperthyroidism, one mildly, the other sharply. They were both over it in thirty-six hours. The average time taken to complete the operation was thirty minutes, the average confinement to bed was seven days, and the average stay in the hospital was two weeks.

The final results were complete cure in the twelve cases of simple goiter where the symptoms were due to mechanical pressure. In the eleven cases of exophthalmic goiter the results were very satisfactory; the exophthalmos or prominence of the eyes was improved in the early cases, but not materially changed in the advanced cases. The nervousness, tremor and rapid heart action were apparently cured in nine cases and markedly improved in the remaining two. Sufficient time has not yet elapsed for them to have received the full benefit of the operation.

Louisville Monthly Journal of Medicine and Surgery, Ky.

January, XVIII, No. 8, pp. 225-256

78 Iodin as Antiseptic. W. O. Roberts, Louisville.
79 Chloroform Habit. A. G. Browning, Maysville, Ky.
80 Hemorrhage in Typhoid. W. F. Boggess, Louisville.
81 Pellagra: Plea for Early Diagnosis. J. D. Trawick, Louisville.

Therapeutic Gazette, Detroit

January 15, XXVIII, No. 1, pp. 1-76

82 Influence of Caffein on Mental and Motor Efficiency. H. L. Hollingworth, New York.
83 *Effects of Caffein on Circulatory and Muscular Systems. H. C. Wood, Philadelphia.
84 Recognition and Treatment of Gonorrheal Infection of Uterus and Its Adnexa. W. E. Ashton, Philadelphia.
85 Treatment of Gonorrheal Complications with Gonorrheal Vaccine Combined. J. L. Boehm, St. Louis.

83. **Effects of Caffein on Circulatory and Muscular Systems.**—The results of Wood's study of the action of caffein on the circulation may be summed up as follows: In therapeutic doses caffein has comparatively little influence on the circulation, but it slightly increases the force of the cardiac contractions, thereby causing some elevation in the general pressure. The pulse-rate is usually not markedly affected, but such change as is produced is rather a retardation than an acceleration. His conclusions concerning the action of caffein on the motor system are: It acts as a stimulant to the reflex centers in the spinal cord; it enables muscle to contract more vigorously without producing a secondary depression, so that the sum total of muscular work which can be done by a man under caffein is greater than that done without it.

Journal of Medical Society of New Jersey, Orange

January, VIII, No. 8, pp. 391-448

86 Calcium Sulphid in Infectious Diseases. J. E. Pratt, Dumont.
87 Estimation of Functional Activity of Kidneys. J. C. Tull, Atlantic City.
88 *Acute Suppurative Otitis Media. G. H. Ward, Englewood.
89 Internal Diseases of Eye. E. J. Marsh, Paterson.
90 Henoch's Purpura. G. F. Boehme, New York.
91 Causes of Postoperative Complications and Early Voluntary Muscular Movements, with Avoidance of Usual Confinement to Bed as Means of Combating Them. W. F. Burrows, New York.
92 High-Frequency Current as Therapeutic Agent. A. C. Geyser, New York.

Medical Herald, St. Joseph, Mo.

December, XXX, No. 12, pp. 531-590

93 Origin and Nature of Exophthalmic Goiter. G. W. Crile, Cleveland.
94 Plea for Early Scientific Examination in All Cases. D. Macrae, Council Bluffs, Iowa.
95 Perineal Prostatectomy. J. T. Axtell, Newton, Kan.
96 Ticks and Calcium Sulphid. R. Powell, East St. Louis, Ill.
97 Chloretone in Control of Anesthesia Sequelæ; Study of Thirty-Nine Cases. W. S. Royce, Chicago.

January, XXXI, No. 1, pp. 1-50

98 *Working Bulletin System and Board of Control Plan for Collecting Evidence Concerning Newer Materia Medica. F. E. Stewart, Philadelphia.
99 Cuba. F. B. Tiffany, Kansas City, Mo.
100 Advantages of Malt Sugar Over Lactose in Infant Feeding. F. C. Neff, Kansas City, Mo.
101 Open Method of Treating Fractures. O. B. Campbell, St. Joseph, Mo.

98. **Working Bulletin System and Board of Control.**—Stewart proposes a board of control and suggests that the personnel of this board be the same as the present committee for the revision of the U. S. Pharmacopeia. The duties of this board to be: (1) The censorship of the advertisements of the medical and pharmaceutical journals. (2) To censor all literature from manufacturing houses, including labels. (3) To determine what materia medica products shall be placed on the market. (4) To determine the therapeutic value of products by collective investigation as represented by the working bulletin system. (5) To cooperate with the Patent Office in the interpretation, application and enforcement of the patent and trademark laws relating to materia medica.

Virginia Medical Semi-Monthly, Richmond

January 12, XVI, No. 19, pp. 469-496

102 *Relation of Medical Profession to People. J. C. Wilson, Philadelphia.
103 Treatment of Tuberculosis in Home. J. J. Llyod, Lynchburg.
104 Tonsillectomy. L. T. Royster, Norfolk.
105 Cases Treated with Salvarsan. L. T. Price, Richmond.
106 Railway Injuries and Their Treatment. C. W. Doughtie, Norfolk.
107 Doctor Moses. T. W. Murrell, Richmond.
108 Physician's Duty to People. M. L. Dalton, Floyd.

102. Abstracted in The Journal, Nov. 11, 1911, p. 1638.

Archives of Internal Medicine, Chicago

January, IX, No. 1, pp. 1-127

109 Curability of Idiopathic Epilepsy. L. P. Clark, New York.
110 Criticism of Uskoff Sphymotonograph. J. Erlanger, St. Louis.
111 *Infantilism in Hypophysis Disease. A. W. Hewlett, Ann Arbor, Mich.
112 *Persistent Patency of Ductus Arteriosus Botalli in Dog. C. Brooks, Pittsburgh.
113 *Variations in Concentration of Blood as Affecting Opsonic Index. H. C. Jackson, New York, and C. B. Hawn, Albany, N. Y.
114 *Study of Blood and Feces Before and After Bilateral Nephrectomy and Double Ureteral Ligation and of Urine Secreted After Reimplantation of Ureters. H. C. Jackson and T. Saiki, New York.
115 *Levulosuria. S. Strouse and J. C Friedman, Chicago.
116 Blood-Pressure-Raising Substance of Adrenals in Acute Adrenal Insufficiency. J. V. Cooke, New Orleans.
117 *Determination of Individual Dosage in Tuberculin Therapy. W. C. White and K. H. Van Norman, Pittsburgh.

111. **Infantilism in Pituitary Disease.** Three cases are reported by Hewlett to show that the infantilism associated with disease in or near the pituitary gland may resemble either the Brissaud or the Lorain type of infantilism. A constantly low specific gravity of the urine in patients with such disease may be the equivalent of a mild diabetes insipidus.

112. **Persistent Patency of Ductus Arteriosus Botalli in Dog.**—The whole pathologic condition of the animal studied by Brooks is that of a widely patent duct of Botal which acted as a short circuit in the aortic circulation, but which was so

well compensated that there resulted no serious impairment of the general health or comfort of the animal. This agrees with the findings of others on man that the prognosis in persistent patency of the duct of Botal is good. Therefore, an effort should always be made to differentiate between aneurysm and patent duct of Botal on account of the difference in prognosis. From Brooks' experience with this animal it would seem that when necessary to administer an anesthetic to a patient with compensated patent duct, there need be no extraordinary precautions, for this dog showed even more than usual resistance to the effects of ether.

113. **Concentration of Blood Affecting Opsonic Index.**—The facts brought out by Jackson and Hawn in their experiments bring into prominence certain factors which bear on the accuracy and variability of the opsonic index. As a result of experimentally altering the concentration of the blood, great variations in the opsonic index made their appearance.

Variations in the physical factors of the blood were produced by the ingestion of water (dilution) or of magnesium sulphate (concentration). Decreased concentration of the blood showed itself by a lowering of the values for specific gravity and viscosity, and an increase in the electrical conductivity. Increased concentration brought about a reversal of these changes. The authors conclude, therefore, that a large portion of the so-called normal variations in the opsonic index are due to changes in the physical characteristics of the blood, and other variations in disease may be explained in part, in a similar manner. These results should also lead us to inquire whether the variations in opsonic index brought about by the injection of vaccines, with the assumed increase in the amount of opsonins in the blood, have not as their basis alterations in the physical factors of the blood; and whether the preparation of the bacteria, so that they may be more readily engulfed by the white cell, may not consist in a large part in changing the surface tension of the system consisting of white cells, substrate and suspension. The authors believe that much experimental work performed along these lines indicates that the latter explanation is probably true.

114. **Blood and Feces After Kidney and Ureter Operations.**—It was found by Jackson and Saiki that when all the various conditions of the experiment (diet, lack of infection, etc.) remained constant, there appeared to be a slight tendency on the part of the animals with both kidneys removed to survive the operation for a longer period than was the case in double ureteral ligation. The analysis of the blood following both operative procedures showed no differences which could account for this. The molecular concentration of the blood increased after both operations until death. The electrical conductivity and chlorid content of the blood, after a temporary rise on the day following the operation, progressively decreased. Hence, the rise in concentration was brought about by an increase in organic substances mainly nitrogenous and noncoagulable in character, as was shown by the blood analysis. Following both operations, the blood becomes more venous, with a resulting increased viscosity due to carbon dioxid and the time of coagulation is increased. No vicarious elimination of water, uric acid or purin bases occurs into the intestine. The urine secreted after the reimplantation into the bladder of the ligated ureters was of a character which did not indicate great renal changes. The variations might be explained by the altered condition of the blood and tissues. The secretion was somewhat low in chlorids on account of low content of chlorids in the blood at that time, high in total nitrogen but low in ammonia nitrogen. The sulphates showed an irregularity which might be construed as pointing to cellular dyspnea. Hydremia does not occur as the result of either operative procedure, and no evidence of edema was ever present. In fact, the tissues at autopsy appeared drier than the normal.

115. **Levulosuria.**—The case of levulosuria cited by Strouse and Friedman belongs to the rare class of spontaneous alimentary levulosurias in which the levulose is derived only from ingested levulose or higher carbohydrates splitting off levulose. The disturbances in the nervous system and in the secondary sexual characteristics of this patient point to a disturbance of function of one or more of the ductless glands. There was no glycosuria present at any time. The authors hold that glucose has no effect on the excretion of levulose, nor is there any diminished tolerance for glucose. The appearance of levulose in the urine is probably due to a partial inability to convert levulose into glycogen, which, according to present conceptions, is a hepatic function. Consequently a constant proportion of levulose in the diet is excreted as such.

117. **Individual Dosage in Tuberculin Therapy.**—The method outlined by White and Van Norman in a former paper was first to determine the sensitiveness of the individual to tuberculin by using on the skin a definite quantity of varying dilutions of tuberculin; then, having arrived at the dilution which, with a given technic, would give a minimal cutaneous reaction around the point of scarification, to determine on this basis the quantity of tuberculin which could be given subcutaneously to produce a reaction of required degree. They call a minimal cutaneous reaction one which gives redness, with some induration, measuring exactly 4 mm. in diameter within seventy-two hours. They have found very few cases in which it is necessary to give only one test to determine the minimal cutaneous reaction, and during the past year all cases of tuberculosis which came under their observation have given minimal cutaneous reaction to 5 per cent. or less.

The past year's work has increased their conviction that it is possible to determine the quantity of tuberculin on the basis of the minimal cutaneous reaction which will give the same result in any group of patients requiring tuberculin treatment, even though these patients differ in their sensitiveness in wide degree. The reaction response having been determined to an individual dose of tuberculin in any given patient, this patient continues to react in the same way to the same dose given every fourteen days for periods as high as twenty-one months, which is the longest time any individual has had tuberculin under this method, and the vast majority of patients continue to react in the same way to the same dose given every fourteen days, without change in the character of the reaction. In a few cases which have been under observation during active disease and arrested disease (National Association Classification) they have found that these cases lose their sensitiveness to tuberculin after becoming arrested, and that increasing doses may be given every fortnight with the same or diminishing local reaction as obtained formerly by the therapeutic dose determined on the minimal cutaneous reaction basis. The variation in the quantity of tuberculin necessary to produce the same grade of reaction in all cases is 100 times. It is not possible to determine by the extent of disease, age or condition of the patient the principle underlying this variation. The administration of tuberculin in doses which produce these mild (local) reactions has given the best results of any method of tuberculin therapy used by the authors.

Delaware State Medical Journal, Wilmington

January, III, No. 2, pp. 1-34

118 Cholecystitis. L. S. Conwell, Camden, Del.

Boston Medical and Surgical Journal

January 18, CLXVI, No. 3, pp. 75-114

119 *Gas Bacillus as Agent of Intestinal Fermentation and Diarrhea. H. F. Hewes and A. I. Kendal, Boston.
120 *Treatment of Tuberculous Adenitis. J. B. Hawes, Boston.
121 Nitrous Oxid-Oxygen Anesthesia, with Description of New Apparatus. W. M. Boothby, Boston.
122 *Relation of Thigh and Leg Muscles to Malpostures of Feet. C. L. Lowman, Los Angeles.
123 Hemorrhage from Throat. A. C. Getchell, Worcester, Mass.

119. **Gas Bacillus in Intestinal Fermentation and Diarrhea.**—That the association of the gas bacillus in excessive numbers with acute infectious diarrhea of the clinical type of dysentery occurs in adults as well as children is shown by a number of cases reported by Hewes and Kendal. The importance of determining the presence of such an association is emphasized by the fact that the treatment is governed thereby.

In the study of cases of bacillary dysentery due to the Shiga or Flexner bacillus it has been determined that these cases do better clinically, run a less toxic course, and tend to improve more rapidly, if the patient is given a diet containing considerable quantities of carbohydrate in a form which is easily utilized by these special intestinal bacteria, lactose, for example, lactose being broken down in the lumen of the intestinal membrane where these invading bacteria have their principal field of activity.

Results obtained in the treatment of the cases of dysentery in which the gas bacillus was found in large numbers have, on the other hand, indicated not only that these cases do not improve on a diet containing much sugar, as in the Shiga and Flexner cases, but that the diarrhea is apparently much augmented by such a diet, the most efficacious treatment for these cases being a proteid diet, or at least a diet containing little carbohydrate, or, in the cases of infants who cannot take a pure proteid diet well, a special diet of buttermilk. Whatever action the administration of buttermilk has on the course of these cases of gas bacillus diarrhea is explained hypothetically on the theory that the buttermilk provides preformed lactic acid in the intestine in considerable amounts, at one time, more than occurs there as the result of ordinary bacterial action in the intestine, or that the acid-forming bacteria of the milk increase lactic acid formation to an extent sufficient to lessen the action of the gas bacillus. There is in the study of the records of cases of acute infectious diarrhea, (1) a certain amount of evidence that the gas bacillus is an etiologic factor in the causation of certain cases of acute infectious diarrhea having the clinical character of acute dysentery, and (2) very definite evidence that this organism, whether or not a first cause in the production of this pathologic condition, is capable, if the proper food materials are present in the intestine in these cases, of acting as an agent in the production of fermentation in the intestine and in the production of diarrhea.

120. **Treatment of Tuberculous Adenitis.**—This paper is based on a study of fifty-six patients with various forms of tuberculous adenitis who have been under Hawes' supervision during the past five years at the Out-Patient Department of the Massachusetts General Hospital and in private practice. Tuberculin is given according to the rules laid down by Trudeau. Hawes uses a bouillon filtrate kindly supplied from the Saranac Laboratory; its administration has been carried on under Dr. Trudeau's directions and supervision. The initial dose is very small, 1-10,000 to 5-10,000 mgm.; this is gradually increased up to 5 to 10 mgm. In rare instances Hawes continues injections up to 15 to 20 mgm. Reactions are avoided whenever possible. In the majority of instances, whenever the intelligence of the patient admits of it, careful record is kept of the temperature and pulse taken at 8 a. m., 12 m., 4 p. m. and 8 p. m. When the patient cannot do this, Hawes depends on the clinical signs and symptoms as guides for dosage. Surgery is made a consideration secondary to the general treatment of the patient. Patients with broken-down glands, discharging sinuses, etc., are sent to the surgical department for proper dressings; glands which break down and become fluctuant are sent to the surgeon to be incised and evacuated. In a few instances when, after a prolonged and thorough treatment with hygiene and tuberculin, enlarged glands still remain, while the general condition of the patient has been raised to the highest possible point, excision is advised.

A summary of these cases shows that of the total number —fifty-six—there were: twenty-one apparently cured; six arrested; ten much improved; six improved; thirteen not improved or not considered. Of the twenty-one children, 15 years or under, ten were apparently cured, four arrested, two much improved and two improved. The great number of failures to improve were among the adults, and of these there were only two or three in which there was failure to improve after systematic and prolonged treatment with cooperation on the part of the patient. Hawes claims that most of the failures were due to the fact that the patients moved away or did not think it worth while to continue.

122. **Relation of Thigh and Leg Muscles to Malpostures of Feet.**—The author concludes that positions of the knee and thigh in relation to the weight line and as affected by the action of the external rotators of the thigh have a marked effect on that malposture of the foot known as "pronation" or valgus.

Colorado Medicine, Denver

January, IX, No. 1, pp. 1-34

124 Infantile Paralysis; Etiology and Pathology. P. Hillkowitz, Denver.
125 Infantile Paralysis; Prophylaxis and Treatment. J. W. Amesse, Denver.
126 Locomotor Ataxia, with Special Reference to Visceral Crises. J. N. Hall, Denver.
127 Brain Decompression. E. F. Rott, Salt Lake City, Utah.

Journal of Biological Chemistry, Baltimore

January, X, No. 6, pp. 433-551

128 Utilization of Proteins of Legumes. L. B. Mendel and M. S. Fine, New Haven, Conn.
129 How Do Isotonic Sodium Chlorid Solution and Other Parthenogenic Agents Increase Oxidation in Sea Urchin's Egg? J. F. McClendon and P. H. Mitchell, Woods Hole, Mass.
130 *Creatin and Creatinin Metabolism. C. G. L. Wolf, Heidelberg, Germany.
131 *Creatin and Creatinin Metabolism in Dogs During Feeding and Inanition, with Special Reference to Function of Liver. C. Towles and C. Voegtlin, Baltimore.
132 Catabolism of Histidin. H. D. Dakin and A. J. Wakeman, New York.

130. **Creatin and Creatinin Metabolism.**—Wolf believes that the explanation for the excretion of creatin in the urine will not be found to reside alone in a disturbance of the carbohydrate metabolism, nor in a disturbance of the liver, but that other processes are contributing to this end.

131. **Id.**—According to Towles and Voegtlin the more or less constant excretion of creatinin in an animal on a fixed diet is explained by the constancy of the three factors which determine it, viz., production in the course of catabolism, destruction through the action of enzymes and kidney secretion. In the dog creatinin and creatin are not true end-products of metabolism. That portion of these substances which appears in the urine is due to the fact that it is excreted by the kidney before destruction occurs. It is shown that the liver does not play the important rôle in reference to the creatin metabolism that has been ascribed to this organ. The occasional appearance of creatin in the urine after creatin administration as well as the occasional increase of urinary creatinin after creatin administration, suggests the possibility of creatinin hydrolysis being a reversible reaction in the animal organism.

Medical Fortnightly, St. Louis

December 11, XXXX, No. 11, pp. 497-518

133 Principles Underlying Treatment of Visceroptosis. W. M. Thompson, Chicago.
134 Cholecystitis. J. M. Bell, St. Joseph, Mo.
135 Neuralgia of Fifth Nerve. T. G. Stephens, Sidney, Iowa.
136 Therapeutics of Tuberculosis. W. Porter, St. Louis.

January 10, XLI, No. 1, pp. 1-20

137 Rheumatism. E. D. Holland, Hot Springs, Ark.
138 Pathology that Remains After Non-Surgical Treatment of Inflammation in Abdominal Cavity. J. W. Cokenower, Des Moines, Iowa.
139 Typhoid Vaccination. J. S. Gaumer, Fairfield, U. S. A.

Interstate Medical Journal, St. Louis

January, XIX, No. 1, pp. 1-92

140 Anatomy and Physiology of Heart and Their Bearing on Diagnosis and Treatment of Cardiac Arhythmias. T. E. Satterthwaite, New York.
141 Paget's Osteitis Deformans; Report of Case. R. Lyons, New Orleans.
142 Division of Auditory Nerve for Persistent Tinnitus; Operation; Recovery. E. B. Dench, New York.
143 Acute Poliomyelitis in Iowa. W. L. Bierring, Des Moines, Iowa.
144 The Cancer Problem. L. Loeb, St. Louis.
145 Chylothorax; Report of Case. L. Sale, St. Louis.
146 *Uric Acid Excretion in Migraine. A. C. Croftan, Chicago.
147 *Two Cases of Aortic Aneurysm Mistaken for Asthma; Absence of Pulsation, Thrill and Bruit; Diagnosis by Inspection, Confirmed by Roentgenogram. S. Solis-Cohen, Philadelphia.

146. **Uric Acid Excretion in Migraine.**—This contribution concerns itself with a study of the uric acid (plus the purinxanthin bases, forming about 10/12 per cent. of the total purins) metabolism in three cases of typical migraine performed in patients of a high degree of intelligence, whose cooperation was willingly secured to carry out tedious dietary restrictions and to collect a series of twenty-four hours' urines for a considerable period of time. Croftan submits the results simply as a chronicle of fact without comment; as an observation and not as an argument. The perversion of the uric acid secretion observed in all these cases is presumably a

symptom rather than a cause. It demonstrates merely a deep-seated metabolic perversion partaking of the character of a "nucleolytic intoxication" and closely resembling similar conditions observed in gout and in other masked manifestations of atypical gout, and to indicate an appropriate prophylaxis and therapy accordingly. Croftan says that prophylactically and therapeutically, the use of a purin-free diet (with quantitative regulation, according to the tolerance for uric acid developed in each individual) together with an energetic alkaline-salicylate treatment, is thoroughly indicated in migraine of this type. He says the impression is gained that in cases so treated the frequency and the severity of the attacks have been reduced.

147. **Aortic Aneurysm Mistaken for Asthma.**—Both of Cohen's patients were syphilitic male laborers in middle life. Both were suddenly attacked with dyspnea, at first, apparently, paroxysmal. There was absence of pulsation, thrill and bruit. Both were sent to the hospital with the diagnosis of asthma. In both, the diagnosis of obstructive dyspnea, possibly aneurysmal, was made on sight. What makes the cases worthy of record in Cohen's opinion is that sudden dyspnea was the sole symptom; that the ordinary physical signs of aneurysm are wanting; that incidentally to the constant dyspnea, paroxysms of increased distress with wheezing and sonorous and sibilant râles misled practicing physicians, outside the hospital, to a diagnosis of asthma; and that the significant features of the case to the eye and ear of the reporter were the suprasternal recession and stridor, incompatible with asthma and indicative of obstruction in or around the larynx or trachea.

Medical Record, New York

January 13, LXXXI, No. 2, pp. 51-100

148 *Musical Memory and Its Derangements (Amusia). J. L. Corning, New York.
149 Surgical Treatment of Goiter. W. D. Hamilton, Columbus, Ohio.
150 Toxemias of Pregnancy. S. H. Blodgett, Boston.
151 *Omphalorrhagia Neonatorum. J. H. Richards, New York.
152 Unusual Case of Fibroid Sclerosis of Corpora Cavernosa. M. Ziegler, New York.

January 20, LXXXI, No. 3, pp. 101-150

153 *Some Extrapulmonary Sounds Which Simulate Râles. G. E. Bushnell, U. S. Army.
154 Treatment of Acute Lobar Pneumonia. C. E. Nammack, New York.
155 Multiple Hereditary Telangiectasis of Tongue, Turbinates and Septum with Recurring Hemorrhages. C. D. Van Wagenen, New York.
156 Management of Inguinal Hernia in Childhood. W. F. Campbell, Brooklyn.
157 Importance of Roentgen-Ray in Diagnosis of Bone Disease. S. B. Childs, Denver.
158 Physical Therapeutics in Medical Press. M. L. H. A. Snow, New York.
159 Radioactive Waters in Treatment of Gout. A. C. Burnham, New York.
160 *Fatal Case of Bismuth Paste Poisoning. L. W. Ely, Denver.

148. **Musical Memory and Its Derangements.**—Corning presents a résumé of the psychology of the musical memory, describes the localization of this faculty in the vicinity of the speech centers, and reports illustrative cases showing how lesions of the cerebral tracts causing aphasia, alexia, and agraphia may be accompanied by a loss of musical memory in its various aspects. The musical faculty is developed very early, tone images being formed before word images. Memory is not a simple faculty, but there are many different kinds of memory, such as sound and other sense memories, word memories, motor memories, sensory memories, etc. The musical memory includes auditory, visual and motor memories. The sense of time, rhythm, melody and harmony are equally important. Musical memory, then, is not a simple matter. The player of instrumental music has much more to learn than the vocalist, since the process of memory is here much more complex. Memory varies very greatly in different individuals as to its constituents and action. With some the auditory memory is much better than the motor memory. Some remember the printed notes, others the sounds and harmony. Any pathologic condition lessening or disturbing the cerebral, and especially the cortical, nutrition may cause derangement of memory and attention. Such is the case with the effects of alcohol, tobacco and other narcotics. Attention is of the greatest importance to the musician. In committing anything to memory excessive fatigue should be avoided, periods of twenty minutes of effort being interspersed with periods of rest. The phenomenon of automatism after practice is of the first importance to the musical memory, the playing of pieces becoming automatic after a time. With the singer an auditory-motor bond need not be established. In the faculty of memory auditory association is the principal factor. There may be a congenital absence of the musical faculty, and states in which apoplexy or paralysis play a part are frequently accompanied by loss of musical memory.

151. **Omphalorrhagia Neonatorum.**—Richards presents the history of a case of umbilical hemorrhage in which the blood began to clot only when serum from the father was introduced into the veins of the baby.

153. **Extrapulmonary Sounds Which Simulate Râles.**—Sounds caused by the slipping of muscular fibers are, in Bushnell's experience, most marked over the pectoralis major in the anterior axillary fold. They may be reproduced by movements of the stethoscope as Sahli says, but by gentle lateral movements, not by repeated intermittent pressure as in the phenomenon now under discussion. These latter sounds are evidently not due to active muscular contraction, first, because they are quite different from the well recognized muscular sounds especially common over the trapezius; secondly, because they are heard best when the underlying muscle is passive; thirdly, because they are not heard at all over spare, well-muscled chests in which purely muscular sounds should be heard most readily. They are finer sounds than those produced by pressure of the stethoscope on lobulated fat. They are distinctly a phenomenon of juicy tissue, whether subcutaneous or muscular is uncertain. The question suggests itself to Bushnell whether they may not be a sign of retention of water. They do not occur in clinical edema in which the tissues are filled with fluid. But if the state of the nutrition be such that there is a tendency to an accumulation of fluid above the normal, but short of true edema, the fluid might conceivably be displaced by pressure with the production of sound. If this be the explanation no reason is apparent why the phenomenon should be confined to the thorax.

160. **Bismuth Paste Poisoning.**—Ely's case was a typical spinal Pott's, with a well-marked kyphosis and a freely discharging sinus in the right lumbar region, which ensued on an abscess. July 7, 1911, an injection was made into the sinus, consisting of the regular bismuth paste mixture, 1 part bismuth subnitrate to 2 parts vaseline. A sharp rise in temperature, to 103 F., followed the injection. August 24, an injection of about 2 ounces of the paste was made. A sharp febrile reaction again followed the injection, reaching 103 F. September 15, about 2 ounces of the paste were injected. The injection was followed by the usual rise in temperature. September 30, the abscess was almost healed. A drop or two of pus occasionally exuded. The patient had a blackish discoloration on one side of her tongue, but seemed in fairly good condition. October 5, the child had been vomiting constantly, lost weight steadily, kept nothing on her stomach and was very restless. October 8, 8 c.c. of olive oil were injected into the sinuses. The patient grew steadily worse. Ulcers developed on both sides of the mouth, between the cheek and alveolar process, spreading rapidly. Some little discharge of bismuth followed the injection, October 13, of 8 c.c. of olive oil. Temperature practically normal; pulse, 120 to 130. Mouth dry and brown. October 17, two bloody stools. Death.

Laryngoscope, St. Louis

December, XXI, No. 12, pp. 1131-1210

161 Observations on Cribriform Plate and Olfactory Nerve in Man and Certain Animals. J. J. Kyle, Indianapolis.
162 Inferior Turbinate; Its Longitudinal Resection for Chronic Intumescence. O. T. Freer, Chicago.
163 Cyst at Base of Tongue. E. A. Forsyth, Buffalo.
164 Laryngo-Esophageal Fistula; Laryngostomy; Cure. J. A. White, Richmond, Va.
165 Esophagoscopy. R. H. Johnston, Baltimore.
166 Method of Filling Excavated Mastoid with Flap from Back of Auricle. H. P. Mosher, Boston.
167 Some Anomalies of Mastoid from Surgical Aspect. H. B. Hitz, Milwaukee.
168 Symptom of Mastoiditis. H. A. Alderton, Brooklyn.
169 Sigmoid Sinus and Jugular Bulb in Infancy. W. C. Braislin, Brooklyn.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

January 6, I, No. 2662, pp. 1-56

1 *Jejunal and Gastrojejunal Ulcers. A. W. Mayo-Robson.
2 Urethral Calculi. K. W. Monsarrat.
3 Case of Calculi of Prostatic Urethra. R. L. Spittel.
4 *New Cell Proliferant; Its Clinical Application in Treatment of Ulcers. C. J. Macalister.
5 *New Cell Proliferant: Symphytum Officinale or Common Comfrey. W. Bramwell.
6 Treatment of Puerperial Septicemia by Vaccines. A. Hawkyard.
7 Salvarsan in Yaws. H. Alston.
8 Examination of Abor Arrow Poison. F. M Windsor.
9 *Unusual Urinary Deposit of CalciumCarbonate. W. H. Brown.

1. **Jejunal and Gastro-Jejunal Ulcers.**—The operation Mayo-Robson has performed consists in taking a loop of the jejunum well beyond its origin, just sufficiently long to reach the surface without tension. A small incision is then made into the top of the loop just large enough to admit a No. 12 Jacques catheter, which is inserted and passed for fully three inches down the distal arm of the loop. This is fixed to the margin of the incision in the gut by a silk or thread suture and the entrance of the tube into the bowel is further secured by two purse-string sutures one over the other. The top of the loop is fixed to the parietal peritoneum and posterior aponeurosis by two stitches and the wound closed around the tube. The patient can then be fed at once with egg, milk and a little brandy. The whole operation is done in from ten to fifteen minutes and with no shock and very little visceral exposure. As a further precaution, the loop may be short-circuited, but this is not absolutely necessary, and, should the patient be seriously ill, the short circuiting is undesirable. For the operation to be a success the bowel must be placed so that it will serve two purposes: (1) To permit the passage onwards of the bile and pancreatic fluid poured into the intestine above the artificial fistula; and (2) to allow of food being introduced into the fistula without fear of regurgitation either of the food or of the intestinal contents. The feeding is done by means of a funnel and tube that will slip over the catheter and it can be repeated every four hours, or more or less frequently, according to the requirements of the case. The operation has been found useful in the following conditions: 1. Widespread cancer of the stomach too advanced for gastrostomy. By securing complete rest to the stomach, it stops hemorrhage, relieves pain, diminishes the size of the tumor and prolongs life very considerably. 2. In general cicatricial contraction of the stomach, due to the swallowing of caustic fluids, in which the stomach has been so far damaged that it no longer performs its functions or even allows of the passage onwards of food. 3. In chronic ulcer of the stomach giving rise to hemorrhage, pain or vomiting and to malnutrition; and where the patient is too ill to bear partial gastrectomy, which can, however, be subsequently done if thought needful after the patient's condition has been restored by adequate feeding. 4. In some cases of chronic duodenal ulcer, associated with hyperchlorhydria, in which there may be a fear of jejunal ulcer subsequently developing if gastro-enterostomy be performed. 5. In certain cases of duodenal ulcer in very stout subjects where it is extremely difficult to perform a posterior gastro-enterostomy and in which violent hemorrhage has only recently occurred and may be again excited by dragging on the stomach. 6. In jejunal or gastro-jejunal ulcer where the patient is thought to be too ill to bear one of the extensive operations previously mentioned; or where, the disease being slight, it is thought that the complete rest of the stomach and upper jejunum that can be given by a jejunostomy will at the same time relieve the hyperchlorhydria and cure the ulcer. Neumann has, in fact, suggested the operation for hyperchlorhydria alone. 7. In recurring hematemesis failing to yield to ordinary treatment and where on exploration no ulcer or other removable cause can be discovered. 8. In persistent vomiting threatening life, as in the severe and sometimes fatal vomiting of pregnancy, where no food whatever can be retained in the stomach.

4. **New Cell Proliferant in Ulcers.**—Macalister's experiences with allantoin, a crystalline solid, very rich in nitrogen and melting at 226 C., extracted from the root of the common comfrey, have led him to believe that it may prove to be of considerable practical utility in the treatment of ulcers of all kinds, even gastric and other internal ulcers. It is easy of application and non-irritating. Although allantoin itself is somewhat expensive, the solutions for application only require to contain from 0.3 to 0.4 per cent. of the crystals.

5. **New Cell Proliferant.**—Bramwell says he has on more than one occasion cured old ulcers which have resisted other treatment, by the simple extract from the comfrey, *Symphytum officinale*, applied on lint to saturation. After a few hours this dressing, in favorable cases, sets quite hard, and can only be removed by the lengthy application of water, which is often more tedious and painful than the average patient, who has been in the habit of applying some simple dressing, cares to endure. This hard setting acts, in some measure, like strapping, drawing the edges of the ulcer towards one another, but probably much more evenly and accurately than the most skilful strapping could effect. This looks as though the cure is wrought similarly to healing under a scab. He, too, has frequently used it internally as a last resource where more elegant preparations have failed, for example, in gastralgia, when he has believed this to be due to an irritated gastric mucosa, and to ease the pain of and to cure gastric ulcer.

9. **Urinary Deposit of Calcium Carbonate.**—Brown's patient, a man aged 65, was presumably suffering from granular kidney. He had been feeling in excellent health till this, the first and terminal illness since boyhood. The symptoms began with headache, followed later by sickness and vomiting; he got progressively worse, gradually passed into a comatose state and died three weeks after the onset of symptoms. The arterial tension was noted to be high. At no time did the urine contain more than a very small quantity of albumen. The first specimen, examined during the first week of illness, showed an organic deposit containing a number of granular and hyaline casts, but no crystals of any kind. A second sample, examined two days later, showed no deposit and no tube-casts were found in this or any of the samples thereafter. During the second week of illness the urine became more highly colored and muddy and looked simply like a concentrated urine with a deposit of pale urates. Microscopic examination, however, revealed a very large number of crystals of clear and sharply defined appearance, consisting of a double contoured envelope and a finely striated structure centrally. For some days this sediment continued to be present, and then was gradually replaced by one of the same chemical composition, but different form, possibly in a different phase of formation. Of this interesting and unusual deposit Brown offers no explanation. The patient's diet latterly consisted of nothing but milk and the only drugs he had during his illness were the alkalies, a few doses of erythrol-tetranitrite and hypodermic injections of pilocarpin.

Lancet, London

January 6, I, No. 1, pp. 1-74

10 *Sensory Disturbances from Cerebral Lesions. H. Head and G. Holmes.
11 *Indications for Surgical Interference in Treatment of Tuberculous Joint Disease in Children. A. H. Tubby.
12 Three Cases of Erythremia (Polycythemia). W. H. White.
13 Some Points in Diagnosis and Treatment of Chronic Duodenal Ulcer. B. G. A. Moynihan.
14 Twelve Foreign Bodies Requiring Surgical Interference. R. Parker.
15 *Observations on Fungi Found in Tropical Bronchomycosis. A. Castellani.
16 Theory and Practice in Treatment of Glaucoma. J. H. Parsons.
17 Lymphatic Varicocele. F. C. Madden.
18 Prevention of Tuberculosis. J. S. Wallace.
19 *New Method of Counting Leukocytes. R. A. P. Hill.
20 Case of Cerebral Malaria; Recovery After Forty-Eight Hours' Unconsciousness. W. T. Quaife.

10. **Sensory Disturbances from Cerebral Lesions.**—This paper is a preliminary communication in which the authors put forward a general conception of the mechanism underlying sensation based on a study of human beings in whom disease, accident, or surgical interference has produced some stationary lesion. It appears from their investigations that the brain-stem between the nuclei of the posterior columns and the

final termination of all sensory paths in the optic thalamus is the seat of the following changes: 1. The impulses for pain, heat and cold continue to run up in separate secondary paths on the opposite side of the nervous system to that by which they entered. They receive accessions from the regrouped afferent nerves of the head and upper part of the neck. Although these paths are frequently affected together they are independent of one another, and any one of the three qualities of sensation may be dissociated by disease. 2. Lesions of the spinal cord tend to diminish simultaneously all forms of painful sensibility, but with disease of the brain-stem the gross forms of pain and discomfort may pass to consciousness, although the skin is analgesic. This applies not only to painful pressure but to the discomfort produced by excessive heat. 3. The impulses concerned with postural recognition part company with those for special discrimination at the posterior column nuclei. Up to this point they have traveled together in the same column of the spinal cord, but as soon as they reach their first synaptic junction they separate. Above the point where they enter secondary paths the power of recognizing position and passive movement can be affected independently of the discrimination of two points and the appreciation of size, shape and form. 4. It would seem as if those elements which underlie the power of localizing the spot touched or pricked become separated off from their associated tactile impulses before they have actually come to an end in the optic thalamus. The long connection of localization with the integrity of tactile sensibility is here broken for the first time. All these changes are preparatory to the great regrouping which takes place in the optic thalamus and will form the subject of a second paper.

11. **Treatment of Tuberculous Joint Disease in Children.**—The objects of every form of treatment of tuberculous arthritis must be: (1) To eradicate the disease; (2) to preserve the functions of the part. It appears to Tubby that the balance of experience gained in treatment during the last decade shows that unquestionably conservative treatment is the better in childhood. Time is saved, the resultant deformity is diminished and there is less risk of generalized tuberculosis when the treatment is nonoperative.

15. **Fungi Found in Tropical Bronchomycosis.**—The fungi which Castellani has so far found in cases of tropical bronchomycosis may be classified as follows: 1. Those belonging to the genus Endomyces. 2. Those belonging to the genus Saccharomyces. 3. Those belonging to the genera Streptothrix and Actinomyces. 5. Nondetermined fungi.

19. **New Method of Counting Leukocytes.**—The advantage of the method described by Hill is said to be that a total and differential count may be done simultaneously, the whole process taking about ten minutes or less. The only apparatus needed besides the usual Thoma pipette and slide is a small cylindrical tube graduated and corked. The tube of a Haldane's hemoglobinometer cut down to the level of the 120 mark is very convenient. Liquor potassæ will clean it after use. The diluent must be made up at the time. Its composition is: Distilled water, 12 parts; acetone, 3 parts; methyl alcohol, 1 part; and Wright's modification of Leishman's stain, 4 parts. This reagent is used as the diluent for the blood in any dilutions from 1 in 200 to 1 in 10. The red cells become almost invisible, the leukocytes stain just as they do in a film and can be distinguished without the least difficulty. A dilution of 1 in 100 will give some eighty cells on the big square of a Thoma-Zappert slide. In marked leucopenia a 1 in 10 dilution enables one to find as many cells as are needed in a few minutes. There is no overstaining or precipitation in the course of two hours; there is no difficulty arising from unequal distribution or distortion or bad staining, such as one meets with in film preparations, especially if made on a slide and in many cases one glance is enough to reveal the condition as, for instance, a marked eosinophilia, or excess of lymphocytes, large mononuclears or polymorphic cells. The stain will keep for several hours if corked, but it is best to prepare just enough for use each time; that is the purpose of the small cylinder. With a hemoglobinometer tube 24 divisions of water and the rest in proportion is enough for a 1 in 100 pipette if it can reach to the bottom. Besides the absolute cleanliness and the purity of reagents necessary for all blood work, three precautions must be observed: (1) The Wright's stain must be filtered. It is best to do this at the time of making it up. (2) The mixture must be very well shaken. (3) The various operations of mixing and putting the drop on the slide must be done with promptness; especially must the drop be covered as soon as possible, as the cells settle quickly and the acetone evaporates readily.

Australasian Medical Gazette, Sydney

November 20, XXX, No. 11, pp. 633-710

21 State and Venereal Diseases. A. J. Turner.
22 Phthisis in Married Couples. J. C. Verco.
23 Open Ethyl Chlorid Anesthesia for Minor Operations and as Preliminary to Open Anesthesia. R. W. Hornabrook.
24 Hints on Administration of Anesthetics. J. W. Bean.
25 Fatal Postoperative Thrombosis. F. J. E. Juttner.

Glasgow Medical Journal

January, LXXVII, No. 1, pp. 1-79

26 Cancer of Uterus: Some Practical Aspects of Its Diagnosis and Treatment. A. W. Russell.
27 History of Pathology in Glasgow Royal Infirmary and Functions of Pathologic Department. J. H. Teacher.
28 *Treatment of Pneumonia by Polyvalent Stock Pneumococcic Vaccine. F. Charteris.
29 *Enlargement of Thymus: Remarkable Case. A. M. Kennedy.

28. **Treatment of Pneumonia.**—Charteris used the vaccine in a series of nineteen cases of acute pneumonia. The cases were not specially selected, and were, as far as possible, treated with vaccine alone, though in all serious cases the usual remedies were used, such as the administration of strophanthus and stimulants. The only selection made in regard to the cases was to exclude from the vaccine series those cases which, on admission, seemed to be on the point of having the crisis. In this way an additional series of ten cases was observed during the same period in which the vaccine treatment was being used. These ten cases have, therefore, the value of control experiments. The vaccine used in this series of cases was prepared from organisms isolated from the sputum of five typical cases of pneumonia. The vaccine was tried at all stages of the disease and in varying doses. The effect of the vaccine treatment was certainly not miraculous. Four patients died of the disease, while a fifth after coming through the acute stage, succumbed to exhaustion on the sixth day after the crisis. This mortality is not very satisfactory, but it compares not unfavorably with that of the series of ten cases, with two deaths, which was treated in the same wards without vaccine during the same period. Of the fatal cases in the vaccine series, the only instance in which the vaccine seemed to do harm was in a case in which death from hyperpyrexia occurred within eighteen hours of the administration of the vaccine. In another case the first two injections of the stock vaccine had no apparent effect, but the third and fourth injections, which contained an autogenous strain, were followed by such marked improvement that the patient seemed to be on the high road to recovery. A fifth injection was followed by an alarming increase in the severity of the symptoms; first empyema and, later, meningitis developed. The early administration of vaccine did not abort the disease, nor prevent complications. Complications were relatively frequent in the vaccine series, viz., one instance of meningitis, two of empyema and one of hyperpyrexia.

29. **Enlargement of Thymus.**—Kennedy's case is one in which the enlarged thymus was the cause of death, undoubtedly by its mechanical effects; but the death, although somewhat sudden in the end, only occurred after symptoms of cardiac failure had been present for some months. Death in this case was clearly due to cardiac failure; the two outstanding features found post mortem were enlargement of the thymus and hypertrophy of the right side of the heart.

Journal of Tropical Medicine and Hygiene, London

January 1, XV, No. 1, pp. 1-16

30 Effect of Various Drugs in Expelling Hookworms. B. Nicol.
31 Prevalence of Filarial Embryos in Blood of Lagos Natives A. Connal.
32 Imported Indian Case of Oriental Sore in West Africa. A. Hutton.
33 Superficial Lymph-Nodes as Source of Leishmania for Diagnosis in Cases of Kala-Azar. S. Cochran.

Indian Medical Gazette, Calcutta

December, XLVI, No. 12, pp. 449-488

34 Quinin Without Tetanus and Some Remarks on Tetanus and Quinin. Sir D. Semple.
35 Radio-Activity of Some Thermal Springs in Bombay Presidency. A. Steichen and H. Sierp.
36 Blood-Pressure. J. G. P. Murray.
37 Case of Acute Hepatitis with Indications of Pus Formation, Subsiding Under Ipecacuanha Treatment. F. F. Elwes.
38 Cases of Leech in Air Passages. W. E. Scott-Moncrieff.
39 *Treatment of Oriental Sore. G. G. Jolly.
40 *Uncommon Fracture of Skull. T. H. Keates.
41 Unusual Case of Worms in Peritoneal Cavity Simulating Appendicitis. R. G. Pickle.

39. **Treatment of Oriental Sore.**—Scraping in Jolly's opinion is the method of most general application. It is indicated when the sores are not situated on the face and when ulceration is not very extensive. The scraping should be done thoroughly, special attention be paid to the edges, which should be rendered flush with the surrounding skin. The sores may then be swabbed with pure phenol and dressed with any moist antiseptic dressing. In the after-treatment, mercury ointments, especially unguentum hydrargyri, ammoniati, appear to hasten healing and prevent relapse.

40. **Fracture of Skull.**—In Keate's case a contused three-cornered wound ¾ inch in diameter was found over the internal angular process of the frontal bone on the right side, just above the root of the nose. The wound went down to the bone. There was great ecchymosis of the right upper eyelid and subconjunctival hemorrhage of the right eye. The right pupil was dilated and the left somewhat contracted. There was some blood issuing from the left ear. On reflecting the scalp, the outer surface of the skull was seen to be intact, there was no fracture at the site of the injury and the right orbital crest was intact. When the brain was removed, a subdural hemorrhage was seen occupying the right anterior fossa. About 2½ ounces of blood-clot were present; this had somewhat hollowed out the under surface of the right frontal lobe and had extended from there into the right sylvian fissure, which was entirely filled up with blood-clot, that had completely surrounded and pressed on the Island of Reil. The bleeding was seen to have come from a fracture in the center of the orbital plate of the frontal bone. This fracture was something like a bullet-hole, oval in form and about 1 inch in its greatest diameter. The bone occupying this area had been split into fragments, which had forced through and torn the dura mater in this position. This was the only fracture present.

Annales des Maladies des Org. Génito-urinaires, Paris

October 15, XXIX, No. 20, pp. 1825-1920

42 *Aberrant Ureter Calculi. (Calculs aberrants de l'uretère.) S. Frenkel.
43 Syphilis of the Urethra. (La syphilis de l'urétre.) C. Baye.

November 1, No. 21, pp. 1921-2016

44 Improved Technic for Electrolytic Treatment of Urethral Stricture. (Nouveaux instruments électrolytiques pour le traitement des rétrécissements de l'urétre.) L. V. Girolano.
45 *Nephrotomy for Acute Medical Nephritis. (Du traitement chirurgical des néphrites médicales aigues.) G. Worms and A. Hamant.

November 15, No. 22, pp. 2017-2112

46 Tuberculous Stricture of the Urethra. (Cas de rétrécissement tuberculeux de l'uréthre chez un malade atteint de tuberculose de l'appareil urinaire.) G. Constantinesco.
47 Technic for Transvesical Prostatectomy. (Deux nouveaux instruments pour la prostatectomie transvésicale.) V. Compan.
48 *Diagnosis of Ureter Calculi. (Diagnostic des calculs des uretères.) L. Casper.

42. **Wandering Ureter Calculi.**—Frenkel comments on the fact that a concrement arrested in the ureter may become impacted and finally make its way through the wall of the ureter. This is more likely to occur when the stone is hard and irregular in shape. The ureter wall closes after it, often without leaving a trace of its passage. In twenty-five cases on record the concrement escaped into the pelvis in eight, in the lumbar region in seven; the iliac portion of the ureter was involved in four, and in four cases it was impossible to find the portal through which it emerged. In one case there were two aberrant calculi and in Piequé's more than this number. He discusses the symptoms liable to occur and the measures suitable for different contingencies.

45. **Nephrotomy for Acute Nephritis.**—Worms and Hamant report from Nancy a case of acute nephritis following osteomyelitis and complicated by anuria and uremia, with recovery after nephrotomy. Acute transient nephritis, of course, does not require this, but when it persists and anuria, uremia or miliary abscesses develop, operative intervention is indicated. Nephrotomy with prolonged drainage is the preferable technic. The anuria of subacute nephritis is otherwise almost inevitably fatal. They have found thirteen cases on record of operative treatment of acute nephritis, reported with details, which they summarize in addition to their own case. Five of the fourteen patients recovered.

48. **Diagnosis of Ureter Calculi.**—Casper has sometimes been able to diagnose the concrement, after failure of all other measures, by introducing a catheter with a metal guide under roentgenoscopic control. Once diagnosed, he tries to induce spontaneous expulsion by injecting glycerin into the ureter or distending the part by an inflatable bag fastened to the tip of the catheter. If these fail, an extraperitoneal operation may be necessary, with extreme care to prevent development of a fistula.

Archives de Médecine des Enfants, Paris

December, XIV, No. 12, pp. 881-984

49 *Serodiagnosis of Inherited Syphilis in Children and Familial Syphilis. (Le séro-diagnostic dans l'hérédo-syphilis infantile et la syphilis familiale.) C. Leroux and R. Labbé.
50 Local Tuberculin Reactions. (Etude des réactions locales à la tuberculine.) H. Rozenblat.

49. **Serodiagnosis of Inherited Syphilis.**—Leroux and Labbé found the results concordant in 77 per cent. of the cases in which the test was applied repeatedly to the same individual. A positive reaction may be accepted as an almost certain index of syphilis, but a negative reaction is less conclusive. In testing for inherited syphilis they insist on the importance of applying the test to the parents. Syphilis in the parents is frequently latent and unsuspected by the mother, at least. The serodiagnosis showed that the syphilis on the part of the mothers was most commonly latent and virulent; the fact that its presence was not suspected explained the lack of treatment and the resulting virulence. Over 76 per cent. of the mothers of children with inherited syphilis are infected themselves. Maternal syphilis with a negative seroreaction entails on the children merely parasyphilitic manifestations, or the children may be free from the inherited taint. None of the testimony accumulated in this research indicated that a father with florid syphilis can generate a child with active syphilis (positive reaction), without the mother's being infected. It seems to be the mother who determines the nature of the manifestations of inherited syphilis.

Bulletin de l'Académie de Médecine, Paris

December 19, LXXV, No. 42, pp. 341-380

51 *Vaccination Against Typhoid. (Sur la vaccination antityphoide.) A. Chantemesse.
52 *Successful Removal of Embolus in Femoral Artery. (Embolie fémorale au cours d'un rétrécissement mitral pur. Artériotomie. Guérison.) Mosny and J. Dumont.
53 *Infant Welfare Stations. (De l'éducation des nourrices et de la surveillance des nourrissons.) E. Vidal.
54 *Training the Respiration to Ward Off Tendency to Pant. (Méthode de respiration rythmée, préventive de l'essoufflement pendant la marche ascendante ou rapide. Son importance éducative.) A. Manquat.

51. Summarized in the Paris Letter in The Journal, January 20, p. 209.

52. **Removal of Embolus in Femoral Artery.**—Successful operations of this kind are extremely rare, as the vessels are generally diseased and the patients elderly when the embolism develops. This was not the case in the patient of 38 whose operative treatment is here described. The embolism occurred in consequence of pure mitral stenosis and the embolus was not infected, the artery was sound and readily accessible. This is the first permanently successful operation of the kind on record, Mosny and Dumont remark; the obstruction of the artery dated from only a few hours but the leg was already livid and cold. The prompt operation undoubtedly saved the limb from gangrene.

53. **Infant Welfare Stations.**—Vidal makes a practice of having the infants who are wards of the community and boarded out, brought for inspection and consultation, once a month. The women nursing or merely caring for the children

are instructed in the care of the infants and general hygiene, and these conferences are proving of great educational value. The emulation between the nurses is quite a stimulus. Only six have died of the 225 infants thus cared for during the last sixteen years, and the general average of the health of these little orphans or half-orphans is remarkably high. He also has infant consultations twice a week for all the families on the poor list. These infant consultations are only for the healthy. If the children are sick the city physicians are sent for and go to them in their homes. Each infant has its individual record card.

54. **Voluntary Control of the Breathing in Hill-Climbing.**—Manquat says that it is possible to avoid puffing and panting in climbing hills or stairs, by keeping the respiration under control of the will, not increasing the rate over eighteen, twenty or twenty-four to the minute, maintaining the normal proportion of the expiration period as twice the length of the inspiration period. By controlling the respiration in this way, the young are taught to breathe properly and the elderly with weakened hearts can often climb hills or stairs without getting out of breath.

Bulletin de la Société de Pédiatrie, Paris

November, XIII, No. 8, pp. 377-418.

55 *Decompressive Trephining for Children. Broca.
56 Acute Articular Rheumatism in Child Causing Acute Mental Confusion. Salicylic Acid Refound in Cerebrospinal Fluid. (Rhumatisme cérébral à forme de confusion mentale aigue.) P. Nobécourt and H. Darre.
57 Technic for Laryngologic Examination. (Une méthode trop peu connue et pourtant indispensable en laryngologie chez l'enfant.) H. Abrand.

55. **Decompressive Trephining.**—In one case related by Broca the decompressive trephining gave such relief that the child apparently succumbing to a brain tumor, recuperated and has developed since practically normally. What the trouble could have been is still a mystery.

Lyon Médical, Lyons

December 10, CXVII, No. 50, pp. 1268-1340

58 *Treatment of Sciatica by Hot Hydrotherapy. (Le traitement de la sciatique par l'hydrothérapie chaude. Résultats immédiats; résultats éloignés.) L. Duverney.

December 17, No. 51, pp. 1341-1412

59 Three Cases of Total Heart-Block. (Trois cas de Stokes-Adams avec block total.) L. Gallavardin.

December 24, No. 52, pp. 1413-1472

60 *Non-Tuberculous Hemoptysis and Pseudohemoptysis. (Les hémoptysies à répétition non tuberculeuses et les fausses hémoptysies.) Garel and Gignoux.

58. **Hydrotherapy for Sciatica.**—Duverney practices at Aix-les-Bains and treats sciatica by the various methods of applying the hot mineral waters, commencing with the simplest and going on to the more powerful hydrotherapeutic measures at need. By this means he has cured or materially relieved 80 per cent. of eighty-one patients, and among thirty-six traced to date only five were found not improved or cured; there had been a relapse in five other cases.

60. **Non-Tuberculous Hemoptysis.**—Garel and Gignoux found varices at the base of the tongue responsible for the supposed hemoptysis in sixty-eight cases on record, and these varices occurred in the pharynx in three similar cases. In other cases the hemorrhage came from the larynx which was merely congested, or the bleeding was of neuropathic origin, a menstrual manifestation of a tendency to hemophilia, or a symptom of chronic nephritis or liver disease. Massei has reported a case of a chronic hemorrhagic catarrhal affection of the trachea. The compilation includes further three cases of hemorrhage from the pharynx, ten with pseudohemoptysis with albuminuria, seven with glycosuria, two with liver disease, twelve with hemoptysis of hysteric or nervous origin, five with "arthritism," three of menstrual origin, and eighteen of unknown cause.

Presse Médicale, Paris

December 23, XIX, No. 102, pp. 1057-1068

61 *Prophylaxis and Treatment of Leprosy. (Prophylaxie et lutte anti-lépreuse.) M. Jeanselme.
62 Dosage and Contra-Indications of Hectine. (Dosages et contre-indications de l'hectine.) F. Balzer.
63 Acute Tuberculous Infection with Tardy Manifestations. (La typhobacillose de Landouzy. Son diagnostic par les inoculations massives de sang avec exclusion préalable du sérum.) Lafforgue.

December 27, No. 103, pp. 1069-1076

64 Improvised Appliance for Continuous Extension of Fractured Leg. (Nouvel appareil de fortune à extension continue pour fracture de jambe.) R. Lhomme.
65 Remarkably Well-Organized Public Health Service in the Channel Islands. (L'organisation sanitaire et l'hygiène dans les îles Anglo-Normandes.) A. Rochaix.
66 Stovain. (L'action de la stovaine dans des solutions de concentration différentes sur la conductibilité et l'excitabilité des nerfs à myéline.) E. G. Socor.

61. **Leprosy and Its Prophylaxis.**—Jeanselme states that leprosy seems to be endemic in the French colonies but that nothing is being done in the way of prophylaxis except in Madagascar where efficient measures have long been in vogue. In New Caledonia he estimates that there are about 1,000 lepers among the 13,460 inhabitants; 137 white lepers are isolated but nothing of the kind is attempted with the natives, and no prophylactic measures have been introduced in French China where there are probably 15,000 lepers. The Société de Pathologie exotique recently passed resolutions that leprosy should be made a notifiable disease and surveillance be kept over those affected, to exclude them from schools and certain employments, and that the foundation of private sanatoriums for lepers should be encouraged, and lepers should be refused admission to France. Jeanselme comments on these resolutions that it is practically impossible to keep a well-to-do leper from entering France, and that the disease frequently escapes detection in the medical examination of emigrants.

Revue de Médecine, Paris

December, XXXI, No. 12, pp. 841-924

67 *Epilepsy at 55; Inflammation with Focus of Softening from Encephalitis in Zone of Wernicke. (Une observation d'épilepsie tardive avec autopsie. Considérations sur sa pathogénie.) F. Mouisset, L. Nové-Josserand and Bouchut.
68 *Treatment of Tuberculosis During the Nineteenth Century. (La phtisiothérapie au XIXe siècle. De la saignée au sanatorium.) M. Piéry and J. Roshem.

67. **Tardy Epilepsy.**—In the case reported a bachelor traveling man developed epilepsy at 55, and necropsy three years later revealed softening of the cortex in the zone of Wernicke, the acute encephalitis involving the tissues around the focus of softening but the convolution of Broca was intact. Comparing this with other cases of tardy epilepsy on record indicates that some predisposition on the part of the cortex seems to be necessary for epilepsy to develop from encephalitis, either an inherited taint or some trace of injury of the cortex dating from childhood.

68. **Historical Sketch of the Treatment of Tuberculosis.**—The first part of this sketch was published in the September number and discussed the treatment customary among the ancients and in the orient. The second part brought the subject through the middle ages in Europe, and this part deals with the treatment of tuberculosis from the beginning of the nineteenth century to 1880, the dawn of the modern era.

Semaine Médicale, Paris

January 3, XXXII, No. 1, pp. 3-12

69 *Decapsulation of the Kidney and Its Results in Puerperal Eclampsia. (La décapsulation rénale et ses résultats dans l'éclampsie puerpérale.) R. De Bovis.

69. **Decapsulation of the Kidney and Its Results in Puerperal Eclampsia.**—De Bovis has found ninety-two cases on record in which decapsulation of the kidneys was applied in treatment of puerperal eclampsia. The mortality recorded was 38 per cent., but probably 40 per cent. is not too small an estimate, as probably not all the fatalities have been published. He says that the experimental research reported to date has failed to confirm any beneficial action from decapsulation of the eclamptic kidney, and that the clinical experiences that have been published do not present the subject in a much better light. Cholmogorov thinks that a coincidence rather than cause and effect is the explanation of the benefit sometimes observed; in one of his cases the eclampsia was very severe but a marked turn for the better was at once apparent after the decapsulation. In a second similar case he was preparing to do the decapsulation but just before commencing it a similar remarkable change for the better was evident and complete recovery followed. If the operation had been done as contemplated, the benefit would have been ascribed natur-

ally to the decapsulation. Even although the operation may restore kidney functioning to normal, yet it can have no effect on the patches of necrosis in the liver and the petechial hemorrhages in the brain. Recovery from eclampsia is not a question of diuresis alone. De Bovis thinks that for the present renal decapsulation in eclampsia will have to be discarded unless we learn to distinguish the cases in which congestion or lesions in the kidney are the main or sole source of trouble; it is evidently in cases like this that benefit has been realized so far. This assumption is sustained by recent research on dogs reported by Ilin in Russia and Ehrenfest in this country.

Archiv für klinische Chirurgie, Berlin

XCVI, No. 3, pp. 557-823. Last indexed December 9, p. 1951

70 *Surgical Treatment of Acute Pancreatitis. (Die chirurgische Behandlung der acuten Pankreatitis.) W. Körte.
71 *Muscles as Cause of Contracture Originating in Joints. (Die polyartienlären Muskeln als Ursache der arthrogenen Contracturen.) M. Jansen.
72 Solitary Gall-Stone in Liver. (Fall von solitärem durch Operation entfernten intrahepatischen Gallenstein.) Y. Noguchi.
73 *Lumbar Incision for Cholecystectomy. (Zur Bewerthung der modificirten Lumbalmethode der Gallenblasenexstirpation.) N. P. Trinkler.
74 Bilateral Hip Joint Disease in Young Adults. (Ueber Osteoarthritis coxae juvenilis duplex.) G. Wolfsohn and S. Brandenstein.
75 *Traumatic Rupture of the Kidney. (Zur Frage der traumatischen Nierenrupturen.) F. Michelsson.
76 Pigment Production and Pathogenic Properties of Staphylococci. (Ueber die Farbstoffproduction und Pathogenität der Staphylokokken.) Y. Noguchi.
77 Sugar in Treatment of Peritonitis. (Die Zuckerbehandlung der Bauchfellentzündung.) F. Kuhn. To be concluded in next number.
78 Laceration of Crucial Ligaments. (Ueber Abreissung der Ligamenta cruciata des Kniegelenks.) F. C. Schulz.

70. **Surgical Treatment of Acute Pancreatitis.**—Körte reports forty-four cases and remarks that the results are growing constantly better with time. The great trouble is that we have not as yet any reliable test for acute disease of the pancreas, and each case makes great demands on the intuition and skill of the medical attendant. He operated in thirty-four of his cases and eighteen patients were saved. All but fourteen of the forty-four patients were men, the youngest 16, the oldest, 70 years of age. In nearly every instance there had been numerous attacks of pain in the region, but generally mild and the pains had been ascribed to the stomach or to gall-stones by most of the patients. In three cases necropsy revealed a duodenal ulcer. Cholelithiasis is the usual cause of pancreatitis, and the pancreas should always be examined at a gall-stone operation.

71. **The Muscles as Cause of Joint Contracture.**—Jansen refers to the muscle that is attached far above and far below the joint, passing over it like a bridge. The rectus cruris is a good example of a polyarticular muscle of the kind, thus bridging both knee and hip joint. When an underlying joint becomes diseased, the muscles limited to this joint suffer with it and atrophy, while the long muscle bridging it is not affected. As these muscles have a predominantly contracting function, atrophy of the mono-articular muscle leaves them in control. This explains the typical attitude with arthrogenous contracture and the muscle factor explains its obstinacy.

73. **Lumbar Incision for Cholecystectomy.**—Trinkler reports two cases and extols the advantages of this technic; the right rectus muscle does not have to be cut and the intercostal nerves are left intact; no opportunity for postoperative hernia is left, while the provision for drainage is far better.

75. **Traumatic Rupture of the Kidney.**—Michelsson reports thirty cases with arguments to sustain his assertion that treatment should be expectant, with strict bed-rest and firm compression of the lumbar region unless hematuria compels immediate operative intervention. Anuria or laceration of the peritoneum alone does not indicate an immediate operation. Catheterization of bladder or ureters should not be done unless under urgent indications. If the ruptured kidney becomes infected, then operative measures are required at once. During the last twenty years there have been thirty cases of the kind at the public hospital at Riga, but no operation was done in any instance. All the patients recovered but three who succumbed to concomitant injuries elsewhere.

Beiträge zur Geburtshilfe und Gynækologie, Leipsic

XVII, No. 1, pp. 1-136. Last indexed Oct. 7, 1911, p. 1247

79 Deformities in the Amnion. (Ueber Amnionanomalien.) A. Sitzenfrey.
80 The Sweat Glands in Pregnancy. (Der Schweissdrüsen-Apparat während der normalen und der pathologischen Schwangerschaft.) S. Rebaudi.
81 *Nature of Rachitis and Osteomalacia. M. Ogata.
82 Rachitic Osteomalacia. (Beitrag zu den klinischen und pathologischen Untersuchungen bei der rachitischen Osteomalacie.) M. Ogata, K. Minakuchi and K. Kaji.
83 Gynecology in the Middle Ages. (Die gynäkologischen Kenntnisse des Mittelalters.) P. Diepgen.
84 Giant Children. (Riesenkinder.) M. Oyamada.

81. **Essential Nature of Rachitis and Osteomalacia.**—Ogata presents a study of an almost endemic affection in a certain province in Japan, the symptoms suggesting severe rachitis or infantile osteomalacia. He is inclined to regard the syndrome as a general trophic disturbance. The bones receive an exaggerated blood-supply and this upsets the balance between the depositing and absorption of calcium. This assumption explains the connection between puberty and pregnancy and the osteomalacia, and the reason why after puberty it is restricted to the female sex. Ogata regards rachitis and osteomalacia as essentially of the same nature, and states that he has often encountered the symptoms of both in one patient; in fact, he would drop the term rachitis entirely and use merely osteomalacia, classifying it as in children, non-puerperal and pregnancy or puerperal osteomalacia. The microscopic findings in the ovaries from fifteen patients with osteomalacia showed numerous follicular cysts, abnormal vascularization and contorted vessels, extravasation of blood, thickening of the vessel walls and their obliteration, and hyaline degeneration. The intensity of the changes corresponded to the severity of the osteomalacia. The question now is whether these changes are primary or secondary; he had no opportunity to examine the ovaries in incipient cases.

Beitrage zur klinischen Chirurgie, Tübingen

November, LXXVI, No. 2, pp. 241-544

85 Operative Treatment of Dislocation of the Eyeball. (Ueber operative Behandlung der Dislocatio bulbi.) G. Perthes.
86 Cure of Stiff Knee by Interposition of Tissue. (Ueber operative Kniegelenksmobilisierung und Funktionsherstellung durch Amnioninterposition.) H. Schmerz.
87 Congenital Dislocation of the Patella. (Ueber kongenitale Patellarluxationen.) M. Fiebach.
88 Treatment of Spina Bifida. W. Brodmann.
89 *Ultimate Results of Operations for Gastric and Duodenal Ulcers. (Studien über die Ergebnisse der chirurgischen Behandlung des Magen- und Duodenalgeschwürs mit ihren nicht-akuten Komplikationen.) G. Petren.
90 Treatment of Simple Laceration of Duodenum and Pancreas. (Beitrag zur Behandlung der subkutanen Duodenum- und Pankreaszerreissung.) F. Kroiss.
91 Thymol for Sterilization of Field of Operation. (Experimentelles und Klinisches zur Desinfektion des Operationsfeldes mit Thymol-Spiritus.) A. Hoffmann.
92 Diagnosis of Tuberculosis of Urinary Apparatus. (Diagnose der schweren tuberkulösen Affektionen der Nieren und Harnwege.) B. Cholzoff.
93 Fracture of Femur with Atrophy of Bone and Contracture of Knee. (Eine typische Oberschenkelfraktur bei Knochenatrophie und Kniegelenkskontraktur.) R. Hagemann.
94 Megacolon. (Zur Diagnose und Therapie der Hirschsprung'schen Krankheit.) H. Hoffmann.

89. **Remote Results of Operations for Gastric and Duodenal Ulcers.**—A previous compilation by Petren of 100 cases of perforated ulcer was reviewed in The Journal, June 3, 1911, page 1691. He here devotes 172 pages to a compilation of cases without perforation in which an operation was done; the data are from Lund and fifteen other Swedish hospitals. Forty died of the 283 patients, and he has obtained information in regard to the condition later of 243 patients, including forty-five he was able to reexamine personally. Among the lessons taught by this material is that freedom from symptoms for years after a gastro-enterostomy is no guarantee that cancer will not develop later; malignant disease followed in at least 5.5 per cent. of the cases. He devotes considerable space to interpretation of the roentgenoscopic findings.

Berliner klinische Wochenschrift

January 1, XLIX, No. 1, pp. 1-48

95 *Differentiation of Neurasthenia and Endogenous Depression. K. Bonhoeffer.
96 *Application of Chemotherapy to Cancer. (Chemotherapeutische Versuche an tumorkranken Tieren.) A. v. Wassermann and D. v. Hansemann.
97 *Permanent Cure of Sarcoma by Roentgen Rays. (Dauererfolge bei der Röntgentherapie von Sarkomen.) M. L.-Dorn.
98 Cultivation of Living Cells. (Die Kultur lebender Körperzellen.) S. Hadda.

99 Sleeping Sickness in New Cameroon. (Die Schlafkrankheit in Neu-Kamerun und die Aussichten ihrer Bekämpfung.) C. Schilling.
100 Lipuria with Chronic Parenchymatous Nephritis. (Lipurie bei chronischer parenchymatöser Nephritis.) F. X. W. O. Ridder.
101 Roentgenoscopy of Jaws and Teeth. (Die Röntgographie der Kiefer und Zähne.) F. Proell.

95. **Differentiation of Neurasthenia and Endogenous Depression.**—Bonhoeffer remarks that numbers of patients with the diagnosis of neurasthenia are sent to the clinic for nervous and mental diseases in his charge at Breslau, while at the clinic the diagnosis of neurasthenia is rarely made. One reason for its frequency outside is evidently to tranquilize the patient and his family, but the principal reason is that the symptoms suggesting neurasthenia merely mask some organic trouble, a latent cancer, diabetes, mild exophthalmic goiter, a brain tumor, multiple sclerosis, progressive paralysis, alcoholism or some other toxic process. This explains the vagueness of the prognosis in neurasthenia, and the prevailing view that "almost anything can develop out of neurasthenia." Cases of suicide in neurasthenia have been reported, but Bonhoeffer declares that when there is a serious attempt at suicide under these conditions, the trouble is not neurasthenia. Correct differentiation of endogenous depression from neurasthenia is essential for prognosis and treatment, and he gives a list of criteria to distinguish the former, especially the sudden onset and often sudden cessation, an inherited taint, a constitutional tendency to periodical disturbances, particularly recurring moods of depression, periodic sleeplessness, periodic periods of apprehension, periodic attacks of diarrhea, of urticaria, asthma, etc. The periodic attacks may appear under a different guise each time; only the mood of depression is constant. The great danger is that the patient may commit suicide or that a manic-depressive condition may eventually develop. Three cases are described in detail and the fact emphasized that these patients feel worse in the morning, gradually improving during the day until by evening they feel quite well and able to work. Veraguth has recently cited this reversal of normal conditions in this respect as typical of neurasthenia, but Bonhoeffer insists that endogenous depression, not neurasthenia, is responsible for it. When there is a history of suicides in the family, as in the first case described, precautions must be redoubled. In the second case a typical condition of depression had developed in a young man with a tendency to hypomania; the third case was a typical instance of cyclothymia. The cases teach that apparently local nervous stomach and heart disturbances may be only a manifestation of the endogenous trouble and do not require treatment; this should be directed to the underlying cause.

96. **Chemotherapy for Cancer in Mice.**—This communication was summarized in the Berlin Letter in The Journal, January 13, p. 1892.

97. **Roentgenotherapy of Sarcoma.**—Levy-Dorn states that he has two patients who are still free from recurrence over six years after *x*-ray treatment of cancerous glands in the neck in one, and of a periosteal sarcoma of the thigh in the other. The patients were 26 and 17 years old at the time of operation.

Correspondenz-Blatt für Schweizer Aerzte, Basel

December 20, XLI, No. 36, pp. 1265-1296

102 *Treatment of Tuberculosis of the Kidney. (Soll die Nierentuberkulose chirurgisch behandelt werden?) H. Wildbolz.
103 Advantages of Reducing Total Ration in Severe Cases of Diabetes. (Ueber das reduzierte Kostmass in schweren Fällen von Diabetes mellitus.) E. Bernoulli.

January 1, XLII, No. 1, pp. 1-32

104 *Specific Treatment of Ringworm and Allied Mycoses. (Die Trichophytien und verwandte Pilzerkrankungen der Haut.) B. Bloch.
105 *Pyelitis from Infection of Lacerations of the Hymen. (Ueber Deflorationspyelitis.) H. Wildbolz.

102. **Treatment of Tuberculosis of the Kidney.**—Wildbolz used to insist that operative measures should not be applied in renal tuberculosis until after failure of persevering medical treatment, but the recent discussions at gatherings of urologists of the ultimate results of nephrectomy have converted him to the view that the surgeon should be called in as soon as tuberculosis of the kidney is diagnosed. Israel has recently reported the remote results of 1,023 nephrectomies done by twenty-one surgeons besides himself. About 25 per cent. of the patients succumbed to the progress of the tuberculosis, about half of these within six months and most of the others within one or two years. Wildbolz had about the same percentage in his 139 cases: With an operative mortality of 2.8 per cent., 14.4 per cent. succumbed to the tuberculosis, all but three of this group of twenty dying within two years. The lungs were mostly responsible for the fatality, the other kidney becoming tuberculous only in the rarest cases, not in over 1.6 per cent. In none of the total statistics did the bladder become tuberculous when it had been normal before the operation. In 63.8 per cent. of Israel's own 170 cases no tubercle bacilli could be found in the urine thereafter, and Wildbolz found 58.9 per cent. of seventy-eight patients living over three years after nephrectomy, entirely cured, while 19.2 per cent. had died and 21.7 per cent. still show signs of tuberculosis. The results of operative treatment are thus far from ideal, he states, but comparison with the remote results of conservative measures in 316 cases under observation for over two years, reported to him by various Swiss confrères, sustains the advantages of prompt surgical treatment. Almost 70 per cent. of the 316 patients had died by the end of the two years and sixty-eight of the ninety-eight survivors show signs of severe tuberculosis of the urinary apparatus. Only thirty of the 316 have no subjective symptoms of their renal tuberculosis, and an objective examination was impossible. In sixteen of the thirty cases this clinical cure had persisted for over five years, but in many instances after years of apparent recovery there was a sudden breakdown and death from uremia. Tuberculin seems to have a favorable influence on the general condition and the subjective symptoms, but its action on the local process is apparently slight. On the whole, the permanent cures of 50 or 60 per cent. under operative measures compares instructively with the 40 per cent. under conservative measures—which includes only a very few clinical recoveries—and confirms the assumptions of those who teach that the earlier the tuberculous kidney is removed, the better the ultimate outlook. Wildbolz emphasizes in conclusion that after nephrectomy the patient is still a tuberculized individual and requires treatment as such, supplying the most favorable conditions for the healing of the tuberculous foci elsewhere in the body. The importance of this after-care is shown by the great difference between the ultimate outcome after nephrectomy in well-to-do patients and in the poor; among the former 78.8 per cent. cured; among the latter only 37.7 per cent. Zuckerkandl has reported a tardy mortality of only 6.4 per cent. among his private patients, but 16.4 per cent. among the charity patients, while Israel reported a difference between 4.8 per cent. and 12.7 per cent. respectively.

104. **Specific Treatment of Ringworm.**—Bloch produces a fluid containing the toxins and endotoxins of the trichophyton fungi by grinding up old bouillon cultures of trichophyton strains with the culture medium and filtering through a Chamberland bougie. This fluid he calls trichophytin, in analogy to tuberculin; it works in the ringworm patients as tuberculin works in the tuberculous, and he thinks that it may prove a specific for treatment of ringworm. He has not been able to attain similar results with favus and microsporon affections; they are too torpid, probably, to be reached in this way. His experiments with guinea-pigs confirmed the efficacy of the trichophytin. These animals are absolutely immune to new infection anywhere on the body after they have recovered from ringworm, but they are left hypersensitive so that a specific local reaction follows injection or frictions with trichophytin. In the clinic he has succeeded in curing a number of ringworm patients by injecting the filtrate of the trichophyton cultures into the sound skin or the trichophyton focus. In a case of kerion caused by the *Trichophyton rosaceum*, no reaction followed injection of trichophytin but he cured the process by inoculating a sound spot on the skin with another living trichophyton fungus, *Achorion quinckeanum*. This second focus modified the body, transforming it in such a way that it became hypersensitive, even at the first spontaneous focus, and thus a permanent cure resulted.

105. **Pyelitis from Colon Bacillus Infection of Lacerated Hymen.**—Wildbolz states that his attention was called to the

connection between defloration and pyelitis by three cases of acute pyelitis developing in recently married women who had had a kidney removed previously for tuberculosis. The natural assumption was that the tuberculosis had flared up again, but in each case the trouble was traced to a simple colon bacillus infection of the bladder and kidney pelvis, and recovery soon followed. None of the husbands of these patients suffered from urethritis. The same findings were noted also in five other brides who had never had symptoms from the urinary apparatus before, and the colon bacillus was the causal germ in each case. The pyelitis was always unilateral, and he thinks that the connection between the defloration and the pyelitis is more than probable. This view is sustained by recurring coli pyelitis in a married woman with kraurosis vulvæ and senile atrophy of the vagina. From superficial lesions of the epithelium the colon bacillus infected the urinary passages with pyelitis in the right kidney, recurring four times. The knowledge of pyelitis of this origin is important as otherwise the gonococci are liable to be incriminated. Instead of expectant treatment for the assumed gonorrhea, vigorous local treatment should be instituted if internal medication does not speedily sterilize the urinary passages. It is possible that the pyelitis of pregnancy may owe its origin to a colon bacillus infection of the kidney pelvis starting in the lacerations of the hymen.

Deutsche medizinische Wochenschrift, Berlin

December 28, XXXVII, No. 52, pp. 2409-2440

106 *The Diet in Kidney Disease. (Die Diät bei Nierenkrankheiten —besonders bei Nierenentzündungen.) H. Strauss.
107 *Alcohol Injections in Treatment of Trifacial Neuralgia. (Ueber die Behandlung von Neuralgien des 2. und 3. Trigeminusastes mit Alkoholinjektionen.) H. Braun.
108 Recent Progress in Surgery of Peripheral Nerves. (Die Chirurgie der peripherischen Nerven.) Berger.
109 Pregnancy Dermatosis Cured by Injection of Normal Horse Serum. (Mit Pferdeserum geheilte Schwangerschaftstoxikose.) R. Freund.
110 *Two-Route Method of Treating Local Infectious Processes. (Die Behandlung der Kehlkopftuberkulose und anderer lokal-infektiöser Prozesse mit Jodnatrium und Ozon bzw. Wasserstoffsuperoxyd.) S. A. Pfannenstill.
111 Man with Complete Female External Genitals. (Spermasekretion aus einer weiblichen Harnröhre.) M. Hirschfeld and E. Buchard.
112 *Physicians in Germany. (Die Aerzte Deutschlands.) F. Prinzing.

106. **The Diet with Kidney Disease.**—Strauss discusses the diet that will spare the kidneys the most and prevent uremia and hydrops, emphasizing the necessity for discriminating between the indications in the individual cases and between different periods in the individual case. He thinks that the discrimination between red and white meat is useful only in that white meat is generally more digestible than red; boiled meats are better than others as they contain less of the harmful extractives. He sees no harm in from two to four eggs a day; the heat in cooking modifies the albumin, so that it loses its specific harmfulness in this respect. In all his experience he has encountered only two cases which suggested possible alimentary albuminuria. In nephritis he uses for saline infusion or proctocylsis an isotonic sugar solution or water alone. Of an exclusive milk diet he remarks that its greatest benefit is from the resulting flushing of the kidneys and of the entire organism. The danger of dropsy from considerable intake of water is less than the danger of uremia; even if dropsy is induced by the ingested fluid, we have abundance of means to control it, while with uremia we are comparatively helpless. Patients with chronic nephritis and dropsy are much less liable to uremia than with "dry" nephritis. Salt is not the only factor in hydrops, but it is such an important one that removal of this link in the chain is one of the main points in treatment of nephritis with a tendency to dropsy. The food is best prepared entirely without salt, and the modicum of salt permitted is given the patient to season his food as he likes. The amount should not be over 2.5 gm. a day in severe cases of parenchymatous nephritis with much dropsy, or when it is feared that dropsy is impending. In moderate cases he allows up to 5 gm. a day; weighing the patient every second day reveals the tendency to dropsy and the progress of treatment. Fruits, preserves, salads and articles made of flour contain naturally very little salt; the bread should be made without any salt. If eaten with unsalted cheese or marmalade, the salt is not missed. Strauss adds a list of ordinary articles of food with their per cent. of salt. The yolk of egg, for example, averages only 0.009 per cent. salt while the white averages 0.31 per cent. Meat averages between 0.1 and 0.2 per cent., but calves' kidneys contain 0.32 per cent. and smoked meat much more; oatmeal, cabbage and celery, between 0.2 and 0.5 per cent., and tea and coffee between 0.5 and 0.15 per cent. The general principle in diet selection is that efforts to spare the kidney and ward off dropsy are indicated in the parenchymatous processes while in the indurative and vascular forms, measures to ward off uremia should predominate. Overeating is particularly harmful, especially on account of its taxing the heart; this is particularly liable to occur when the patients are kept in bed. At the same time he warns of the necessity for ample nourishment, emphasizing in this respect especially the albuminuria that develops from a constitutional cause, instead of nephritis, such as orthostatic, lordotic or puberty albuminuria.

107. **Alcohol Injections for Trifacial Neuralgia.**—Braun gives a few technical points to simplify this method of destroying the nerve root with alcohol. [Compare with Patrick's latest article in THE JOURNAL, Jan. 20, 1912, p. 160, and with Offerhaus, Abstract 74, p. 1152, in THE JOURNAL, Sept. 24, 1910.] Braun says that the effect amounts practically to a resection of the nerve, adding that Schlösser has reported application of the method in 123 cases of facial neuralgia and all the patients but seven were cured, for an average of ten months or permanently. In case of recurrence, repetition of the injection is simple and effectual. Kiliani had only five failures in 190 cases, and Ostwalt only four in forty-five cases. Braun urges wider application of this method of blocking the second or third branch of the trifacial nerve in the foramen rotundum or ovale, saying that the method might be useful also for operations on the face, extraction of teeth, etc. He gives illustrations to show the mode of access, and advises experimenting with an anesthetic plus epinephrin solution for transient anesthesia of the regions involved, before attempting to inject the alcohol. He introduces the needle just below the malar bone down to the sphenomaxillary fossa, striking the second division as it emerges from the foramen. Paresthesia in the upper teeth warns the patient that the nerve has been reached, and the operator should wait for this. The foramen ovale is reached by introducing the needle at the middle of the lower border of the zygomatic arch, just in front of the jaw. The needle, inserted at a right angle to the head, strikes bone at a depth of about 5 cm.; the foramen ovale is just back of the bone. The needle is partly withdrawn and tilted forward and it is then pushed in again, the tip farther back, to exactly the same depth. Paresthesia in the lower jaw warns that the third division of the fifth nerve has been reached. Braun uses a graduated needle, 8 cm. long and 0.7 mm. in diameter. He has a skull with a needle passed into the foramen stand just back of the patient's head, to aid him in locating the foramen. He introduces the needle through a little novocain solution injected into the skin, as otherwise the introduction of the needle is rather painful. When the needle is in place he injects a few c.c. of a 2 per cent. novocain-suprarenin solution and waits a few minutes before injecting the alcohol, and then injects 2 c.c. of 96 per cent. alcohol. This prevents the sharp pain liable when the alcohol alone is injected. He has never found it necessary to make the calculations suggested by Offerhaus. He advises against applying the alcohol method of blocking the nerve to the first division of the fifth nerve on account of the danger to other nerves in the orbit.

110. **Two-Route Method of Treating Laryngeal Tuberculosis, Etc.**—Pfannenstill's method was described in THE JOURNAL, July 16, 1910, p. 264. He gives potassium iodid internally and applies ozone or hydrogen dioxid externally to the lesion, the combination of the two drugs in the lesion generating nascent iodin. He here relates experiences with the method in laryngeal and superficial tuberculous processes, lupus of the nasal mucosa, leg ulcers, etc. He commences with 3 gm. of potassium iodid daily, fractioned, and applies continuously the ozone or hydrogen peroxid in a 2 or 3 per cent. solution, acidified with 1 per cent. acid. The treatment is effective only

when there is local ulceration; it has no influence on diphtheritic lesions, for instance.

112. See Berlin Letter in The Journal, Jan. 20, 1912, p. 209.

Jahrbuch für Kinderheilkunde, Berlin

December, LXXIV, No. 6, pp. 627-776

113 *Chronic Bronchiolectasia. H. Vogt.
114 *Research on Metabolism of Normal Artificially Fed Infant. (Der Gesamtstoffwechsel eines künstlich genährten Säuglings. Mit Einschluss des respiratorischen Stoffwechsels.) A. Niemann. Concluded.
115 *Cystitis in Male Infants. (Zur Aetiologie der Cystitis bei Knaben im Säuglingsalter.) E. Rach and A. v. Reuss.
116 *Depressing Action of Hot Weather on Gastric Secretion. (Die Einwirkung hoher Aussenlufttemperaturen auf die sekretorische Tätigkeit des Magens.) V. Salle.

113. **Chronic Bronchiolectasia.**—Vogt thinks that the chronic course liable with bronchopneumonia, in contrast to the comparatively brief course of lobar bronchopneumonia, is due to permanent injury of parts of the lung. Careful examination after the supposed complete clinical recovery may reveal moist râles, indicating a permanent focus that may flare up again on slight provocation. He cites a few typical cases of this. The left lobe is the one generally affected and roentgenoscopy is often a valuable aid for the diagnosis. The most probable assumption is that some of the smaller bronchi are left permanently diseased and enlarged; this is particularly liable when influenza bacilli are involved, either alone or in mixed infection. The tendency to the chronic affection is more marked the younger the children. In eighteen of twenty children with recurring bronchopneumonia, the first attack occurred before the age of 6, in nine before the children were 2 years old. The acute onset and apparently complete subsidence speak against a tuberculous nature of the trouble. He reports the details of twenty-five cases of chronic bronchopneumonia with acute exacerbations which he has encountered in the last eighteen months. Drugs may reduce the amount and putridity of the sputum, but this is all that can be expected of them. Mechanical surgical measures alone offer the only chances of radical cure in the cases that show no tendency to spontaneous recovery.

114. **Metabolic Findings in Normal, Artificially Fed Infant.**—Niemann's extensive monograph gives the metabolic findings, over long periods, of a bottle infant on various artificial foods. The tables provide a standard for comparison in morbid conditions, and throw light on certain laws regulating the vital processes.

115. **Cystitis in Male Infants.**—In the two cases reported fever and general symptoms developed suddenly, followed in a few days by jaundice and cystitis and this in turn by pyelonephritis, the children dying a few days later. Intestinal catarrh was found in both at necropsy. In a third case a robust baby, five months old, developed an intestinal affection with fulminating fever and cystitis soon followed. In the latter case the cystitis was manifestly secondary to the bowel trouble and this assumption is probable for the others, as the same bacteria were found in both intestine and bladder. In the third case the proteus was involved, and the case teaches the extremely unfavorable effect of a diet rich in protein in the presence of the proteus. The food used was a casein-fat suspension, free from whey—the von Reuss-Sperk mixture—and, after the first week, breast milk. The child had been breast-fed until 3 months old, and had been given diluted cow's milk with cocoa on which it seemed to be thriving finely.

116. **Action of Hot Weather on Gastric Secretion.**—Salle experimented with young dogs, keeping them in an incubator for periods and at temperatures corresponding to the hot weather of last summer. The gastric secretion was studied by means of a Pawlow fistula. His aim was to ascertain whether the heat had a special depressing action on the stomach functioning and what changes it induced. The results reported and condensed in diagrams show that the secretory function is materially depressed by heat and dryness of the air; the secretion of gastric juice becomes less and less as also its digestive power. The dogs lost rapidly in weight, their temperature rose, and diarrhea and vomiting followed—in short, they presented disturbances remarkably like those of summer diarrhea in infants. The experiences related confirm the danger from excessive loss of fluids during the hot weather, and the exaggeration of this danger when the air is unusually free from moisture. Some of the charts at the recent Hygiene Exhibition at Dresden showed in various countries how the highest summer infant mortality coincided with an unusual lack of moisture in the air. All the research reported emphasizes the necessity for supplying fluids to infants in hot weather.

Medizinische Klinik, Berlin

December 31, VII, No. 53, pp. 2045-2060 and Supplement

117 Cancer of Lower Bowel. (Ueber die bösartigen Geschwülste der unteren Darmabschnitte.) H. Wolff.
118 Etiology of Appendicitis. Oberndorfer.
119 *Autoplastic Method of Lengthening Long Bones. (Vorschlag einer autoplastischen Methode zur Verlängerung von Röhrenknochen.) R. Müller.
120 *Pernicious Anemia. J. Hürter.

119. **Autoplastic Method of Lengthening Long Bones.**—Müller saws the leg half way across, then he saws it longitudinally at right angles to the first cut, and for a little longer distance. Then he saws the other half of the bone, the stumps thus being cut apart as with two steps. The stumps are then drawn apart until they touch only at the two corners of the steps. The square gap thus left on each side is filled by a square of bone cut out of the shaft some distance above and another also below. Müller has had no clinical experience with the method, but the results on animals and the cadaver have been encouraging.

120. **Pernicious Anemia.**—Hürter's article is a postgraduate lecture, based on thirty-five personal cases and much experimental research. Although no effectual treatment is known, he says, yet a number of empirical measures have proved useful and, strictly applied, occasionally recoveries have been observed under them. Chief among them is bed rest, but the patients often rebel against this as they feel well. He advises keeping the patients in bed until the blood shows a marked change for the better. Repose in the open air may advantageously alternate with bed rest. Light massage may be useful. Thorough examination for possible intestinal parasites is the first measure, and it is necessary to investigate the stomach functioning to remedy the individual deficiencies. In regard to diet, stimulation of the appetite is of predominant importance; fruit juices and lemonade should be freely allowed. With simple gastric achylia, lavage of the fasting stomach in the morning with physiologic salt solution often proves useful. The food should be extremely nourishing and digestible, and nutrient enemas sometimes are valuable to supplement the ordinary food. Hürter is inclined to regard transfusion of blood as a valuable adjuvant; he does not wait too long, but makes the transfusion as soon as the blood picture ceases to show evidences of regeneration. He injects 200 or 250 c.c. of blood and states that symptoms of anaphylaxis have never been observed. Unless sure of one's technic and assistance, the blood had better be defibrinated, but the natural blood should be preferred. He follows the Moritz method of transfusion, using a 100 c.c. syringe. He adds that in two of his thirty-five cases dyspnea followed the transfusion. In one case it suggested pulmonary embolism at first, but it rapidly subsided. In the second case the patient died two days later and peculiar foci were found in the lungs; they were not typical of embolism but suggested intravascular coagulation. No by-effects were ever noted with defibrinated blood. He has observed transient improvement in the blood-picture under administration of bone-marrow, and as we need all the leverage power possible to aid in starting the regeneration of the blood, he advises using this organotherapy. He gives generally 30 or 40 gm. of the fresh bone-marrow from calves, generally in tablets made with 90 parts marrow, 30 parts port wine, 30 parts glycerin and 20 parts gelatin, mixing the marrow with the wine in one hot mortar, and the glycerin and gelatin in another, and then combining. Barr says that such tablets will keep for months. Hürter concludes with a reference to glycerin, stating that he has a vague impression that some benefit was apparent from glycerin given in large doses during the day—30 gm. in lemon juice, 20 gm. in capsules and 30 gm. by the rectum.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

December, XXXIV, No. 6, pp. 621-738

121 Menstrual Changes in Uterine Mucosa. (Die menstruellen Veränderungen der Uterusschleimhaut.) R. Keller and G. Schickele.
122 Congenital Prolapse of the Uterus. (Ueber den kongenitalen Prolaps. Beitrag zur Aetiologie der weiblichen Genitalprolapse.) R. Graf.
123 *Traumatic Rupture of the Pregnant Uterus. (Traumatische Uterusruptur in der Schwangerschaft.) H. Hinterstoisser.
124 *Febrile Abortion. (Die Bewertung und die Behandlung des fieberhaften Abortes.) F. Fromme.
125 Ascending Urogenital Tuberculosis in Women. (Zur Frage der aszendierende Urogenitaltuberkulose beim Weibe.) S. Sugimura.
126 Atresia of Duodenum Fatal in One Week After Birth. (Atresia duodeni als Todesursache bei einem Neugeborenen von 7 Tagen.) H. Hauser.
127 Sarcoma in Wall of Ovarian Cyst. (Spindelzellensarkom in der Wand einer papillären Parovarialcyste.) F. Goldschmidt.
128 Typhoid Suppuration in Ovarian Dermoid Cyst. (Typhusvereiterung eines Ovarialdermoids.) L. A. Kriwsky.
129 *Experiences with Spinal Anesthesia. (Erfahrungen mit der Lumbalanästhesie.) W. Steuernagel.

123. **Traumatic Rupture of the Pregnant Uterus.**—Hinterstoisser has been able to find comparatively few cases of this kind on record. He summarizes them in connection with a case from his own experience in which he successfully removed the ruptured uterus with the fetus still in its membranes, although it had escaped through the rupture into the abdominal cavity and looked like a large cyst developing on the uterus. About the seventh month of the pregnancy the woman had been knocked down and trampled on by her husband; colic pains followed and hemorrhages for a month, then all trouble subsided and the woman felt well and attended to her work as a farmer's wife. A few months later the cramps and hemorrhage returned, cured by panhysterectomy. Rupture from indirect trauma, as from a jump or fall, is more frequent than from direct injury. The uterus ruptures in these cases lengthwise, in the anterior wall of the fundus. In some of the cases on record the rupture at the eighth month was successfully sutured. The prognosis is not always unfavorable; prompt operative treatment almost always proved successful.

124. **Febrile Abortion.**—Fromme begins by tamponing the cervix and vagina and giving ergot. If with these measures the os is still impermeable after twelve hours, he dilates with laminaria and then cautiously removes the retained portions of the placenta with the finger alone after thoroughly rinsing out the uterus. The curet is to be absolutely rejected.

129. **Spinal Anesthesia in Gynecology.**—Steuernagel states that the spinal technic has been applied about 700 times at the clinic in charge of Zangemeister, and he here reviews 320 gynecologic operations done with it. The anesthesia was not quite sufficient in twenty-three cases and by-effects were observed in fifty-nine, including vomiting in twenty-seven, headache in fifteen, collapse in four, nervous disturbances in three and nausea in eight, but no symptoms on the part of the lungs in any instance. In one case the electric heat for the operating table was turned on too strong and it was found at the close of the hour-long operation that the patient was severely burned in the back and thighs. The burns healed in time, but the case warns of the special danger of burning during spinal anesthesia. The nervous disturbances mentioned as occurring in three cases were slight paresis in one or both legs and sensory disturbances. In two of the cases conditions promptly returned to normal under electric treatment, but in the third case there were evidences of grave organic injury from the spinal anesthesia, weakness and pains in the legs, sensory disturbances and considerable paresis of the right leg. The symptoms gradually subsided by the end of the third month, when it was found that a purely hysterical affection had succeeded the organic disturbances. It is wiser, Steuernagel remarks, to exclude from the spinal technic all persons with a tendency to hysteria or neurasthenia. The failures in regard to the anesthesia are always among such persons. If this category of patients can be shut off from spinal anesthesia, he thinks that the method will be found far superior to other technics in all other cases. Septic processes, of course, contra-indicate it. The results with spinal anesthesia have been growing constantly better from year to year, but he doubts whether the method is ripe yet for general practice.

Münchener medizinische Wochenschrift

December 26, LVIII, No. 52, pp. 2786-2808

130 The Martyrdom of the Sexual Apparatus Through the Ages. (Das Martyrium des Sexualapparates.) A. Hegar.
131 *Anthrax. (Zur Klinik und Therapie des äusseren Milzbrandes.) H. Wolff and Wiewiorowski.
132 *Polycythemia. (Ueber Hyperglobulie.) F. Röver.
133 Diuretic Action of Radium. (Radiumemanation als Diuretikum.) L. Grin.
134 Green Urine. (Ausscheidung von Indigoblau im Harn.) P. Sommerfeld.
135 *To Facilitate Climbing Stairs. (Ein zusammenlegbarer Pantoffel zur Erleichterung des Treppensteigens.) E. F. Schurig.
136 Radiotherapy of Conjunctivitis and Rosacea. H. Axmann.
137 Technic for Transplantation of Joints. (Zur Frage der Transplantation des Intermediärknorpels.) H. Helferich.

131. **Treatment of Anthrax.**—Of the thirteen cases of anthrax reported in detail, six were very severe, but all terminated favorably. Conservative measures alone were applied in ten cases, merely absolute repose, suspension when necessary, and boric acid salve. The main point is to keep the part absolutely still. In one case excision of the lesion was followed by high fever and symptoms indicating that the bacilli had found their way into the blood. One patient was a butcher who developed extensive lesions on the arms after slaughtering a cow with anthrax.

132. **Polycythemia.**—Röver reports two new cases of polycythemia studied with the "hemodynamic method" like the four recently described by Plesch. The findings are tabulated under twenty-two headings, including a repetition of the tests in one case. The findings differed widely where the tests were repeated, showing how the conditions in regard to the circulation differ at different times in the same patient. The cases teach further that high saturation of the venous blood with oxygen is a sign of evil import in polycythemia as well as in other diseases.

135. **Stair Climbing Facilitated.**—Schurig states that when the steps are of the ordinary height, about 16 cm., the effort to lift up the body is too great for persons with heart disease. He supplies such patients with a kind of slipper, the sole of which raises the foot by 8 cm., while the slipper can be folded until it is not over 2 cm. thick and can be conveniently carried in the pocket. The right foot, in the slipper, steps close to the first stair; the left foot then steps on the first stair. The right foot, in its slipper, is then placed on the same stair, and the left foot in turn placed on the second stair. The slipper thus interposes a midway step, doubling the number of treads; the body thus has to be lifted only 8 cm. at each step, which immeasurably reduces the exertion in stair climbing.

Zeitschrift für Kinderheilkunde, Berlin

III, No. 4, pp. 313-390. Last indexed January 6, p. 73

138 *Pathogenesis of Digestive Disturbances in Infants. (II. Die qualitativ-quantitative Bestimmung flüchtiger Fettsäuren in den Destillaten der Vakuum-Dampfdestillation.) F. Edelstein and F. v. Csonka.
139 *Pathogenesis of Digestive Disturbances in Infants. (III and IV. Tierversuche über die Wirkung niederer organischer Säuren auf die Peristaltik.) H. Bahrdt and K. Bamberg.
140 *Pathogenesis of Digestive Disturbances in Infants. (V. Ueber die flüchtigen Fettsäuren im Mageninhalt gesunder Säuglinge.) K. Huldschinsky.

138-140. **Pathogenesis of Digestive Disturbances in Infants.**—The four articles here presented are the reports of research at the special infant-welfare institution known as the Kaiserin Auguste Victoria-Haus zur Bekämpfung der Säuglingssterblichkeit im Deutschen Reiche. The institution is in charge of Prof. Langstein, and it is rapidly accumulating valuable data on the origin of digestive disturbances in infants. The special points here discussed are the volatile fat acids in the stools, stomach content and milk; the action of organic salts on peristalsis as determined in experiments on animals, and the volatile fat acids in the stomach content of healthy infants.

Zentralblatt für Gynäkologie, Leipsic

December 30, XXXV, No. 52, pp. 1729-1760

141 *Secondary Tuberculosis of the Female Genital Organs. (Beitrag zur Lehre der sekundären Tuberkulose der weiblichen Genitalorgane.) N. I. Horizontow.
142 *Uncontrollable Vomiting with Hematometra. (Fall von unstillbarem Erbrechen bei Hämatometra.) M. Hirsch.

141. **Tuberculosis of Female Genitals.**—Horizontow examined the genital organs of thirty guinea-pigs and eleven rabbits which he had inoculated with tuberculosis, comparing the

findings with those in the genital organs of twenty-one women who had succumbed to tuberculosis. It seems to be beyond question, he says, that the female genital organs are extremely susceptible to secondary tuberculosis, and that tuberculous infection of the abdominal cavity is peculiarly important from this point of view. In the vagina, tubes and uterus the secondary tuberculous lesions are found mainly in the mucosa; in the ovaries, mainly in the stroma of the cortical layer. In animals, tubercles may develop in the follicular apparatus. The tuberculous changes in the genital organs are usually slight and can be seldom recognized without the microscope. In his experiments tubercle bacilli were sometimes found in the genital organs when there were no signs of tuberculous infection.

142. **Vomiting with Hematometra.**—The blood accumulated in the uterus simulated a three-months' pregnancy, both in the size of the uterus and general symptoms. Uncontrollable vomiting developed and persisted for over a month, with progressive debility, rapid loss of weight and increasing pulse-rate compelling evacuation of the supposed pregnant uterus. No trace of a fetus or fetal membranes was found, and after evacuation of a large amount of blood conditions promptly returned to normal. The distention of the uterus evidently induced irritation, setting up and maintaining the vomiting; no other possible cause could be discovered and this assumption was confirmed by the recovery at once on the evacuation of the uterus. The peripheral nervous system semmed to be normal, but the sympathetic system must have been exceptionally irritable; the patient had suffered from uncontrollable vomiting during her three pregnancies and her fourth pregnancy—after the hematometra experience—had to be interrupted for the same cause. In each instance the vomiting came on about a month after conception; her mother had had a similar experience.

Gazzetta degli Ospedali e delle Cliniche, Milan

December 28, XXXII, No. 156, pp. 1651-1658

143 Research on Resistance of the Blood Corpuscles in Jaundice. (Delle resistenze globulari negli itterici, ricercate sul sangue in toto e sulle emazie deplasmatizzate.) P. Biffi.

Policlinico, Rome

January, XIX, No. 1, pp. 1-40

144 *Treatment of Erysipelas. (La cura dell'eresipela.) T. Pontano.

144. **Treatment of Erysipelas.**—Pontano states that from January, 1909, to August, 1911, there were 1,084 erysipelas patients at the Rome policlinic; eighty-seven patients died, but in only forty-seven cases was the erysipelas directly responsible for the death. In this group the erysipelas was of a septic or gangrenous form or there was a kidney or lung affection. This mortality of 8.02 per cent. is about the same as is observed elsewhere; it is made up mostly of aged or much debilitated patients. It seems to be irrespective of the mode of treatment, and none of the measures in vogue to date seems to have displayed any influence on the course of the affection or the death-rate. Measures that torture the patient are useless, and serotherapy has given no conclusive benefit in the severe cases. Pontano has been best pleased with the action of hot compresses dipped in physiologic salt solution and renewed every four hours. Although this treatment does not modify the actual course of the erysipelas or reduce the mortality, yet it is the simplest and easiest means of protecting the region, preventing contagion and reducing the pain.

Riforma Medica, Naples

December 18, XXVII, No. 51, pp. 1401-1428

145 *Effect on Blood Platelets of Injection of Pyrodin. (La piastrinosi sperimentale nella emolisi da pirodina.) A. Foti.
146 *Tests for Occult Blood. (Le ftaleine del fenolo e della resorcina come reattivi del sangue.) F. Ravenna.
147 Two Cases of Facial Paralysis. (La paralisi del facciale.) E. Grande.

145. **Effect on Blood Platelets of Injection of Pyrodin.**—Foti found that the blood-platelets increased in large numbers after intravenous injection of a 1 per cent. solution of pyrodin in rabbits. The injection had an evident destructive action on the blood, the red corpuscles being rapidly destroyed while the number of platelets increased. He found that the increased number of platelets corresponded exactly to the number of reds destroyed, and he accepts this as proof that the platelets are formed from destroyed or otherwise modified reds.

146. **Tests for Occult Blood.**—Ravenna experimented with resorcin phthalein and phenolphthalein, the Meyer reaction, his experience confirming the delicacy and reliability of the latter test, phenolphthalin in an alkaline solution revealing the presence of hemoglobin in minute quantities and even in putrefied material. The Meyer technic is more sensitive when distilled water is used for the test, as the slightest impurity in the water hampers the reaction. In urine, the addition of acetic alcohol is necessary to facilitate the test; with this, even the slightest tendency to hemoglobinuria or hematuria is readily detected. In a recent clinical case all the symptoms of a gastric ulcer subsided under the usual course of treatment but the phenolphthalin test for occult blood in the stools still gave positive findings. The young man left the hospital apparently entirely cured, refusing to heed the warnings based on the test. It was not long, however, before he was brought back with perforation peritonitis, and necropsy disclosed the perforation in a gastric ulcer. Other instructive cases are cited, among them that of an elderly man with severe anemia and symptoms suggesting gastric cancer, but the phenolphthalin test was negative and under vigorous tonic and hygienic measures the patient's condition was restored to approximately normal. Positive findings were obtained in a few cases in patients with heart disease and failing compensation, local congestion permitting the passage of a little blood into the gastro-intestinal tract. Another source of error is the swallowing of sputum containing a little blood. Ravenna is careful to exclude error from hemorrhoids and keeps his patients on a strict milk diet for three days before the test, and precedes the test with a cleasing enema, and boils and then cools the stool to be used for the test. Parallel findings with other tests confirmed anew, he says, the superiority of the phenolphthalin test. [It was recently described in The Journal, Nov. 25, 1911, p. 1783.]

Norsk Magazin for Lægevidenskaben, Christiania

January, LXXIII, No. 1, pp. 1-144

148 Experimental Research on Articles of Food Which Tend to Prevent Development of Scorbutus. . (Experimentelle undersøkelse over existensen av egne "antiskorbutiske" stoffer.) V. Fürst.
149 Three Years' Experiences in Treatment of Trypanosomiasis in Belgian Congo. (Om trypanose.) J. Cammermeyer.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

A Handbook of the Diseases of the Eye and Their Treatment. By Sir Henry R. Swanzy, A.M., M.D., D.Sc., Surgeon to the Royal Victoria Eye and Ear Hospital, Dublin, and Louis Werner, M.B., F.R.C.S.I., Sen. Mod. Univ. Dub. Ophthalmic Surgeon to the Mater Hospital. Tenth Edition. Cloth. Price, $4. Pp. 634, with illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

Some Factors Influencing Health in Tropical and Subtropical Countries. By T. Gerald Garry, M.D., M.A.O., M.Ch.R.U.I. Cloth. Price, 2 shillings, 6 pence. Pp. 96. London: John Bale, Sons & Danielsson, Ltd., 83 Titchfield St., 1911.

Handbuch der Biochemie des Menschen und der Tiere. Herausgegeben von Prof. Dr. Phil. et Med. Carl Oppenheimer. 29 (Schluss) Lieferung. Volume 4, part 1. Paper. Price, 5 marks. Pp. 855. Jena: Gustav Fischer, 1911.

Die heteroplastische und homöoplastische Transplantation. Von Dr. Georg Schöne, Privatdozent der Chirurgie, Marburg. Paper. Price, 8 marks. Pp. 161, with 29 illustrations. Berlin: Julius Springer, 1912.

Jewish Dietary Laws from a Scientific Standpoint. A Study by N. E. Aronstam, M.D. Paper. Price, 25 cents. Pp. 24. New York: Bloch Publishing Company, 40 East 14th St. 1912.

Twenty-Eighth Annual Report of the State Board of Health of the State of Rhode Island for 1905. Cloth. Pp. 300. Providence, 1911.

Fifteenth Annual Report of the Loomis Sanatorium for the Treatment of Tuberculosis. Liberty, Sullivan County, New York. 1911.

The Conquest of Nerves. By J. W. Courtney, M.D. Cloth. Price, $1.25. Pp. 209. New York: Macmillan Company, 1911.

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A STUDY OF CHILDREN WITH REFERENCE TO ENTEROPTOSIS *

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GRAND RAPIDS, MICH.

If we examine a large number of women with reference to visceral prolapse, we shall find that we may divide them roughly into two groups: first, those who were originally of vigorous build and whose organs were normally or nearly normally placed, but who have given way to child-bearing, excessive hard work or other untoward influences and now present, aside from certain well-marked outward physical signs, more or less sagging of some of their organs; and, second, those who are of the true or essential type, in whom certain fundamental defects in constitution play the chief rôle in causation. For the sake of clearness in this study we shall dismiss the former division, with the brief statement that the prolapse in this class is seldom or never excessive, whereas in the essential or primary form we find it of varying but often of extreme degree. It might be added that the external physical manifestations of the two are very different. The two types often blend and yet the purer forms of each present so many points of difference as to make a clear distinction necessary. I am basing these seemingly dogmatic statements on a study of some four hundred women, a summary of which I presented before another section of this society one year ago.[1] My own interest in this subject has been that of a gynecologist.

The first impression that we get of the enteroptotic woman of the true or essential type, as seen in adult life, is that of frailness, expressed in the contour of her form and often in her features. She is slight and angular and has but little adipose tissue: her muscles are thin and there is almost invariably a laxness and softness of her tissues. These and other structures of the body, including the bones, give one a sense of underdevelopment and a lack of vigor. These may be designated as the fundamental characteristics of the habitus. Associated with and largely dependent on these characteristics, one notes in such an individual that the neck is long, the chest undersized and showing distinct signs of collapse—that is, it is shallow, the upper ribs lie far apart, the lower ones slant downward and inward, lying close together, and there is a distinct lessening of the capacity of the thoracic abdomen. The abdominal walls are soft and lack resistance, and there is a tendency for them to bulge forward. This bulging is rarely present to any marked extent in the nullipara and in a large number of cases it is practically lacking altogether; in the parous woman it is, however, oftener present. The changes in the chest and upper abdomen take place, largely at least, during the growth of the child to maturity. They are permanent changes; at least, they are the most difficult of any material correction. Such women are peculiarly apt to suffer from muscular insufficiency; that is, their muscles are unable to meet the demands on them. It is very apparent in the lessening of the lumbar lordosis, in the rounding back, the forward droop of the shoulders and, not infrequently, in weak foot. The insufficiencies are not always conspicuously present and, generally speaking, are to be looked on as signs of fatigue. They are as a rule less permanent in character and are frequently bettered as the woman improves in health.

I do not wish to go into the symptomatology more than to say that such women very often have good health in the ordinary meaning of the term, but that they, as a class, have less resistance than more vigorous women and are peculiarly apt to give way to overwork, care and responsibility, child-bearing, an indoor life or poor food. Under such conditions they are brought quickly to a state of fatigue, of lowered nutrition and an abnormal mental condition. They develop pain in the back and groins, a feeling of weight and bearing down in the lower abdomen, disturbances of digestion, menstruation and urination and a long series of psychoneurotic disturbances. It may, in fact, be said that the enteroptotic woman, when once her equilibrium is disturbed, develops symptoms that may usually be classified under the term neurasthenia. It is because of the frequency of this occurrence, and the difficulties encountered in seeking to improve such patients, that we are led to make a close study of enteroptosis from all standpoints.

If we inquire into the early history of such women we shall find that, in all the well-marked cases at least, the condition can be traced to early childhood;[2] that is, they will tell you they were thin, frail and perhaps more or less nervous, even at that early period. It was with the idea of learning more of this phase of the problem that I began some time ago the study of children.

W. J. Butler[3] presented before this section at its last meeting a most excellent paper on this subject, based on an examination of 155 children; my findings agree in the main with his.

My own study is based on the examination of 109 female children ranging in age from birth to thirteen years. The height was obtained and, following the routine used with adults, the size of the middle zone of the trunk was estimated by obtaining the index of Becher

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* Read in the Section on Diseases of Children of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

[1] The Journal A. M. A., Nov. 26, 1910, p. 1860.

[2] That there is here a marked hereditary tendency to assume this habitus may be learned by making inquiry of such patients. I obtained information on this point from some 300 women and found the immediate progenitors to be of similar type in most of the well-marked instances.

[3] The Journal A. M. A., Dec. 31, 1910, p. 2279.

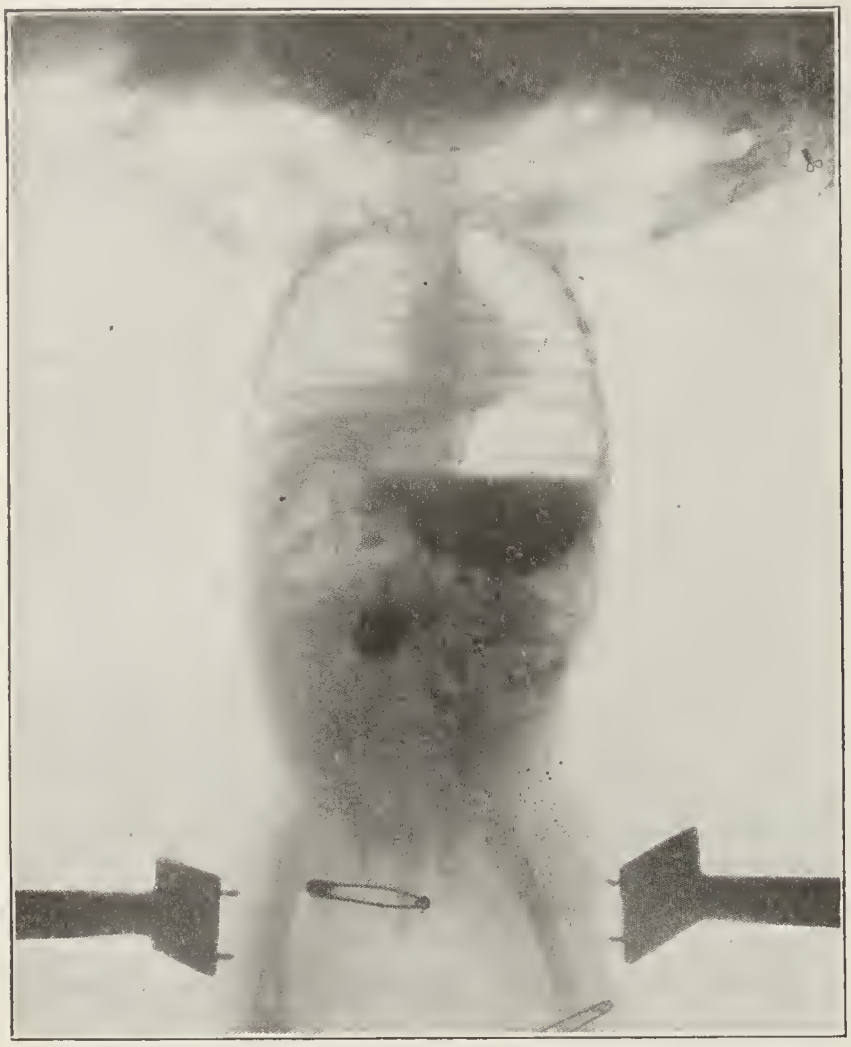

Fig. 1 (B. P.)—Healthy infant, aged 14 months. Note cow-horn shape of stomach, outlined by mixture at the bottom and gas bubbles at the top. Note also its high position, well up toward the diaphragm, the lower border forming a gentle curve nearly on a level with the pylorus. Note colon (gas) in front of stomach, also shape of infant's trunk (spindle- or bobbin-shaped), large in the middle and tapering to either end. Upper abdomen is its roomiest portion.

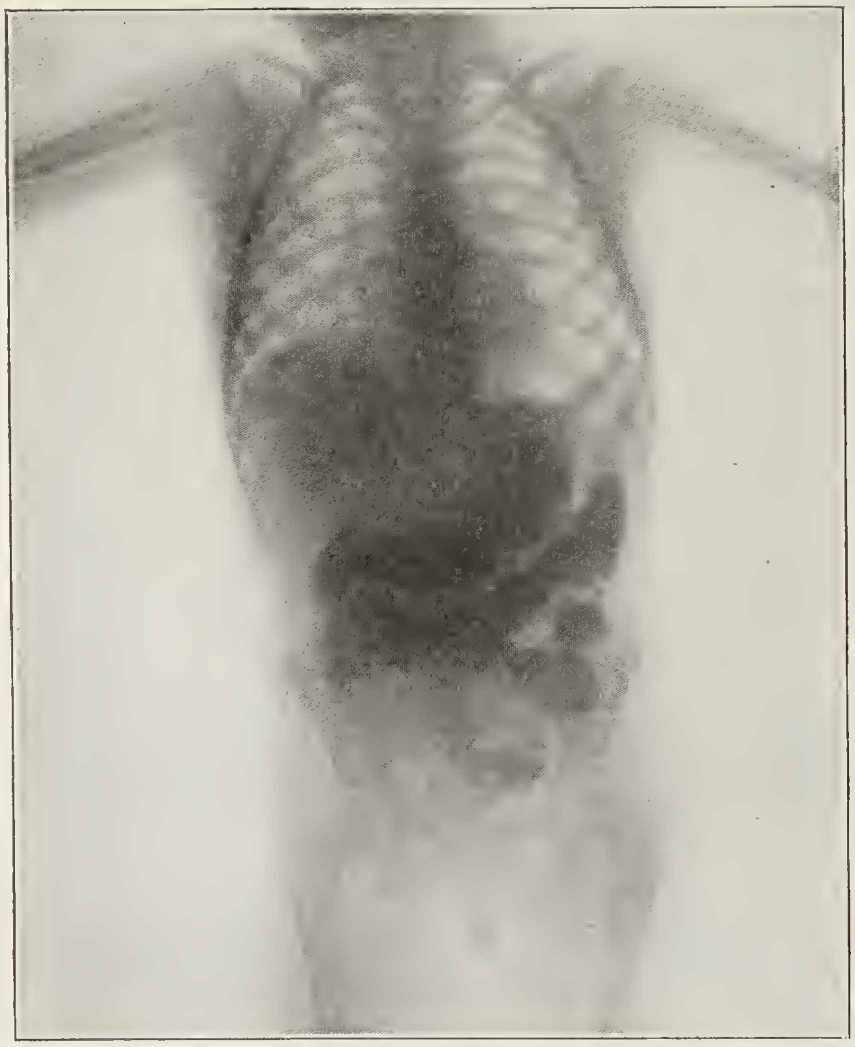

Fig. 3 (M. S.)—Vigorous child, aged 3 years. Exposure twenty-four hours after taking mixture, and mixture repeated before exposure was made. Relation of stomach and colon well shown. Note that the stomach and colon are well up in the abdomen and that both correspond in shape and position to the normal adult organs.

and Lenhoff.[4] After this the general state of nutrition was observed, the attitude of the child, the size and shape of the thorax (and the epigastric angle). I endeavored to palpate the kidneys and sought the position of the lower border of the stomach under gas[5] and percussion. Some of the examinations were incomplete because of circumstances. Photographs were obtained in a large number of instances and x-ray examinations were made in twenty-four cases. Much of this was done to familiarize myself with the peculiar characteristics of the child body at different ages—in this I was much helped by the excellent work of Stratz.[6] No prolonged attempt was made to obtain a detailed account of the previous state of health. It was obviously almost impossible to get this from the children themselves and the parents were rarely present. I realize that these examinations might have covered many more points had time and circumstances permitted. The material examined was largely in the D. A. Blodgett Home for Children in Grand Rapids. Through the kindness of Dr. Robert W. Lovett of Boston, I was also able to examine a considerable number of children in various institutions of that city.

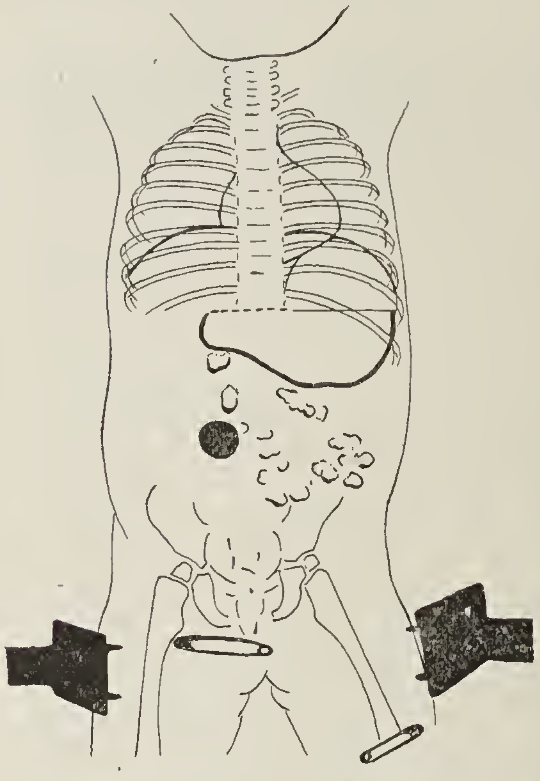

Fig. 2.—A diagram, traced from the radiograph shown in Figure 1. (See foot-note 11.)

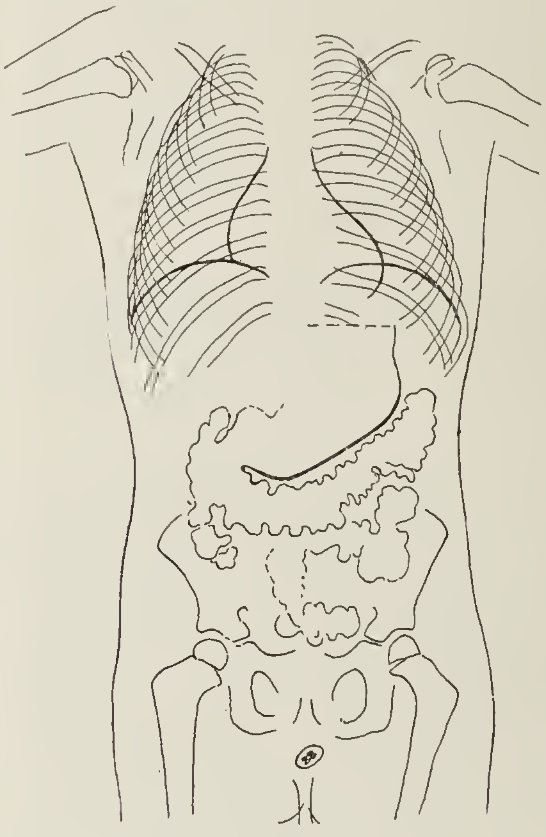

Fig. 4.—A diagram of Fig. 3.

In this series of examinations children of various states of nutrition and vigor were met with, as might be expected—children with slender frames, of little fat and small muscles were common. I was rather surprised at the number of children who presented signs of muscular insufficiency, round shoulders, slight lateral curvature and weak foot. In the thin, frail child

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[4] This index is obtained by dividing the jugulopubic distance by the waist circumference and multiplying the result by 100. This gives, in a general way, the relative capacity of the upper abdomen.

[5] To the adult a dram of sodium bicarbonate in one-half glass of water is given, followed by one-half dram of tartaric acid in a like amount of water; to the child rather less is given, according to the size and age. Infants received none.

[6] Stratz: Der Körper des Kindes, Stuttgart, 1909.

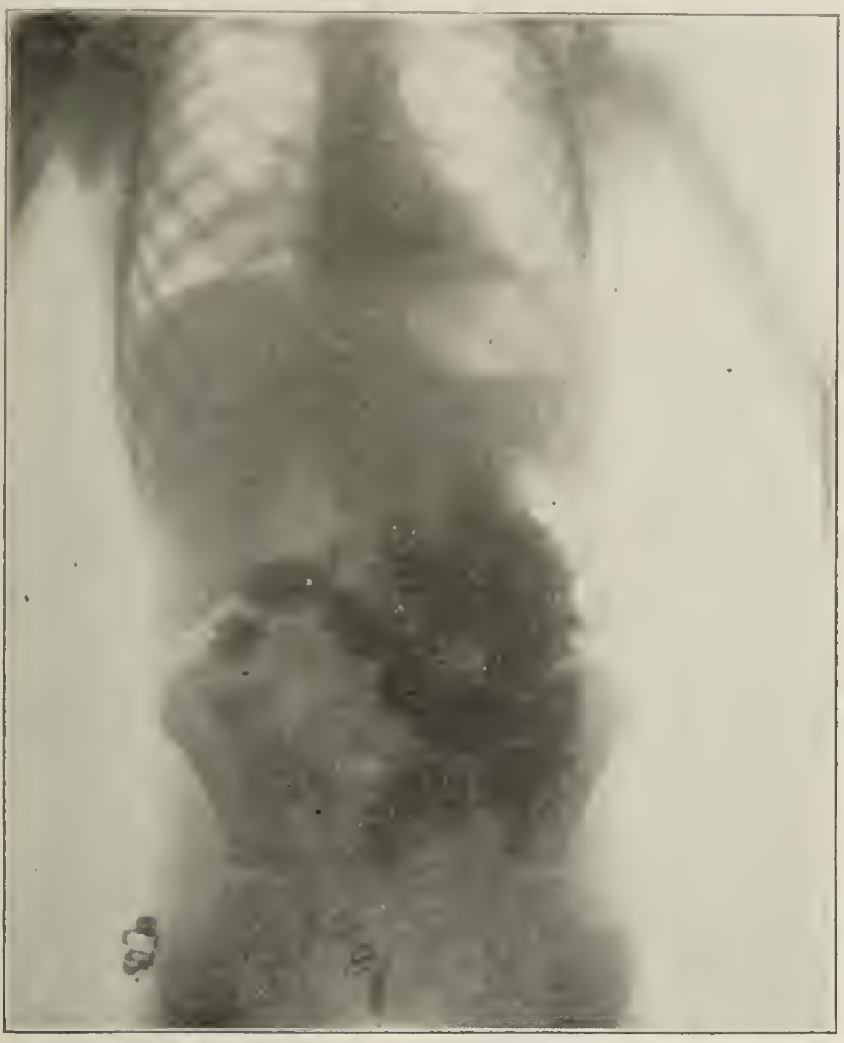

Fig. 5 (Z. G.)—A child, aged 6 years, distinctly of the enteroptotic type. The stomach is high in the abdomen and its lower pole is distinctly hooked. This has a strong resemblance to the enteroptotic stomach of later life, but of mild degree.

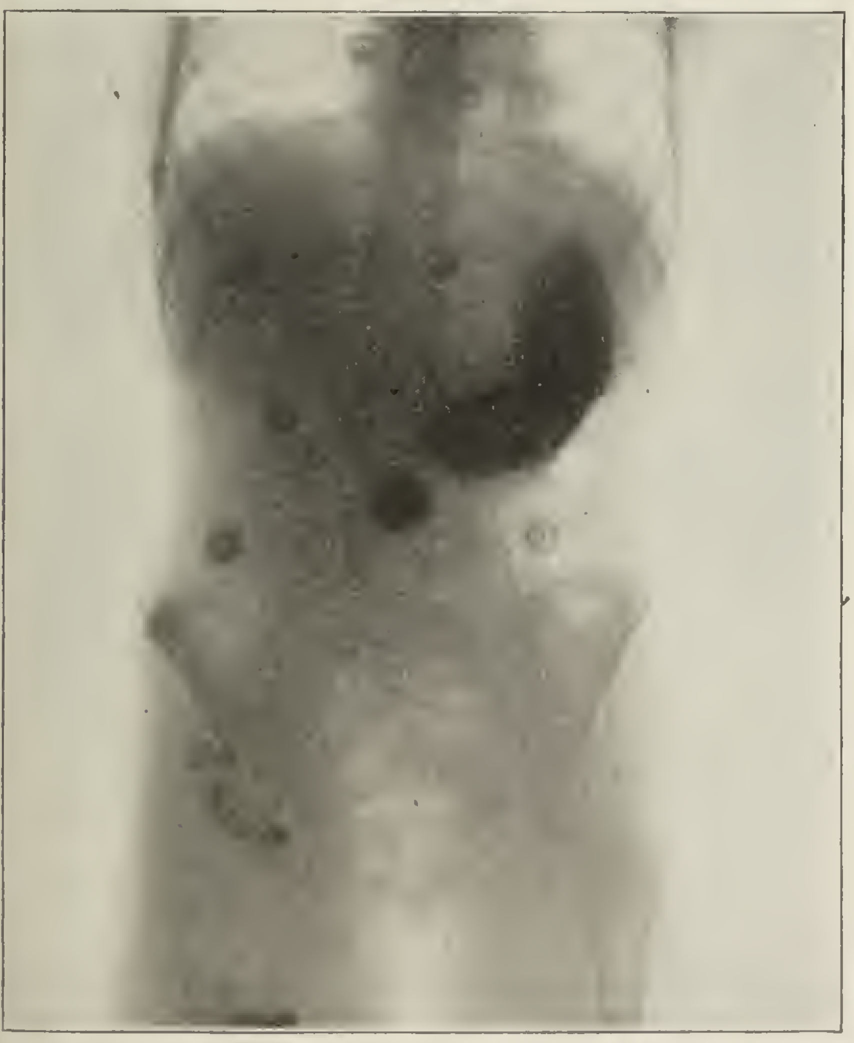

Fig. 7 (A. B.)—Vigorous child, aged 8 years. Stomach almost ideal in form and position.

this was especially noticeable, though by no means confined to this class. The muscular insufficiency, so frequently accompanying the enteroptotic habit of adult life, is then by no means peculiar to later periods, but is often present early. In order to obtain information as to what constituted normal nutrition in a given instance, it was necessary to have in mind the varying contour of form present at different ages and to compare children of the same age and stage of growth. In the illustrations (Figs. 30 to 37) I have endeavored to bring out the slenderness, lack of fat and muscle, the delicacy of form and feature which characterized the frail child—primary characteristics of the enteroptotic habit of the adult.

The changes in the form of the trunk which normally take place in the growth from infancy to puberty were of much interest, since the capacity of the upper abdomen in adult life is undoubtedly a mechanical factor (although but one) in determining the position of the contained organs. The shape of the trunk is very different from that seen later on. In the infant and young child it is spindle-shaped, largest at the middle, tapering in either direction to the pelvis below and the neck above. This shape is most outspoken in infancy; as the child grows, the waist circumference diminishes relatively, but this form of trunk remains conspicuous up to the eighth year, the beginning of the bisexual age. At this time begins the widening of the pelvis and the infant trunk-form is soon lost. Not until late puberty, however, is there any marked narrowing of the middle zone. The prominence of the abdomen is most marked in infancy, but remains very conspicuous until about the eighth year, when it seems to lessen more rapidly. The shortness of the thorax, the relatively greater depth of it and the upper abdomen, as compared with the adult, are other features worthy of note and are common to all states of nutrition. Not until after the tenth year could distinct signs of actual collapse of the thorax be noted and this was exceptional then, even in very frail subjects. In a few instances, after approximately the tenth year, it was found smaller in size, showing a less vigorous development, and some of the collapse so conspicuous in the adult enteroptotic woman could be noted in these children at this age. In most children, frail or vigorous, however, up to about the age of 12 years, there was little change in the actual shape of the thorax and abdomen.

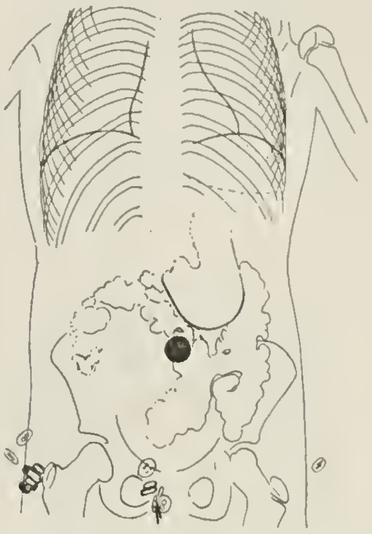

Fig. 6.—A diagram of Fig. 5.

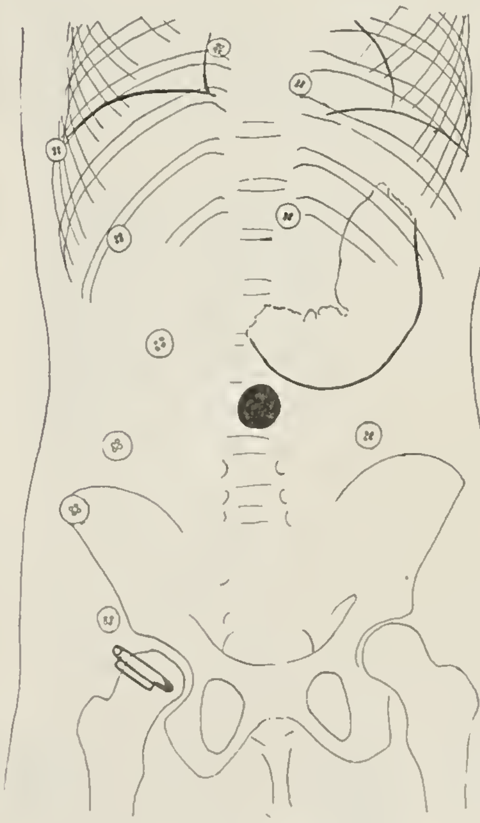

Fig. 8.—A diagram of Fig. 7.

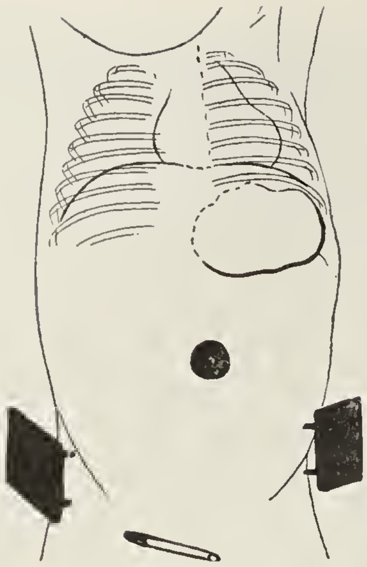

Fig. 9 (T. H.)—Rather frail infant, aged 8 months. Note high position of stomach; shape not well shown. In original plate, colon, outlined by gas, shows in front of stomach. Incidentally, oblique position of heart is well shown.

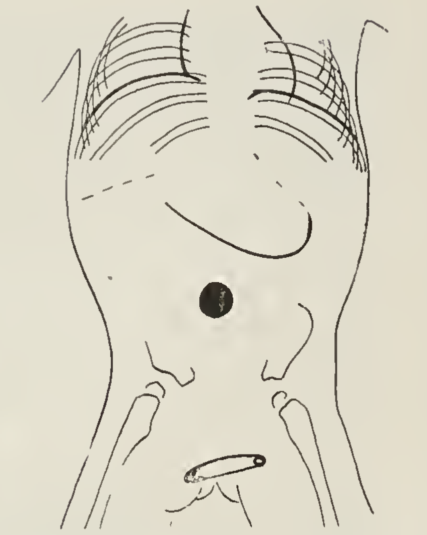

Fig. 10 (M. L.)—Frail, poorly nourished infant, aged 14 months. Stomach well up in abdomen. Shape not well shown.

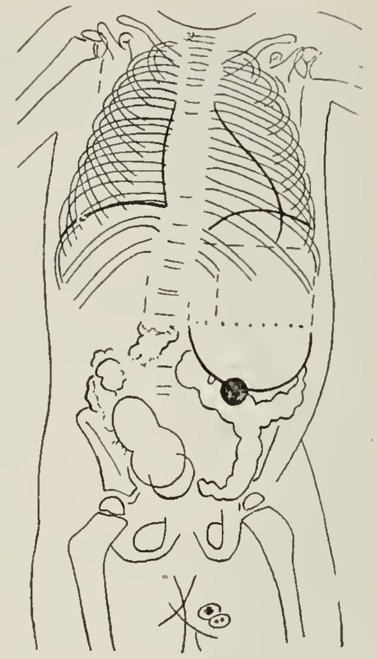

Fig. 15 (E. W.)—Well-nourished, healthy infant, aged 28 months. Stomach rather large, lower border rather low, shape apparently normal.

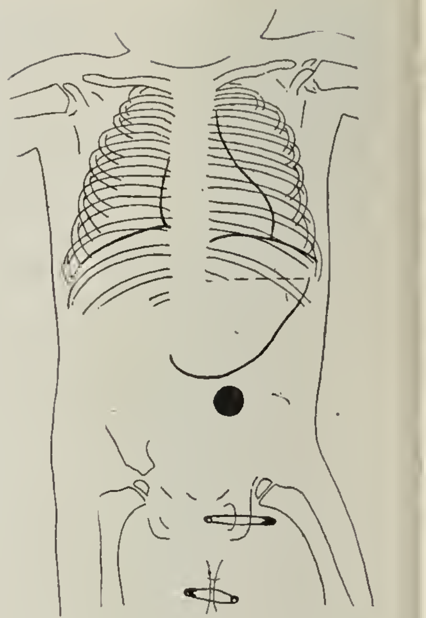

Fig. 16 (L. E.)—Child well nourished at present, aged 30 months. Shows distinct signs of rickets. Stomach well up in abdomen and normal in shape.

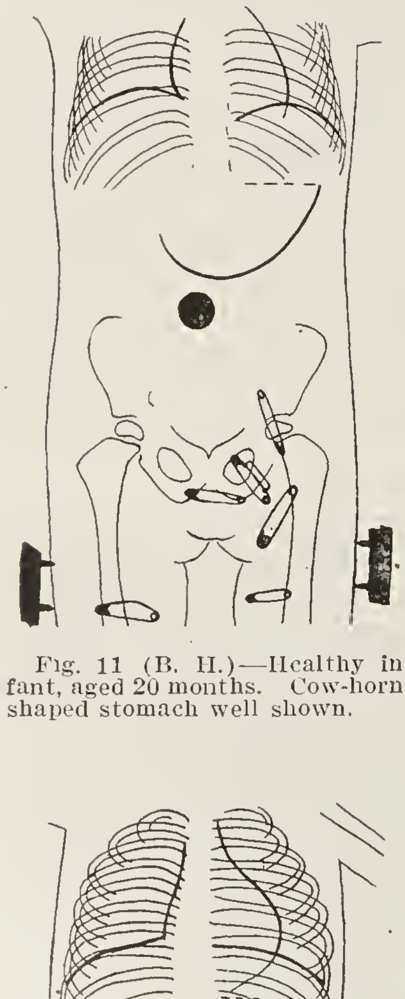

Fig. 11 (B. H.)—Healthy infant, aged 20 months. Cow-horn-shaped stomach well shown.

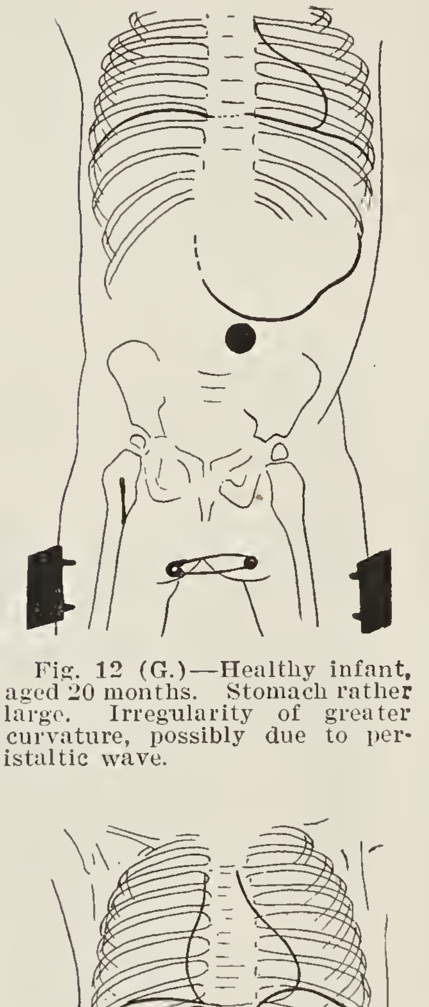

Fig. 12 (G.)—Healthy infant, aged 20 months. Stomach rather large. Irregularity of greater curvature, possibly due to peristaltic wave.

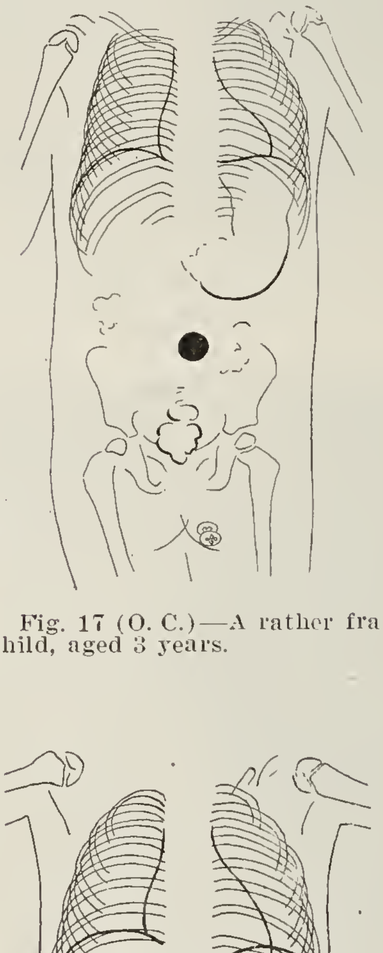

Fig. 17 (O. C.)—A rather frail child, aged 3 years.

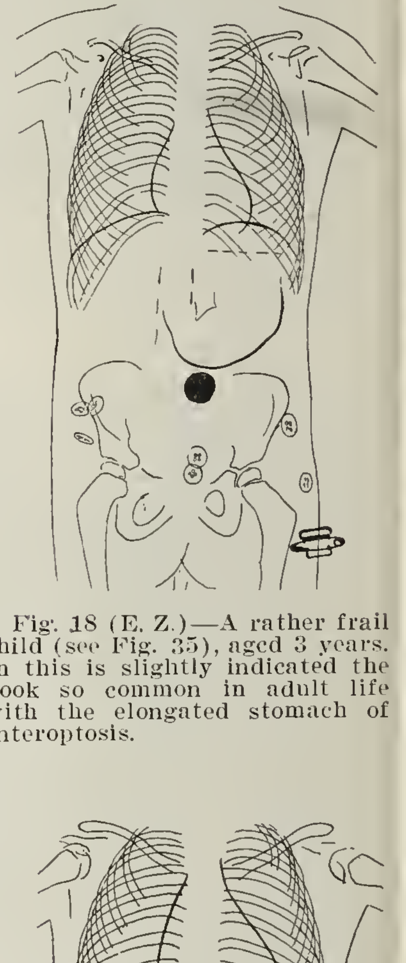

Fig. 18 (E. Z.)—A rather frail child (see Fig. 35), aged 3 years. In this is slightly indicated the hook so common in adult life with the elongated stomach of enteroptosis.

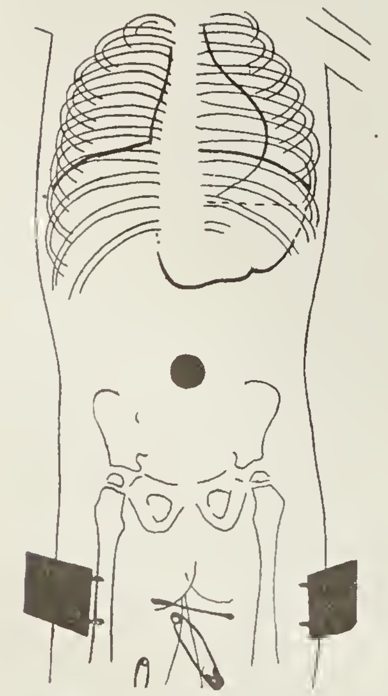

Fig. 13 (P. H.)—Healthy infant, aged 21 months.

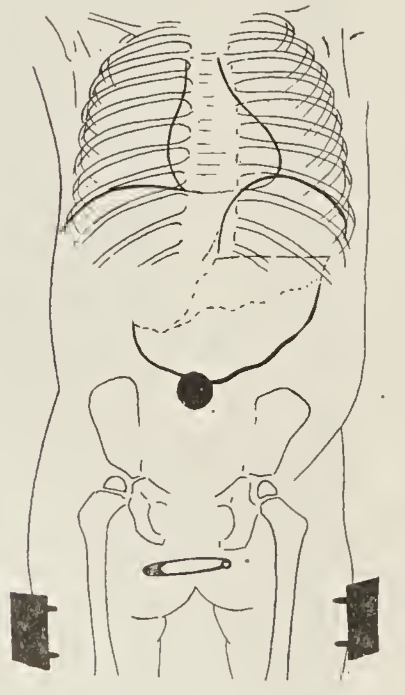

Fig. 14 (K. P.)—Healthy infant, aged 22 months. A large distended stomach; note that it pushes the left side of the diaphragm higher than the right.

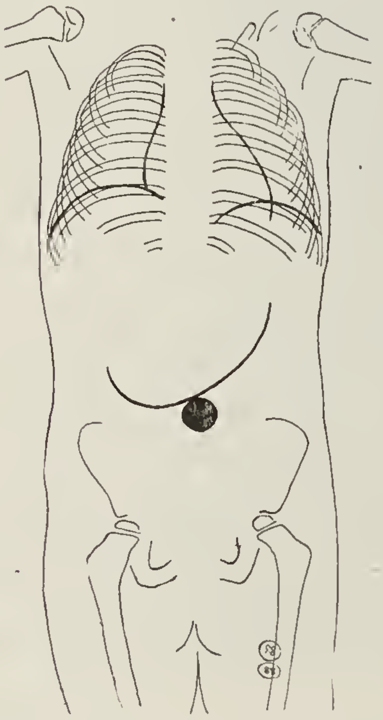

Fig. 19 (D. V. N.)—Well-nourished, vigorous child, aged 3 years. Stomach rather large, lower pole lies rather low.

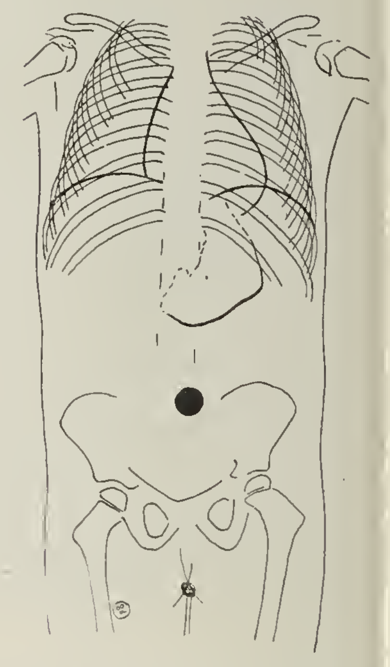

Fig. 20 (M. P.)—Well-nourished and vigorous child, aged 3 years. Stomach imperfectly outlined.

Explanation: Each of these diagrams is made from a radiograph, just as in the case of Figures 2, 4, 6 and 8. See foot-note 11.

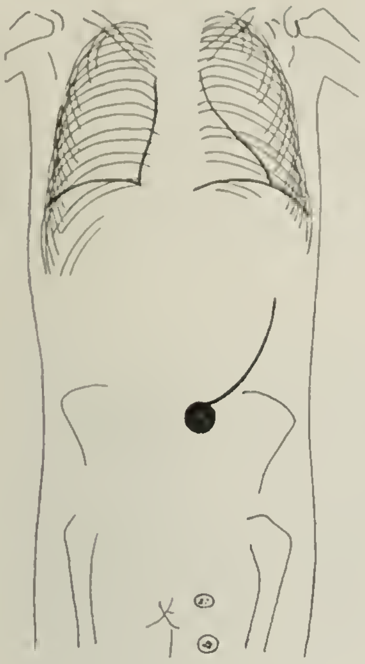

Fig. 21 (J. V. H.)—Well-nourished child, aged 4 years. Stomach imperfectly outlined; lower pole lies rather lower than usual.

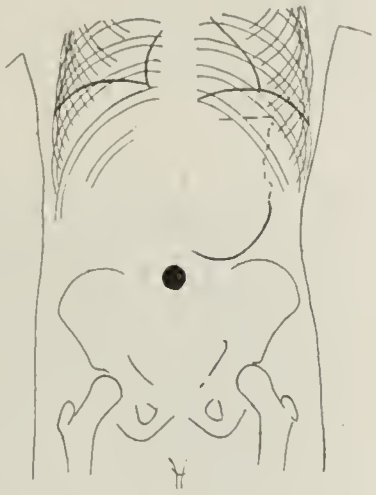

Fig. 22 (A. S.)—Well-nourished child, aged 7 years (Fig. 30). Lower pole normal in position.

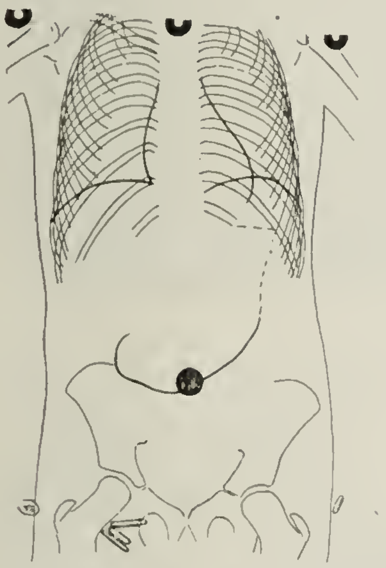

Fig. 23 (B. W.)—Slender child, aged 8 years. Stomach shows more signs of relaxation than any of the others.

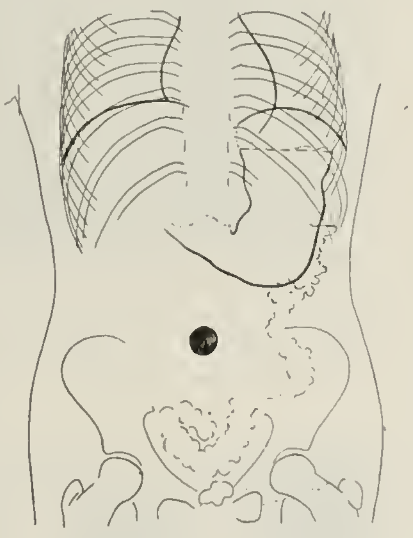

Fig. 24 (B. B.)—Vigorous child, aged 10 years. Stomach ideal in form and position.

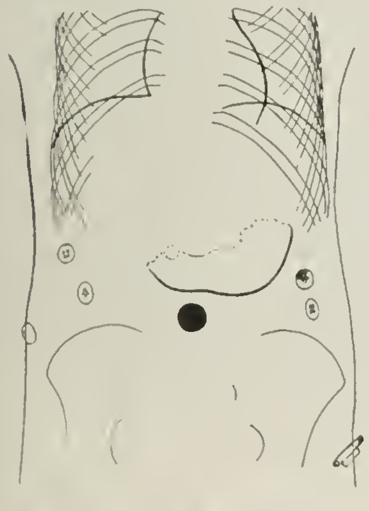

Fig. 25 (E. R.)—Very frail child (Fig. 36), aged 11 years. Stomach is normal in shape. Some flabbiness of stomach-wall may be conjectured by comparing with Figure 26.

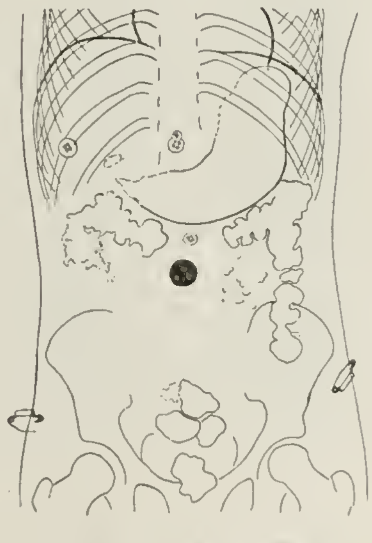

Fig. 26.—Same child as in Figure 25. Picture taken in lying position. Shows lower pole of stomach higher than in standing position.

If one has presumed that the marked visceral prolapse, so conspicuous in the frail woman in after-life, is present during childhood, he is destined to meet with a surprise when he comes to investigate the matter. In fifty children, aged from 3 to 12 years inclusive, I sought to palpate the kidneys. The method used was to turn the child well on its side on the table or bed and to reach into the kidney fossa as far as possible with the fingers. With a little patience this was satisfactory. Only such kidneys as could be distinctly felt to slip beneath the fingers were regarded as palpable. The tissues are soft and one can press deeply enough into the side to insure the non-presence of the kidney in an abnormal position. In none of the children (except infants) up to 7 years was the kidney palpable. In one child of 7 the right kidney, and in another of 9, the left was plainly palpable. In a girl of 12 (a very frail subject) the right kidney was palpable. Butler, in fifty girls, found palpable (movable) kidneys present in three, all 12 years or older. This does not necessarily mean that kidneys are never displaced in early childhood, but, when we compare these results with those obtained by examining adult women,[7] the contrast is very striking and we may say that, ordinarily at least, the kidney that was palpable in later life was not so in childhood; in other words, the kidney was not congenitally displaced but became so. The body habit, I repeat, defined by the fundamental characteristics of frailness, lack of adipose tissue, and slenderness and laxness of tissues, is, however, found very commonly. Of the 109 subjects examined, thirty-nine were infants under 2 years, nineteen under 1 year, and twenty between 1 and 2. In the first group the liver could be plainly palpated in fifteen; the right kidney was palpable in five; the left, in three and both kidneys in two. In the second group the liver was examined in seventeen and plainly palpable in ten; but in the twenty neither kidney was palpable. This, of course, does not mean any congenital displacement of these organs, but, as Butler has pointed out, simply that they can be palpated at this early age because of the shortness of the thorax, the wideness of its lower aperture and the softness of the

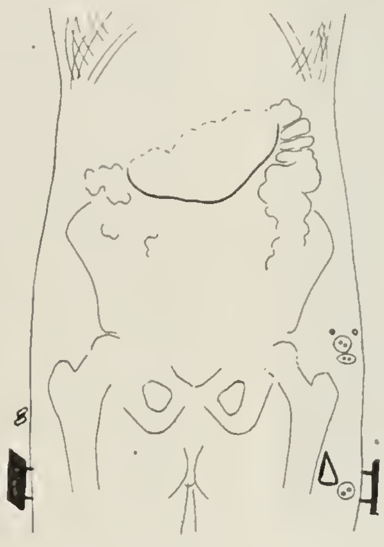

Fig. 27 (D. S.)—Rather vigorous child, aged 11 years. Stomach well up; colon imperfectly outlined.

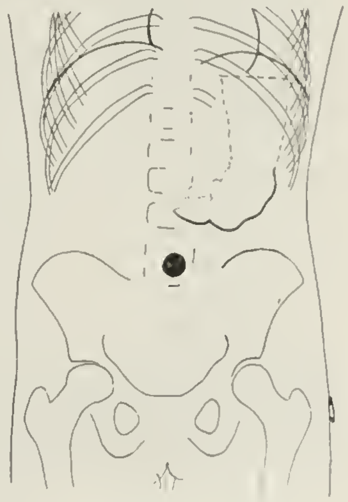

Fig. 28 (F. N.)—Frail child (Fig. 37), aged 12 years. Stomach, however, shows no relaxation.

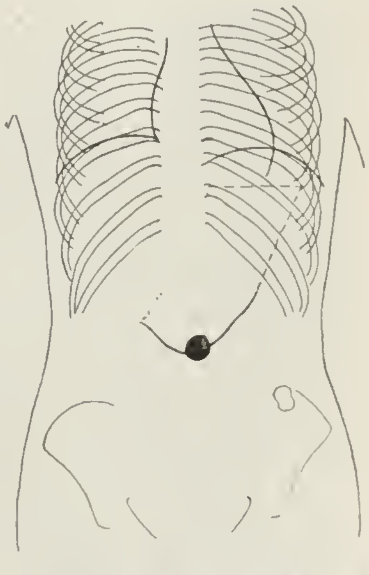

Fig. 29 (M. S.)—Vigorous child (Fig. 31), aged 12 years.

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[7] In a series of 100 women, taken at random, I found that the right kidney was palpable in thirty-five and both kidneys in eight. In frail, enteroptotic women the percentage would run much higher.

tissues. After the age of 1 year the palpable kidneys disappeared.

With gas I dilated the stomachs of fifty-seven of these children; this method I thought impracticable in infants and I relied on simple percussion. In all of the children the lower pole was found well up in the abdomen. In fact, in none was there any lowering of this pole which could safely be called prolapse; this was in marked contrast to the examination of adults.[8]

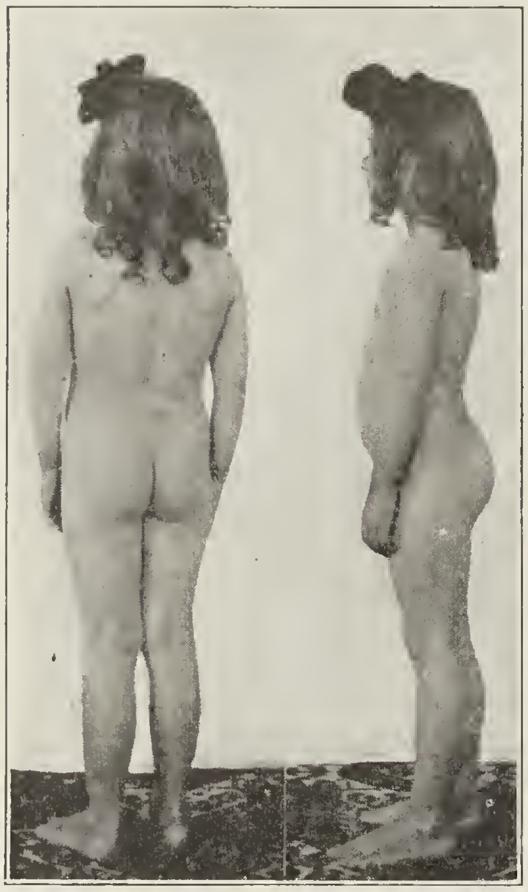

Fig. 30 (A. S.)—Normal child, aged 7, well developed and well nourished. Note contour of form and trunk and erect attitude, which is naturally assumed. Signs of weakness are wanting.

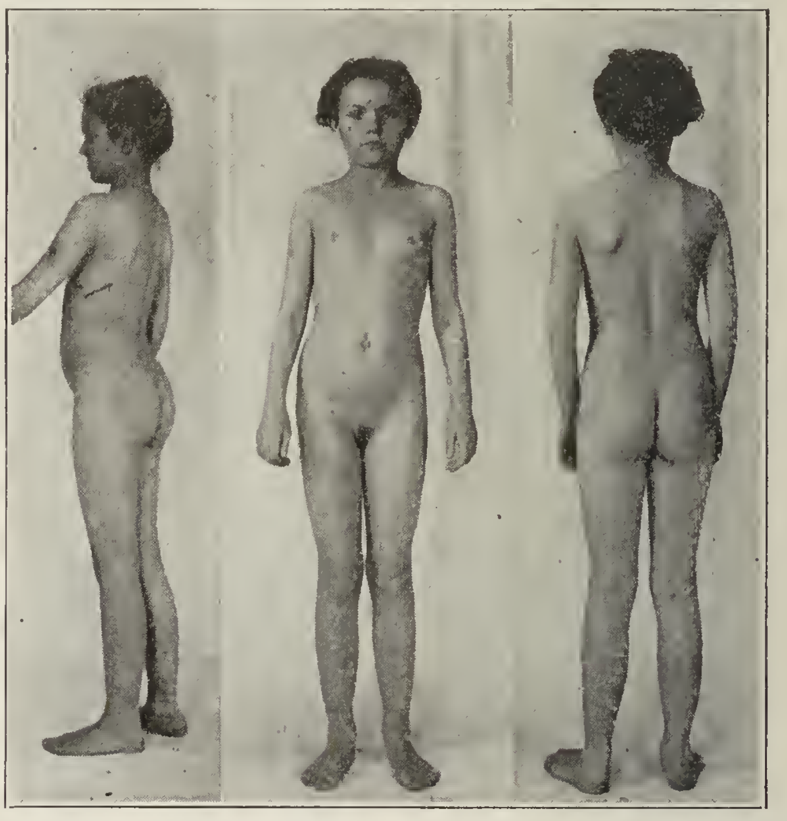

Fig. 31 (N. S.)—Healthy, well-nourished, well-developed child, aged 12. She stands easily in a normal attitude. Note shape of chest and trunk at this age, also beginning enlargement of pelvis.

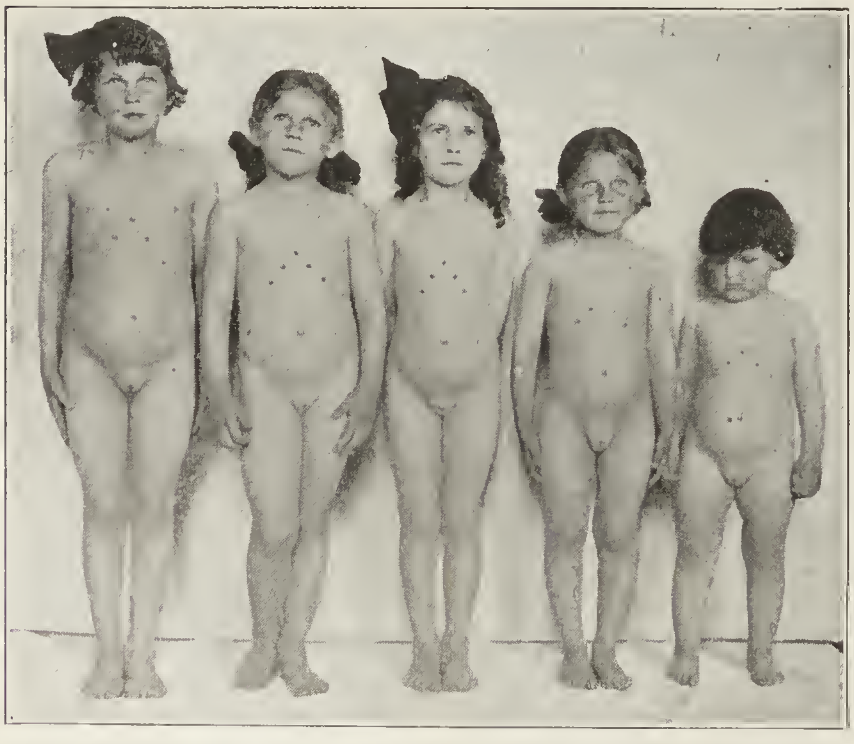

Fig. 32.—From right to left: M. Z., E. W., J. M., A. S., P. C., aged 2, 6, 6, 7 and 8. The middle one is slightly frailer than the rest, but all are of vigorous type. Note amount of fat, good development and the few signs of weakness. Note also the wide epigastric angle, which is a constant one in childhood in all types. Some narrowing is occasionally found after 10 years of age in frail children, but this is not the rule. Narrowing is the rule in enteroptotic women and is an accompaniment of the underdeveloped, collapsed thorax.

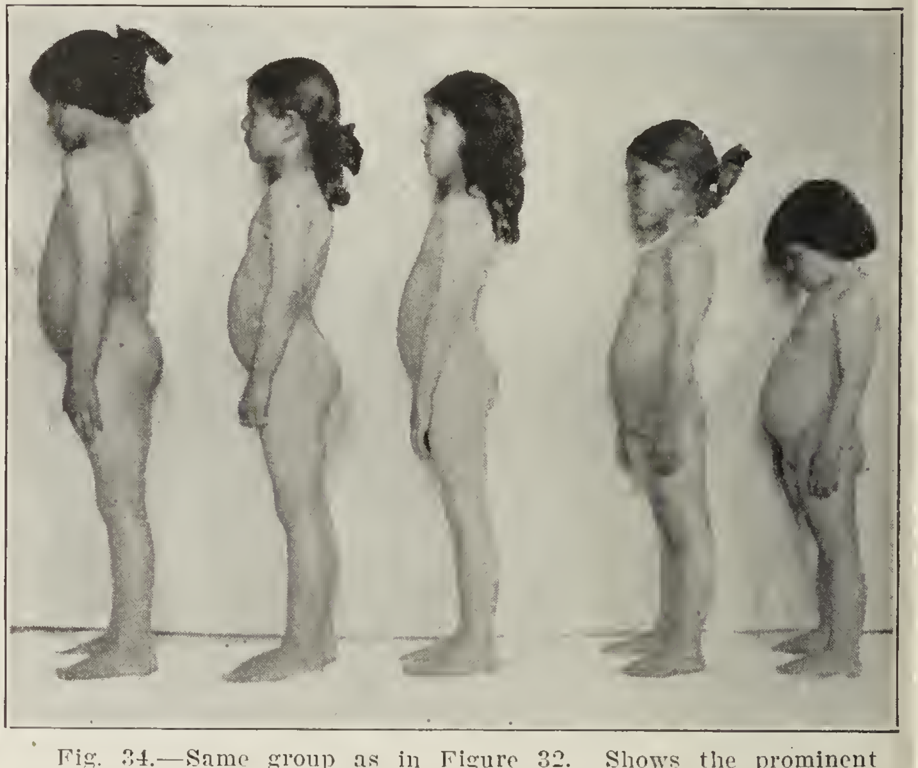

Fig. 34.—Same group as in Figure 32. Shows the prominent abdomen found in childhood. These are all vigorous children.

With Dr. Henry Hulst I examined with the *x*-ray the stomach and intestines of twenty-four children. It is to his painstaking and exact work that I am indebted for this unusually fine series of plates. The technic was as follows: The child was placed in the standing position, 5 feet, sometimes 6 feet, from the tube (which was about on a level with the umbilicus) in order to eradicate as far as possible any distortion. The exposures were less than one second in duration. The child stood with its back to the tube, the plate being placed against, but not pressed on, the abdomen. In these examinations a coin was placed over the umbilicus, but I would say in this connection that, in children at least, it forms a very imperfect landmark, since its relation to the spine was not a constant one. The coin might well have been dispensed with. We judged the stomach rather by its relation to the diaphragm, liver and pelvis. Zirconium oxid, mixed with chocolate, sugar and milk, we found a fairly palatable mixture and free from any nauseating or ill affects, a thing which cannot be said of bismuth. The child was given 8 ounces to a pint of the mixture, at noon on an empty stomach and the exposure made immediately afterward. In twenty-four hours another similar meal was given and a second exposure made. This was done, of course, to outline the stomach and colon together. The results were as follows: The stomachs, as outlined by the mixture, varied in size and shape. As contrasted with adults, the stomachs were well up in the abdomen and the hook at the lower pole, so common in the enteroptotic stomach of the adult, was seen in but few instances and then only in comparatively slight degree. The amount of gas in the stomach and intestines seemed to influence the size considerably, this being often changed at the second examination. This seemed to have little or no relation to the vigor of the child. We would naturally turn to the frail child to find the visceral prolapse which we seek, but even here, except in one instance (Fig. 23), it was but slightly indicated as compared with the frequently found outspoken abnormalities of later life.

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[8] In 100 women examined by this method the lower pole was found below the umbilicus in fifty-two instances, at or above it in forty-eight, Surg., Gynec. and Obst., 1906, iii, 130.

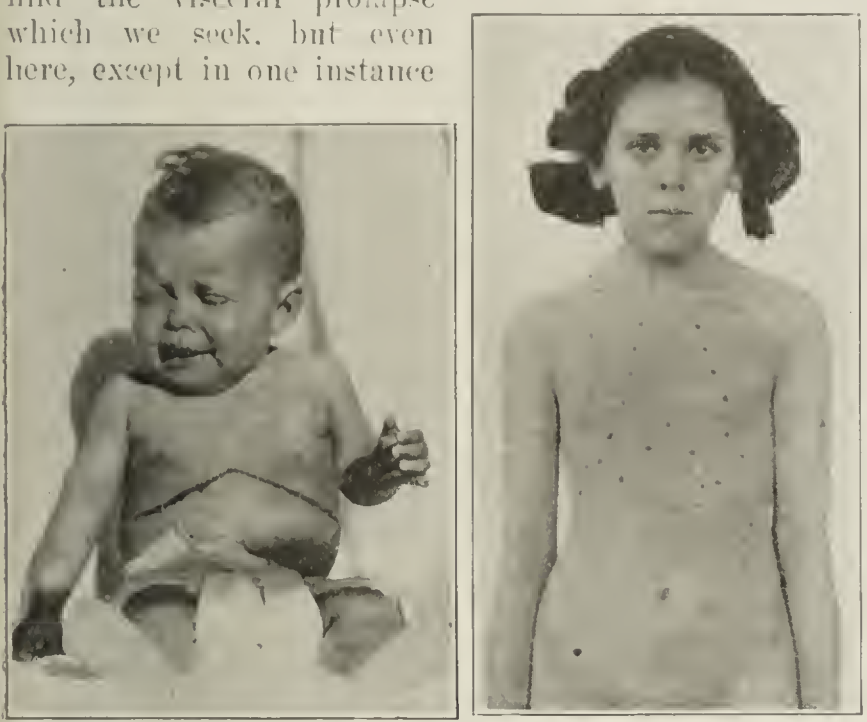
Fig. 33 (M. S. and M.)—Shows difference in shape of trunk in infancy (16 months) and at 12 years. Note also the length of thorax and epigastric angle in the two.

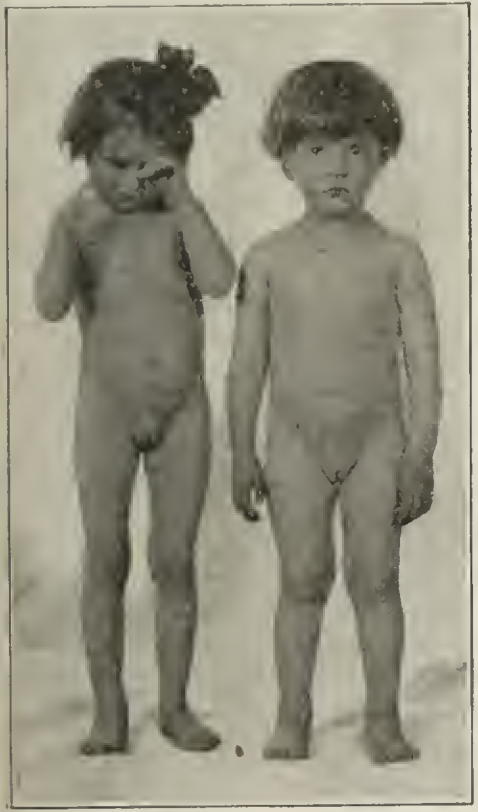
Fig. 35 (E. Z. and M. S.)—Both children aged 3, the one of vigorous, the other of frail type. Note slenderness of form and lack of fat in the one.

The adult stomach in position and shape stands in a more constant relation, I believe, to body habit than the kidneys and, therefore, merits our study. What shall we regard as the normal stomach? I believe with Hulst[9] and Holznecht[10] that the small cow-horn-shaped stomach, with its lower border about on a level with the pylorus, must be regarded as such. In this connection we must dismiss from our minds the matter of function and regard only the anatomy, for the two stand in no constant relation. It not infrequently happens that stomachs that are elongated, even to extréme degree, will care for food in apparently a normal way. If we disregard function and think only of the anatomy we shell be arguing to the same point. Personally, I rather like the term "ideal stomach" to designate the small cow-horn-shaped stomach just mentioned. It is mechanically correct and is the form from which all others seem to deviate. As Holznecht has pointed out, this is the only constant form of stomach found, the more frequent form with a greater curvature dipping downward in a hook varying widely in the degree of this formation and forming a series of gradations, some of which approach the "normal." He points out also that this is the stomach that should perform its functions most easily; an engineer would build it so. It might be added that the "ideal stomach" is found only in vigorous individuals (adults) and that the elongation found in others varies much according to the degree of frailness and relaxation which they present. If now we add the fact that the "ideal stomach" is the common one of infancy and childhood (or, in other words, that the elongated, stretched-out stomach of later life was orig-

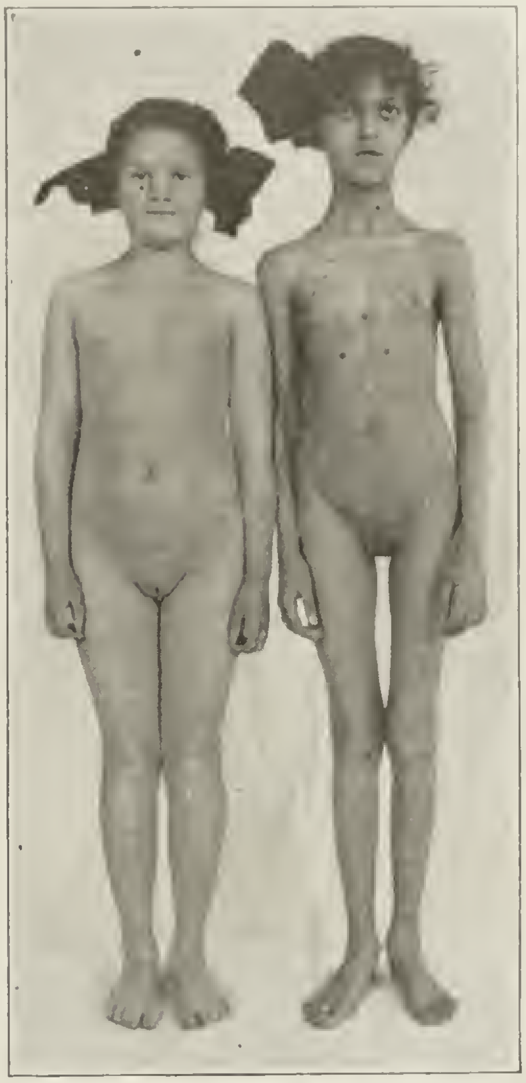
Fig. 36 (A. B. and E. B.)—Two children, aged 11. Contrast contour of form, amount of fat, muscular development, bony frame and size of chest.

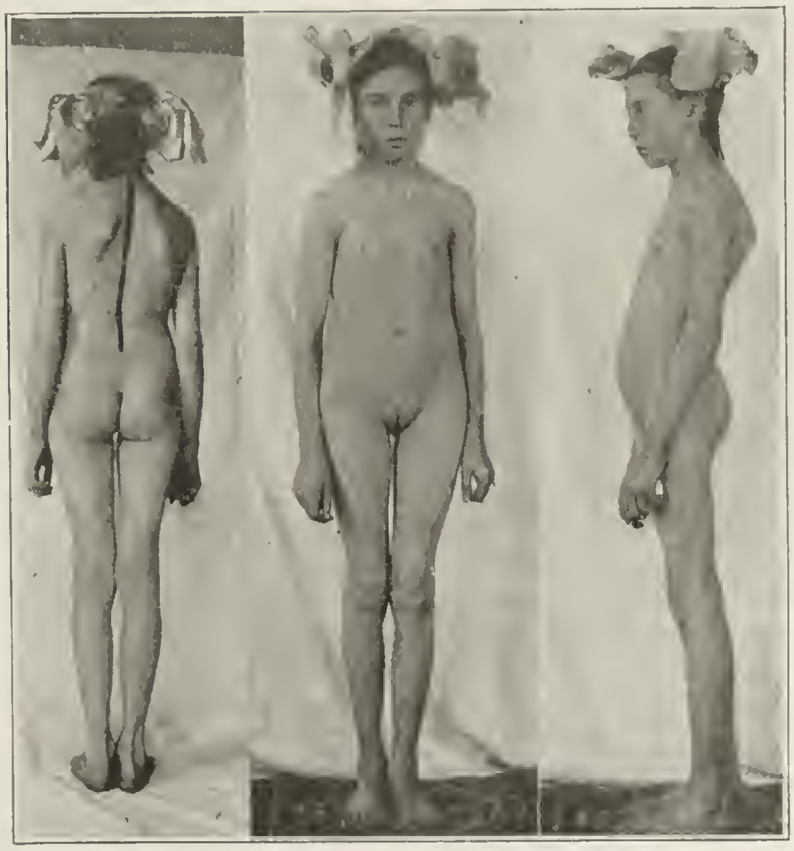
Fig. 37 (F. N.)—Frail child, aged 12, showing muscular insufficiencies and slight lateral scoliosis. Chest remains distinctly behind in development.

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[9] Hulst, H.: Physiol. and Surg., Ann Arbor, Mich., September, 1905, p. 391; Arch. Phys. Ther., January, 1906.

[10] Holznecht, G.: Berl. klin. Wchnschr., Jan. 29, 1906, p. 127.

inally of this form) we have another argument for the establishment of this conception.

The results of these x-ray examinations may be best seen by examining the reproductions of the plates.[11] The youngest child examined was 8 months old, the oldest 12 years. In some of the younger infants the mixture seems to have escaped quickly into the small intestine. In one or two the transverse colon, as outlined by its contained gas, lies apparently in front of the stomach. We found this in infants, but never in older children. In the younger infants the type of stomach prevailing was of the cow-horn-shape. Not until the age of 3 years did we find evidence of the hook at the lower pole, and then only in slight degree. During the whole of childhood, although the stomach was sometimes large, it was found, comparatively speaking, well up in the abdomen, the lower pole showing but little tendency to hook. (Figure 23 forms an exception to this.) Changes in stomach-form in successive pictures were sometimes seen, especially in the older children, but only when well indicated were they considered as demonstrating some relaxation of the wall. In the adult the more nearly the ideal the less can such changes be demonstrated. This applies to the changes brought about by shifting of body position as well as those made by varying amounts of stomach contents.

We may conclude a number of things from this study. The enteroptotic habit of adult life finds its counterpart in the frail child presenting the same fundamental characteristics: Frailness, lack of fat, slenderness of muscle, lack of vigor in body development. Any actual collapse of the thorax or diminution in the capacity of the upper abdomen is seen only in older children, and then only exceptionally, even in frail subjects. The muscular insufficiencies of later life in enteroptotic women are common in frail children. The prolapse of kidneys, stomach, colon and intestines which accompanies the enteroptotic habit of adult life is not outspoken in childhood (under 12 years) except in rather rare instances, and then usually late in that period.

In my opinion, the habit itself is of far greater importance to the enteroptotic woman than the prolapse of the viscera which accompanies it; at least, in the vast majority of instances. Her lessened ability to fulfil the duties imposed on her, the limitations placed on her by her lack of vigor and the unhappiness which such women in a state of fatigue endure are serious matters with her. I believe that more might be done in the way of prevention. The frail child, it seems to me, should be more clearly recognized as an entity and its tendencies more intelligently fought. In a large number of instances, at least, I believe it possible to maintain a fair state of nutrition in such children and to direct them to a more vigorous womanhood. When this is uniformly done, we shall have accomplished much and shall do away, to a certain extent, with the enteroptotic, neurotic women, who form such a problem in every-day practice and in almost every specialty.

ABSTRACT OF DISCUSSION

Dr. William J. Butler, Chicago: I do not suppose any one in this country has done more than Dr. Smith to call our attention to enteroptosis and to put it on such a basis as to make us realize just what it means. Enteroptosis in the adult may be divided into two types, the congenital type and the acquired type. The acquired type is never seen in children, and is the result of the laxity of the tissues, a muscular insufficiency. The congenital type is quite commonly found in children, in fact, one often wonders whether it may be regarded as an abnormal type. In referring to types I refer to the body form of the individual. In children there is no doubt we can see right from the earliest period, examples of the enteroptotic habit, i. e., the body form. It does not show itself frequently, however, until the child begins to grow and develop. In discussing enteroptosis we must keep in mind not merely the matter of organ displacement. The organ displacements are merely the consequences of this body type. As a matter of fact, what would be enteroptosis in later life is a condition that is constantly present in infants, i. e., so far as the palpability of the liver and kidneys is concerned. The stomach, however, is not below the umbilicus. The enteroptotic body form of the child begins to show itself quite distinctly just before puberty, from the tenth year onward; i. e., the characteristic frailty of structure and the lack of tone. The organ displacements, however, are not to be found, except in exceptional cases, much before the twelfth year. I noticed that in Dr. Smith's cases, as in some of my own, the kidneys become palpable about the twelfth year. They may be found exceptionally about the tenth year. This is likewise true in stomach displacement. I did not find any below the umbilicus until about the twelfth or fourteenth year; then occasionally I found one. A thing that particularly strikes the gynecologist is that this matter of enteroptosis is one of the most serious problems that can possibly be considered because of the innumerable cases of ailing women in whom there is an enteroptotic habit which had its origin in early childhood and which is responsible for all their symptoms. In some of these patients it is surprising how long they can carry the organ displacement without symptoms; and in others it is equally surprising how marked the symptoms sometimes are with but slight displacements. The condition should be recognized early, and it is important that they should always be kept above par from the nutritional standpoint. This should help to prevent the development of their symptoms, which are of a neurasthenic character. These individuals are always of the neurasthenic type. In fact, it is sometimes a difficult question to decide what is the cause of their symptoms, the nervous instability or the enteroptotic habit, as they are associate conditions. The symptoms of which these patients complain do not occur until some other condition precipitates them, e. g., child-bearing, or a serious illness, or any prolonged physical or nervous strain. The prophylactic step is to keep these individuals in a high state of nutrition at all times.

Dr. I. A. Abt, Chicago: Several years ago I read a paper on "Floating Kidneys in Children" at the Atlantic City meeting. One of the cases I described at that time was a little girl from the Orphans' Home. The kidney was excessively movable, descending down into the pelvis. Sometimes the ureter became twisted on itself and she was seized with violent colic. We applied a pad which she wore for a long time and she was relieved of discomfort. I have followed up this case. She is now 20 years old and I had opportunity to examine her recently and found that the kidney was no longer mobile and could not be palpated. I would suggest, therefore, that possibly some of these patients may recover spontaneously. Another point to which I would refer is that we are liable to fall into error about the size of the child's stomach. Not long ago, I saw a child at a hospital which had the symptoms of pyloric stenosis, though no tumor was felt, i. e., there was the characteristic vomiting and peristaltic wave. The case came to operation. On opening the abdomen, it was found that the stomach, after being emptied, was not nearly so large as had been thought. Therefore, I believe that in estimating the size of an infant's stomach, the organ should be examined after its contents have been evacuated as well as in the distended condition.

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[11] It would have been desirable to make direct copies, but these, in the ordinary half-tones, are so blotched and indistinct that drawings were substituted. Four of the plates are, however, offered. The drawings were made according to careful measurements, directly from the plates and give in a true manner the relationship we seek. In most instances but one plate of each child is given. The position of the colon is reflected quite closely in that of the stomach.

LEGAL POWERS OF HEALTH DEPARTMENTS

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Generally health departments originate in times of emergency, as each new activity is the result of some unusual demand. This being true, we are prepared to find that health ordinances and laws are, as a rule, very unskilfully drawn. They fit much more accurately the basic community need than they do the technical requirements of legal procedure. Individuals are constantly battling to gain larger rights over the community, and each decision which is given them is used as a precedent on which others stand and battle for further limitations of the right of the community to protect itself.

For these reasons there is great need that health departments should have their laws and ordinances carefully studied by constitutional lawyers to make them meet the legal requirements as well as the sanitary and economic demands. Fundamentally, every man has the right to life, liberty and the pursuit of happiness, but no man should so exercise this right as to interfere unduly with the rights of other men. The dogma of liberty is a broad rather than a narrow, selfish or exclusively individualistic one. No man can use his property so as to interfere with the use of property by others. The right of improper use may mean temporary increase of liberty for him, but it means a decrease in general liberty and, ultimately, a decrease in the liberty of the individual who was given improper power.

On this principle of gaining liberty for the mass by differentiating between the proper and improper use of individual liberty there is based the great legal principle called police power. The basis of police power is that the welfare of the people is the supreme law. All health work is based on police power. Police power rests with the people themselves. In ordinary times and for ordinary matters, the people delegate the law-making functions to the national, state or municipal legislative bodies, the administration to administrative bodies, similarly divided, and the judicial functions to the judicial machinery. In times of great emergency, action lies with the people. Their rights are primitive and all-compelling; for example, mob and mass rule. This is because it is necessary that it should be so. The mass must be protected even though, in order to do so, it is necessary to neglect or even override the machinery devised to fit the usual demands. In ordinary times, police power by mob action would be useless or worse. Hence, it becomes necessary to create certain machinery called police-power laws, and these must conform to certain legal standards. There are three of these legal standards with such an abnormal development of the third that sometimes a fourth is added.

A. The condition which is sought to be met must be important. It must be causing hardship or harm more universal in character or more destructive to rights than the remedy which is sought to be applied. The difference must be material—it must be more than borderline. In making proof of the benefits of the remedy it is proper to lay stress on future benefits or accruing harm from no remedy. The inquiry, especially in health matters, should be certain to run deeply enough into the future to develop the merits of the case.

B. The remedy proposed must be reasonably adequate to meet the demands. A reasonable departure from this rule is proper, provided it takes proper account of the law of advancing standards, the principles being that perfect control and regulation can only be gained by stages. A law or ordinance which required radical changes as a single step would probably be held to be unreasonably stringent, even though the hygienist knew that it meant lives saved. Therefore, it is proper to have advancing standards.

As a part of the same principle it is proper to have one standard for future installations or performances and another for present or past installations and performances. Laws prescribing that new buildings shall have a certain proportion of area-ways and that old buildings shall be allowed to remain, if they conform to a lesser standard, are proper.

Laws allowing milk from tuberculous cows to be sold for human or hog consumption, for say three years and prohibited after that time, are proper on the same principle.

In order that this principle may be applied, it is necessary that the principle of advancement must be clearly a part of the law. For at most, it is nothing more than this: The second principle of police power, namely, that the remedy must be adequate, can be compromised only up to a certain point and for a reasonable length of time.

C. Health laws and ordinances must be reasonable. They must be reasonable in the directions indicated in A and B. In addition they must work no unreasonable hardships on the property or the rights which are invaded. Health laws can be proper and at the same time destroy or confiscate property, restrain freedom and liberty of action, imprison—or what amounts to the same thing—quarantine, and all of these acts without the right of trial by jury or review by court prior to the commitment of the act, provided it can be shown that the public good demands such acts. They are, however, properly subject for review subsequent to the act.

Such acts must always be reasonable in their every aspect. Where the need is not so great, the individual in the exercise of his liberty, and the owner in the control of his property, has the right to a reasonable opportunity to adjust himself to the requirements of the law and thereby to conserve his interests, in so far as they do not run counter to the general interests. From an abuse of, or rank and extravagant growth of, this last there has grown a line of procedure which is sometimes considered a fourth principle.

D. The individual or the owner must have due and proper notice. There is a basic principle of law that "ignorance of the law is no excuse for its breach." This principle is violated in requirement D. Yet the requirements of health concern themselves so closely with the intimate lives of men, the requirements are often so technical, the ultimate good of the mass is so difficult of comprehension by the average individual that it becomes just and fair that the individual should have due and proper notice. This requirement has been carried to the most ridiculous extremes. All that is required is that the notice should have been such that a man of average intelligence and alertness could have seen and understood.

In determining whether a man shall be excused for his ignorance, it is proper for the prosecution to put in evidence any bulletin, notice, rule or regulation and the effort made to publish such announcement, and also whether the defendant belonged to any lodge, society or association when such laws were discussed or investigated; whether the defendant has agents employed to keep him posted on or advised as to laws; whether he personally or through his agents counseled in the formation of such laws. It is not necessary to show that he had knowledge of the law.

In a democracy, laws must always respond to the militant desires. As these vary over broad limits either the laws or their administration will vary. As health laws are so intimately concerned with the use of liberty and property, they or their enforcement represent the maximum of variation. As an illustration of an extreme right of this police power, we have the right to quarantine without trial by jury. Ordinarily, the right of liberty cannot be abridged except by a court procedure. Certain duties of health protection are not compatible with the operations of the machinery for abridging liberty. For example, a man with small-pox must be deprived of his liberty immediately after the diagnosis is determined or as soon as seems reasonably possible. The beginning of the detention cannot wait on jury trial. No other course is compatible with the rights of the mass to life, liberty and the pursuit of health. At certain times and in certain kinds of effort, governments exercising the functions of health protection must have autocratic and dogmatic powers.

In eminent domain there is recognition of the necessity of the limitation of the rights of property. Here, though there is recognition of the right of the mass to take from a man his property for the use of the mass, directly or indirectly, the right of eminent domain can be exercised only after legal process and with compensation. Police powers are much more arbitrary. In other functions of health work, particularly health conservation, the same right of summary action is not necessary. In physical welfare, the possibility of planning ahead increases and the right of summary action decreases. But in times of great emergency the rights are as primitive and all-compelling as in mob or mass rule. The mass must be protected regardless of any and every machinery devised to fit the usual conditions.

Health laws and procedures must take into account public sentiment. Hygienists know that the number of deaths from consumption is ten times as high as the number from scarlet fever; that consumption is communicable. Still public sentiment is not ripe for the use of controlling methods. Laws governing consumption become more acceptable year by year. Typhus fever is endemic in certain parts of Mexico, but laws for its control are not enforceable in Juarez just now. Cross the Rio Grande into El Paso, one mile away, and right of summary action would be upheld by courts and public sentiment. One year from now the same will be true in Juarez. Thus we see that, in practical operation, police-power health laws vary over a wide range.

POWER OF THE VARIOUS DIVISIONS OF THE GOVERNMENT

The National Government.—In all matters in which the constitution or its amendments give power to the national government, its powers are paramount. In such matters the state may make laws or the city may make ordinances which are in conformity with the national laws, but any laws or ordinances not in conformity with the national powers are invalid.

State Legislatures.—In matters not covered by national powers, and under ordinary circumstances, the people delegate their legislative powers to state legislatures and these in turn provide such administrative and judicial machinery as is not provided by the constitution of the state.

City Councils.—In matters affecting groups of people in a peculiar way—for example, cities, towns, villages and sanitary districts—the state legislature may delegate legislative power to the city councils, park boards, sanitary district boards and similar bodies. Such delegation of power is always specific and runs alone to those things which are designated.

The people through mass meetings, constitutions, state legislatures or city council may give to boards of health legislative functions. But these bestowals of legislative functions are limited by the limitations of the bestowers. For example, a mass meeting can act only in times of great emergency and therefore can bestow function only to meet great emergency. A state legislature can delegate only powers in accordance with the constitution of the state. A city council can give a board of health powers of legislation only on subjects on which the legislature allows the city council to legislate.

In addition, there must be the right to delegate legislative power. In the case of a state legislature it is assumed that the legislative body has every right of the people to legislate directly or indirectly, except where restrictions are placed by the state or national constitutions. Therefore, such legislatures have the right to create subsidiary legislative bodies except when it is prohibited by the constitution. On the other hand, city councils have not the right to create subsidiary legislative bodies except where their enabling acts specifically grant them such powers.

The need of elasticity in health laws, unless they are to fall into disrespect from disuse, demands that legislative powers be delegated so as to reach the administrative powers as closely as possible. A further need arises from the technical character of most of the points to be determined. Where a body of men without technical training undertakes to pass on technical questions, the laws passed are frequently unreasonable and unfair either to individuals or to the mass. They are encumbered by a mass of inelastic detail. They are a renaissance of the type of those old Roman laws which Justinian swept away.

Illustrations of existing delegations of legislative power no more demanded than delegation to health boards or departments are:

The rights of courts to make rules for internal government and external matters which are tantamount to legislation.

The creation of commissions on standards giving them the power to establish standards tantamount to legislation, such standards not to be confirmed by subsequent legislative act.

The creation of railroad commissions with both legislative and judicial functions.

The endowment of sanitary and park boards with legislative functions.

The charter creation in certain states of legislative power for health boards, e. g., New York and Ohio.

Such delegations of legislative powers have been upheld by the courts.

Every department or board of health has the right to make rules and regulations for the control of the men who work in the department—hours of work, method of inaugurating and continuing work, in fact, internal rules governing the officials and the work of all connected with the department.

Rules and regulations governing the work or living of the general body of citizens must conform to the legal principles of delegated legislative power which prevail in the community concerned.

Rules and regulations interpreting ordinances and laws and in conformity therewith are legal and proper when they are reasonable. Such rules and regulations are in accordance with two principles of police power. They are notices of the administrative interpretation of the provisions of such ordinances or laws; they are in accordance with the principle that police power comprehends the power, the means and the interpretation necessary to make the power operative. All rules and regulations are subject to judicial review as a part of the ordinances which they interpret and make operative.

It is not feasible to write into ordinances and laws all of the details required for police-power ordinances and laws. Ordinances and laws in which it is attempted to write such detail are never comprehensive enough for operation and, on the other hand, are always burdensome and impossible of exact application to the varying conditions which are offered. Therefore, conditions not being uniform, there grows up a variation in interpretation by administrative officials, which is, in fact, legislative in character, just the thing which the ordinances or laws sought to avoid. Making a necessary act an illegal act leads to irregularity and frequently dishonesty. Therefore, the only logical organization of any police-power board is on a semi-legislative basis. Such boards should consist of an executive or administrative officer and legislative members. Where such organizations are not now provided, the state constitutions should be so amended as to provide for them.

Care must be taken that charter and constitutional provision for health work do not elaborate in such detail that the great mass-right of protection through police power is abridged.

Any case in which the basis of power is police power must be tried on its merits.

The questions sought to be determined are:

A. Is there need for this act of the governmental agency? Is the act of this defendant prejudicial to the rights of the mass either immediately and directly, or indirectly or by example set?

B. Is there a reasonable protection of the rights of the individual as against the mass?

Neither of these questions can be determined except by testimony. Therefore, trial of police-power cases without testimony are not proper legal procedures.

The tendency of the law of precedents being to limit constantly the rights of the mass to protection, the increasing complexities of civilization making a conservation of the rights of the mass more imperative, some agency or activity must be created or made operative to attack certain so-termed health laws on the ground that they do not protect the mass—to the end that in the precedents there may be a proper protection of the rights of the people.

In most of the precedents now prevailing, the rights of the individual and his property are deified and the rights of the mass are minimized. The growth of protection against ill health is through the growth of public intelligence and in spite of the prevailing judicial decisions. The responsibility for these decisions is to be divided between lack of community view by the judges and lack of knowledge of legal requirements by health officials.

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NITROUS OXID AND OXYGEN ANESTHESIA IN MAJOR SURGERY *

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So much has been written lately in favor of gas and oxygen anesthesia that I feel called on to state in the beginning that I am in no way trying to discredit a method which I am using constantly and increasingly both in hospital and private practice, but merely to arrive at some conclusion as to its safety and freedom from after-effects in major surgery as distinguished from minor surgery and dentistry. By major surgery I mean, in a general way, serious operations lasting from, say, thirty-five minutes to two hours. It is on such cases that my experience with gas and oxygen is based. Examples are goiter extirpations, appendectomies, cholecystotomies, intestinal anastomoses, decortication of the kidneys, nephrectomies, prostatectomies, hysterectomies, etc.; operations which require prolonged anesthesia and in which the respiration under gas and oxygen undergoes marked reflex changes.

Most writers on this subject make the unqualified general statement that nitrous oxid and oxygen produces the safest known form of anesthesia. In support of this statement they quote Hewitt:[1]

> There is no form of anesthesia known at present which is so devoid of danger as that which results from nitrous oxid when administered with a sufficient percentage of oxygen to prevent all asphyxial complications. I have employed this system up to the present time (January, 1901) in about 14,000 cases as near as I am able to estimate and . . . I have had no anxiety . . . So far as I am aware no fatality has yet been recorded under nitrous oxid and oxygen.

A large proportion of Hewitt's 14,000 cases were dental or minor surgery operations requiring brief administrations. In response to a personal communication from me, last year, he replied that he used it to a limited extent in major surgery owing to the difficulty in securing tranquil anesthesia and muscular relaxation in these cases.

Enthusiastic writers also cite the statistics of Teter, of Cleveland. A tabulation, by G. W. Crile,[2] of 17,716 administrations by Teter of gas and oxygen without a death shows:

12,886	administrations	lasted	less than 5	minutes
3,365	"	"	5 to 15	"
865	"	"	15 to 30	"
346	"	"	30 to 60	"
228	"	"	1 to 2	hours
22	"	"	2 to 3	"
2	"	"	3 to 4	"
17,716				

It is evident, therefore, that the majority of these administrations were for dentistry or minor surgical procedures requiring brief inhalations — and not for major surgery.

As Hewitt says:[3]

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* Read before the Obstetrical Society, Boston, Nov. 28, 1911.

* This article is an elaboration of some remarks made on this subject in a brief paper at the annual meeting of the Massachusetts Medical Society, June, 1911, and again in the course of a lengthy paper read before the New York Society of Anesthetists, in New York City, November, 1911.

[1] Hewitt: Administration of Anesthetics, 1901, p. 265.

[2] Crile, G. W.: Surg., Gynec. and Obst., 1911, xiii, 170.

[3] Administration of Anesthetics, p. 261.

> The anesthesia produced by this system is particularly suited to dental operations; in fact, so far as my experience goes, there is no other form of anesthesia that can be compared to it.

The safety of gas and oxygen anesthesia in dentistry and in minor surgery requiring brief administrations is not to be contested. It is undoubtedly very safe. But during the prolonged administrations required in major surgery, a patient's respiration and circulation undergo many and marked reflex changes which make the administration of gas and oxygen in these cases quite a different proposition.

Thomas L. Bennett of New York, the leading surgical anesthetist in America to-day and a man of wide experience with anesthesia, says the following on this subject:[4]

> The writer has administered gas with air or with oxygen for operations lasting from a few minutes to more than two hours in several hundred cases, and while he has had no deaths, alarming states have several times appeared with such rapidity and so little warning that it seems probable that the general adoption of this form of anesthesia would lead to a mortality more nearly approximating, if not exceeding, that of chloroform and ether.
>
> This opinion is strengthened by the occurrence of four such deaths in New York City which have come to the writer's notice within one year.
>
> It is therefore probable that nitrous oxid and oxygen is the safest general anesthetic if restricted to momentary administrations, as for dentistry. The prolonged administration of this anesthetic is quite a different matter, however, and at the present time there are not sufficient data of its use to warrant conclusions as to its safety.

In response to a personal communication from me, last year, Dr. Bennett replied that he had seen no reason to change his views concerning the safety of gas and oxygen.

I have had a fair amount of experience with this method. In 1903, at the Massachusetts General Hospital, working with Dr. W. M. Conant and others, I anesthetized fifty patients (major surgical cases) with gas and oxygen, using a Hewitt apparatus (no ether given). The method was then dropped, owing to lack of demand, until the autumn of 1909, since which time, using a new model Hewitt and lately a Teter apparatus, I have anesthetized in private and hospital practice 152 patients (major surgical cases). I have several times encountered, in my work, the "alarming states" mentioned by Bennett. They occur suddenly and without warning. The patient suddenly becomes livid, respiration fails, the pupil dilates and—which I consider the most alarming sign of all—the corneal reflex becomes faint or absent. Last year I had a death under nitrous oxid and oxygen. The patient was a profoundly uremic, almost pulseless, man about to be operated on for decapsulation of the kidneys. After about four minutes of inhaling the anesthetic and with the oxygen indicator of the Hewitt apparatus pointing to "5," the patient died before the incision could be made—clearly an anesthetic death. It may not be pertinent, but may be of interest to know that during ten years of professional anesthetizing, I have had but one other death, and that was due to rectal etherization.

I know of two deaths and one very alarming accident occurring within two years in Boston in the practice of young doctors administering gas and oxygen in major surgery.

In light of the above, therefore, I conclude that gas and oxygen anesthesia is *not* the safest known anesthetic method in major surgery, and it would seem desirable that exploiters of this method, in citing statistics designed to show its safety, should carefully separate the brief administrations required for dentistry and minor surgery from the prolonged administrations of major surgery; otherwise no helpful idea as to its safety in the latter can be obtained.

Undoubtedly, as perfected by Crile, with his improvements in apparatus, with his use of "anoci-association," with the infinite pains that he takes with each case and when administered by his skilled anesthetists, the method is made practically perfectly safe. He cites 2,412 surgical operations performed under nitrous oxid and oxygen alone or nitrous oxid supplemented by ether, without an anesthetic death. He says:[5]

> The shortcomings of nitrous oxid anesthesia are as follows: It is the most difficult anesthetic to administer; its effects are fleeting; there is imperfect relaxation of the abdominal muscles; it is more expensive than ether, and there is more venous congestion. The anesthetist must be an individual of the keenest perception of the precise condition of the patient at every moment, i. e. the anesthetist must be a most delicate human recording apparatus.

It would seem, then, that in enumerating the factors which will contribute toward increasing the safety of gas and oxygen, the one of first importance is that it should always be administered by a skilled anesthetist and not undertaken by practitioners with no knowledge, or only an average knowledge of the administration of anesthetics. With the former class of practitioner, i. e., one with no knowledge of anesthetics, a patient would be perfectly safe as regards gas and oxygen, because the practitioner would be unable to bring the patient under the influence of the anesthetic at all. But with the latter class, i. e., a practitioner with an average knowledge of anesthetics and yet unable to interpret properly the sounds and rhythm of breathing, a patient would be anything but safe under gas and oxygen.

Another important factor in contributing to the safety of gas and oxygen is proper preliminary medication of the patient with morphin and atropin and, possibly, scopolamin.

A third and very important provision for safety is to secure a steady and even flow of both gases. To secure a steady flow of oxygen is simple. To secure a steady flow of nitrous oxid is difficult. The best way to secure this is to have the gas piped direct to the inhaling-apparatus from a nitrous oxid plant, as in Crile's clinic in Cleveland. The second best is to use reducing-valves fitted to the gas cylinders supplied by the manufacturers. These reducing-valves reduce the pressure in the cylinders and secure a steady and even flow. They are seen on the large cylinders rented by some gas companies, and also in the apparatus lately devised by Drs. Cotton and Boothby of Boston. The third best way to secure this steady flow is to have an assistant keep the gas-bags of the apparatus evenly distended by turning on gas from alternate cylinders. The steady flow of gas tends to maintain an even anesthesia and enables the anesthetist to give his full attention to air exclusion and to the patient's general condition.

The danger of gas and oxygen anesthesia in surgery is that it is essentially too light a form of anesthesia to abolish the higher reflexes which are stimulated by the operative procedures. It is difficult to produce a sufficiently deep and even anesthesia and the reflex changes undergone by the patient's respiration and circulation constitute the danger by impeding the even inhalation and exhalation of the gases. Consequently the factors above enumerated, by tending to produce a deeper and more even anesthesia, tend to increase the safety of the method.

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[4] Bennett, in the New Reference Handbook of Medical Sciences, 1901, iii, 19.

[5] Crile: Surg., Gynec. and Obst., 1911, xiii, 170.

In discussing the freedom from after-effects of gas and oxygen anesthesia, careful distinction should be made between patients given gas and oxygen "with just a little ether" and patients given simply gas and oxygen. It may of course be necessary, in order to get muscular relaxation, to turn on "just a little ether" during the administration. Such administrations should be spoken of as gas, oxygen, and ether anesthesia. Teter says that about 17 per cent. of patients vomit slightly after gas and oxygen anesthesia. Hewitt says:

> In one case in which I administered the gases for removal of the breast, the vascularity of the parts was as great as it usually is under ether; and the patient, who was particularly anxious to avoid this latter anesthetic, because of previous experiences, was sick for many hours after the administration.

If nausea and vomiting occurs in a certain proportion of cases under nitrous oxid and oxygen alone, it is surely much more apt to do so if any ether is given.

Recently a case has come to my notice. A woman requiring a major surgical operation elected to take gas and oxygen in order to avoid the intense nausea and vomiting that had followed previous administrations of ether. During the administration, in order to produce more complete muscular relaxation, "just a little ether" was given. The result was that the postanesthetic nausea and vomiting was fully as severe as that which had followed previous administrations of ether. The purpose for which the gas and oxygen was given was thus defeated.

It would seem obvious, therefore, that if we wish to arrive at a helpful conclusion as to the freedom from after-effects of gas and oxygen in major surgery, writers must be careful to distinguish between cases in which gas and oxygen only is given and those in which gas, oxygen and "just a little ether" is given.

The large amounts of ether which some anesthetists use in conjunction with their gas and oxygen administrations puts the method about on a par with the closed or rebreathing method of administering nitrous oxid and ether, discovered by Clover in 1876 and further elaborated and practiced by Bennett for the past fifteen years. Except in certain selected cases in which it is possible to omit ether entirely from a gas and oxygen administration, this method has not a very great advantage in major surgery over a properly conducted administration of the gas-ether sequence by Bennett's method; provided, of course, that the ether part of the administration is maintained by the closed or rebreathing method as practiced by Bennett, and *not* by the semi-open method.

CONCLUSIONS

1. Writers quoting statistics designed to show the safety of gas and oxygen anesthesia should carefully separate the brief administrations of dentistry and minor surgery from the prolonged administrations of major surgery.

2. Anesthetic deaths occurring during the use of nitrous oxid and oxygen in major surgery are not uncommon.

3. There are at the present time not enough statistics as to the safety of nitrous oxid and oxygen in major surgery to show that it is as safe as ether or chloroform.

4. In order to insure a maximum of safety, gas and oxygen should not be administered except by a skilled anesthetist equipped with the best available apparatus, and patients should receive preliminary hypodermic medication.

5. In estimating the freedom from after-effects of gas and oxygen anesthesia in major surgery, careful distinction must be made between patients receiving gas and oxygen only and those receiving gas and oxygen and "just a little ether."

6. When given with large amounts of ether, gas and oxygen has only a slight advantage over the nitrous oxid-ether sequence properly administered by the closed method.

CLINICAL OBSERVATIONS FROM 203 PATIENTS OPERATED ON FOR RENAL TUBERCULOSIS

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Cystitis is usually secondary to some extravesical cause, and its cure is generally accomplished by the removal of such cause. Only within the last few years have we learned to recognize renal tuberculosis clinically through the persistent bladder irritability which it causes. Certainly no one is justified in treating locally a case of bladder irritability until all means have been exhausted to exclude the existence of renal tuberculosis. Without going into the clinical description of typical cases of renal tuberculosis, which has been done so often in recent literature, I will confine my observations to a brief consideration of the exceptional conditions, the complications and results in 203 cases of renal tuberculosis in which the patients were operated on in St. Mary's Hospital (Mayo clinic).

SUMMARY OF STATISTICS

A summary of various data tabulated from the series may be of interest.

1. *Sex.*—There is a noticeable preponderance of males, in that they constituted 61 per cent., or almost two-thirds of the total number of cases.

2. *Age.*—Although renal tuberculosis is generally considered as being confined largely to the young adult; 29 per cent. of the patients in our series were above 40 years of age.

3. *Hematuria.*—Hematuria was found to be present in 60 per cent. of the cases. It is of particular interest to note that hematuria occurred about twice as often in the male as in the female.

4. *Primary Symptoms.*—Bladder irritability in 86 per cent., renal pain either alone or coincidental with bladder irritability in 25 per cent., and hematuria in 6 per cent. of the cases, are primary symptoms.

5. *Renal Tumor.*—Renal tumor was palpable in but 20 per cent. of the cases.

CLOSED PYONEPHROSIS

The pathology of the tuberculous kidney will frequently depend on the situation, number and character of strictures found in the tuberculous ureter. If the first stricture be near the bladder, a varying dilatation of the ureter above it and of the renal pelvis will necessarily follow, depending on the degree of the constriction. If the first stricture is in the upper ureter, there may be multiple strictures below it. If the ureter becomes closed early, a large pyonephrosis may result: if late, but a caseated remnant of the kidney may remain.

When the ureteral constriction becomes so great as to prevent any infecting secretion from reaching the bladder, the process is called "autonephrectomy." In such cases the bladder may recover entirely, although usually a small amount of the secretion will find its way into the bladder so as to reinfect it sporadically to a varying degree. The bladder symptoms are then often obscured by those of abdominal pain or tumor, while the absence of pus or tubercle bacilli in the urine may further mislead one.

The cystoscopic examination must determine the absence of secretion from the affected side, and will usually reveal several areas of ulceration often situated on the bladder roof. The radiograph may also be of corroborative value by demonstrating the shadows which are often cast by the calcium deposit in the caseated areas.

SECONDARY INFECTION

While, as a rule, the urine with renal tuberculosis is acid and is free from bacteria other than the tubercle bacillus, secondary infection frequently occurs and the clinical symptoms may be markedly altered. Most observers are agreed that interference with urinary drainage is the usual cause of an ascending infection. A secondary infection in a tuberculous kidney often results from constriction in a tuberculous ureter. The symptoms then noted are variable and may be any of the following: (1) comparative cessation of bladder symptoms; (2) pain and tenderness in the kidney area; (3) fever and chills; (4) pallor and weakness from toxic absorption.

Of particular interest is the marked decrease in bladder irritability which is often noted with secondary infection. It becomes very difficult to demonstrate the tubercle bacillus in the thick purulent urine. The kidney may be so greatly altered by the inflammatory process that its initial tuberculous nature is obscured.

RESISTANCE

To what extent the individual is able to resist and overcome renal tuberculous infection is still a disputed point. The present trend of opinion is to regard a spontaneous or tuberculin cure as exceptional and one to be regarded with distrust. It would seem that the clinical course might be divided into three general groups including:

1. Those cases in which the course of the renal disease is steadily progressive, which constitute the majority of cases seen.

2. A smaller number of cases which are characterized by considerable resisting powers in the patients, as evidenced by intervals of spontaneous recovery from their symptoms, followed by periods of recurrence. After a number of years the course of the disease usually becomes progressive. Evidence of localization of the process is sometimes seen in the surrounding areas of scar tissue, cystic degeneration or dormant circumscribed foci.

3. A few cases with but little evidence of tuberculous infection other than a few pus cells and tubercle bacilli in the urine from the affected kidney, which may persist over a period of more or less than a year, and then, under general treatment or tuberculin, disappear entirely.

Various observers have reported cases of symptomatic cure from an evident well-advanced renal tuberculosis. Before such a recovery is established definitely, enough time must elapse to exclude a possible recurrence. Furthermore, a closed ureter or so-called "autonephrectomy" is not an uncommon occurrence and would be followed by a symptomatic cure.

Of considerable interest is the increased resistance to renal tuberculosis as seen in the older adult. In our series 29 per cent. of patients were over 40 years of age, showing that it is not an uncommon infection above that age. With most of these patients the symptoms were moderate and of several years' existence. The bladder lesions were often those of a mild cystitis. The kidney lesions were usually well localized and not extensive. Young adults with considerable loss of weight and strength, in whom the cystoscopic examination showed marked general ulceration of the bladder after an infection of but several months' duration, usually have an unfavorable prognosis.

ASCENDING BLADDER INFECTION

It is now generally conceded that primary bladder infection may be disregarded as a clinical entity and that it follows either a descending or ascending infection. The relative percentage of descending and ascending infections has been variously estimated, the latter as high as 20 per cent. It would seem, however, that an exact relative estimate would be quite impossible because of the difficulty in identifying the bladder infection as tuberculous. During the past three years we have made a cystoscopic examination of thirty-seven patients with tuberculosis of either epididymis, testicle or prostate, who complained of bladder symptoms in which renal infection was excluded. Of this number, twenty-three showed no evidence of actual bladder inflammation, and we must regard their symptoms as due to extra-vesical irritation or possibly a slight inflammation in the prostatic urethra. Nine patients showed a moderate degree of inflammation confined to the base of the bladder without any evidence of tubercle or ulcer.

Finally, there remain a few patients (five in number) in whom the bladder appeared quite markedly inflamed, with areas of superficial ulceration strongly suggestive of actual tuberculous infection. The demonstration of the tubercle bacillus in the voided urine would hardly identify the bladder infection because the bacillus may come from the infected prostate or seminal vesicle. In our experience the number of cases which could be regarded as tuberculous from an ascending infection have been less than 5 per cent. of the tuberculous bladders observed.

COMPLICATIONS

The tuberculous infection was confined to the kidney in but a comparatively small percentage of cases which came to operation. The ureter was found infected to a varying degree in most of the cases. While it may be difficult to say whether the infection in the bladder is actually tuberculous or not in some cases, judging from the severity of ulceration and persistence of symptoms after nephrectomy, in more than two-thirds of the patients examined the bladder became infected. In order of frequency the extra-urinary complications in our series were found to be as follows: male genital, pulmonary, joint, bone.

Male Genital.—In over 60 per cent. of the cases of renal tuberculosis evidence of the disease was found in the epididymis, testicle, vas deferens or prostate. The epididymis was most often affected, the changes varying from a nodular thickening to a tumor the size of an orange. The testicle is usually not involved, if at all; the adjoining portion is the first to become infected. Palpable tuberculous changes in the prostate occurred in over a third of the male patients with renal tuberculosis. The changes will vary from a moderate nodular thickening, which is usually found, to a diffuse irregular boggy tumor, and often one lobe is larger than the other. Clinical evidence of infection in the seminal vesicle occurs less often. The presence of the disease in the male genitals should be looked for as a routine procedure and is often of considerable value as corroborative evidence. Genital infection *per se* offers, as a rule, no contra-indication to nephrectomy. With a large prostatic abscess and a perineal fistula, and when the patient is otherwise extremely weak, the value of a nephrectomy might be problematical.

Pulmonary.—The lungs were found affected to a varying degree in 6 per cent. of the patients operated on. All of those (six) showing marked involvement died within a year after operation, whereas the others recovered. Providing that the general condition of the patient is otherwise good, a *slight* pulmonary lesion should be no contra-indication to operation. If there are lesions present also in other parts of the body, or if the pulmonary disease is bilateral or well advanced, removal of the diseased kidney will not, as a rule, stop the progress of the tuberculous infection.

Joint.—History of previous joint tuberculosis was present in 7 per cent. of the patients operated on. Active joint lesions occurred in 3 per cent. of the cases. But five of these patients were reported dead, showing that a joint complication does not necessarily lessen the patient's resisting powers and offers no contra-indication to nephrectomy.

Bone.—A bone lesion was present in but three of the patients operated on. In two of the patients marked kyphosis remained from previous vertebral infection. Active vertebral infection was found in several cases regarded as inoperable. Complications other than the above were lumbar, abdominal and perineal fistulas and tuberculous adenitis.

DIFFERENTIAL DIAGNOSIS

The errors in clinical diagnosis in our series have been made in the differentiation of pyelitis, kidney stone, stricture of the lower ureter, single kidney and cold abscess.

Pyelitis.—As a rule, the clinical picture and cystoscopic examination will readily differentiate a pyelitis. When, however, the cloudy urine is unilateral and the bladder appears ulcerated and contracted, confusion may easily arise unless the presence of the tubercle bacillus can be demonstrated. Demonstration of cortical abscesses in the colloidal silver plate may be of considerable value. If necessary, guinea-pig inoculation should be made.

Kidney Stone.—Calcareous deposits in caseated tuberculous foci may simulate lithiasis. Since the case history in renal lithiasis and tuberculosis may be identical we must rely largely on the cystescopic data and the demonstration of the tubercle bacillus for a diagnosis. The character of the radiograph shadow is usually suggestive of its tuberculous nature. The occasional presence of secondary stone deposits in the residual urine of advanced tuberculous kidneys must also be remembered.

Single Kidney.—With a congenital, single or atrophic kidney and a chronic ulcerative cystitis, one might easily infer that the absent kidney was destroyed by the so-called autonephrectomy, which occasionally happens with a closed tuberculous kidney.

Cold Abscess.—Patients with a lumbar abscess of renal origin not infrequently appear with little or no urinary symptoms or findings. Cystoscopic examination will demonstrate the absence of secretion from the affected kidney. Injecting colloidal silver through the external sinus and then radiographing will often trace the abscess to its origin. With a tuberculous kidney necrosis the sinus may attain an extraordinary depth, extending even as far as the bony pelvis, giving the impression that the abscess originated there.

RADIOGRAPHIC DATA

The calcium deposit in caseated foci of tuberculous kidneys will often cause shadows to appear in the radiograph. The shadow is usually of three general types: (1) the cast of the caseated kidney, entirely or in part; (2) single, irregular shadows of varying size outlining the caseated center of tuberculous foci, which is the usual type; (3) multiple, small, irregular shadows scattered over the kidney area. Not all areas of caseation will cast a shadow, however; in fact, the majority will not. It is impossible to judge from its macroscopic characteristics whether the caseated area would cast a shadow. The shadows vary in density from a thin film to a distinct outline, and are usually more hazy and irregularly edged than the stone shadow. The diagnosis of lithiasis based on such shadows is a common clinical error.

The injected radiograph (pyelograph) of tuberculous kidneys and of those suspected of being tuberculous is often of considerable interest and practical value.[1] Many tuberculous kidneys removed after an infection of several months' duration will show areas of cortical necrosis in direct communication with the renal pelvis. This can be outlined clinically in the radiograph of the injected cavity (colloidal silver) without any detriment to the patient. When the necrotic process is extensive the pelvis may appear markedly irregular and greatly dilated in the pyelograph. The pelvis with non-tuberculous pyelitis, on the other hand, while usually appearing moderately enlarged, is not so irregular nor will it show any cortical abscesses.

Dilatation above constriction in the tuberculous ureter may be outlined in the injected radiograph. With a primary stricture near the bladder the resulting hydroureter may simulate that resulting from a congenital or traumatic obstruction.

CYSTOSCOPIC TECHNIC

In reviewing the literature descriptive of cystoscopic technic in the tuberculous bladder, the impression might be gained that the appearance of the meatuses and bladder, as well as the ureteral data, were quite uniform, and one would be led to expect to find typical ulceration or tubercles, confined largely to the affected side. The affected meatus is described as being "golf-hole," or markedly ulcerated with cloudy urine exuding, while the other meatus appears normal. Although such a picture may be found in many cases, in the majority it will not be found.

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[1] Braasch: Ann. Surg., November, 1910.

The technic involved in finding and catheterizing the tuberculous ureter is the most difficult in cystoscopy, as is evidenced by the many errors and failures made even by competent endoscopists. In reviewing the many difficulties and possible sources of error encountered, the following conditions were found most often:

1. A papillomatous proliferation of the mucosa as the result of the marked inflammatory changes accompanying tuberculous cystitis may be so extensive as to be mistaken for a malignant papilloma. This false papilloma or granulation tissue is more often seen with a tuberculous cystitis than with any other bladder inflammation. It may be low and flattened by distending the bladder or it may be a pedicled cauliflower-like growth. It is particularly confusing if either ureteral orifice is so hidden in the growth as to render inspection or catheterization impossible, or if at the time of examination but little pus and no tubercle bacilli are found in the urine. It may be necessary to obtain a specimen of the growth through the cystoscope for laboratory examination to determine its identity.

2. The ureteral orifice on the normal side may appear even more diseased than that of the diseased side. The bladder segment of the ureter on the well side may become infected from the severe cystitis, with consequent dilatation and rigidity. It may become so retracted as to form a false diverticulum of the bladder-wall.

3. Erroneous observations are easily made as to the amount and character of urinary secretions. As a result of irritation caused by the cystoscope the bladder-wall may so contract that little or no urine may be seen to escape from either meatus during five to ten minutes. With marked inflammatory dilatation of the bladder ureter on either side, retained cloudy bladder fluid, when exuding, may give the impression that the secretion from that side is purulent.

4. Obstruction to the ureteral catheter preventing successful catheterization is quite frequently encountered. If on the diseased side, which occurs more often, it is usually due to constriction following ureteral ulceration. On the normal side the obstruction is usually at the meatus or intramural as the result of cicatricial changes following marked inflammation or ulceration in the bladder-wall.

5. Urine catheterized from the well side may be contaminated with a few pus cells and possibly tubercle bacilli scraped from the bladder mucosa in introducing the ureteral catheter. Such an error might easily lead to an erroneous diagnosis of a bilateral infection.

When the condition of the healthy kidney cannot be determined through cystoscopy, bilateral surgical exploration is necessary. Whenever this was deemed necessary in our series both kidneys were usually found diseased and in one case the other kidney was found to be absent.

BILATERAL TUBERCULOSIS

Although various observers have regarded the bilateral infection as usually occurring simultaneously, it would seem, from our series, that in the majority of cases the second kidney becomes infected several years after the first one. Of the cases diagnosed as bilateral tuberculosis the majority gave a history of evident renal infection dating back from two to ten years. The course of the second infection may often be traced by the history of a comparatively recent exacerbation of bladder symptoms and pronounced general weakness occurring several years after the first infection. This is, furthermore, often borne out at operation where bilateral exploration not infrequently reveals an old abscessed kidney on one side, and a recent small focus in the other. The danger of subsequent infection in the second kidney should be regarded as an urgent argument for early operation. Bladder irritability is frequently diminished in advanced bilateral involvement. Cystoscopic examination will then often show the bladder mucosa to be necrotic and covered with a thick, purulent exudate, rendering it impossible to see the ureteral meatuses. Pulmonary infection is a frequent terminal complication of bilateral disease. The symptoms of renal insufficiency accompanying bilateral involvement are quite different from those usually accompanying the insufficiency of nephritis; emaciation, weakness, nausea and vomiting are the usual symptoms observed, while edema of the extremities is seldom seen and ophthalmoscopic examination is usually negative.

ADRENAL GLAND INVOLVEMENT

During the past two years we have observed at operation three cases in which the adrenal gland, together with the kidney of the same side, was involved in the tuberculous process. The adrenal gland was found to be fully twice as large as normal and densely adherent to the inflammatory tissue about the kidney. On section, caseated tubercules, varying in size, were found scattered in the substance of the gland in two cases. In the third, the gland, though considerably enlarged, presented only inflammatory changes without any evidence of tubercules. The last patient died three weeks after operation. Autopsy revealed no evidence of tuberculosis in the remaining adrenal. Of the other two patients, one died three months after operation and the other was reported alive after one and one-half years. Clinically, the cases were of exceptional interest from the fact that they exhibited symptoms which may have been due to the diseased adrenal gland. In two of the patients numerous areas of brown pigmentation of the skin were found in various parts of the body and also on the palate. After operation, the third patient presented marked ecchymoses in the conjuctiva of both eyes, and numerous minute areas of subcutaneous hemorrhage on both legs.

CAUSE OF POST-OPERATIVE DEATH

While insufficiency of the remaining kidney has been generally regarded as a frequent cause of death following nephrectomy for renal tuberculosis, it would seem that there are other factors which should also be considered. Every autopsy record of patients dying soon after nephrectomy showed evidences of a severe general toxemia. Cloudy swelling and fatty degeneration of the remaining kidney as well as of the liver, brown atrophy of the heart muscle, miliary tuberculosis in the various organs and peritoneum were found in practically every case. In one patient, who died of post-operative lobar pneumonia, the remaining kidney showed evidences of chronic and acute nephritis, which otherwise might have been regarded as the direct cause of death. Various observers have shown that albumin and casts disappear from the urine of the remaining kidney after the diseased kidney has been removed. It would seem, therefore, that the evidences of post-operative renal insufficiency are but part of a systemic toxemia and that the patient's power of resistance is diminished by operation. It hardly seems possible that a laboratory estimation of the kidney function would determine the degree of this resistance.

SUMMARY OF RESULTS

Six (2.9 per cent.) of the 203 patients operated on died in the hospital. Excluding the cases of those patients operated on during the past year as being too recent to be of statistical value, we were able to obtain the subsequent histories of but 70 per cent. of the patients. Of this number, 18 per cent. were reported dead. Of this 18 per cent., 60 per cent. died during the first year after operation, and 15 per cent. lived more than three years. Of the 82 per cent. alive, all but 13 per cent. reported improvement or recovery from their previous bladder symptoms. The majority of those reporting no bladder improvement had gained in weight and strength.

The length of time elapsing before the bladder symptoms were relieved varied from a few weeks to five years after operation, 67 per cent. in less than a year. Seventy-five per cent. of those patients reporting no improvement in their bladder symptoms gave a history of bladder infection of more than two years' standing. The operative wound was reported healed in less than three months by 43 per cent. of the patients, and in less than a year by 87 per cent. The sinus persisted as long as four years in one case. Healing of the sinus was evidently hastened in but few cases by bismuth paste injections. Ureterectomy did not seem to affect the after-course materially. In the fourteen patients in whom ureterectomy was done with the nephrectomy the sinus persisted fully as long as in the others.

Of five patients in whom the diagnosis of bilateral tuberculosis was made and substantiated on exploration, and in whom the more diseased kidney was removed, all were reported dead within a year after operation. While our results in operating for bilateral tuberculosis are not so satisfactory as those noted by some observers, the operation may occasionally be followed by cure.

Operative mortality is therefore a negligible factor in nephrectomy for renal tuberculosis. We can expect a permanent cure in fully 75 per cent. of patients operated on. On the other hand, if otherwise treated, fully 90 per cent. must eventually succumb to the infection and in taking the small chance for such a cure the risk of infecting the bladder or infection in other foci is greatly increased.

SOME BACTERIAL AND NON-BACTERIAL DISEASES *

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BACTERIAL DISEASES

Bacterial mouth manifestations furnish a large field for original research which has been neglected for the reason that the physician has been content to leave this line of investigation for the stomatologist. The dentist has been educated along such narrow lines that from his mechanical and commercial inclination and training he is totally unfit for and uninterested in original investigation.

Medical workers in bacteriology are devoted to the general subject and rarely touch on special or local causes and results. Miller's "Micro-Organisms of the Human Mouth" is the only work along this special line with which I am familiar. The researches in this work are certainly well begun, but there is plenty of room for the further pursuit of this subject to confirm or reject previous investigation, to add to the facts already recorded in this pioneer work of Miller and also to take up new investigations where Miller has left off.

Further research is necessary for the purpose of diagnosis and treatment. In most mouth infections, specific treatment may be applied with satisfactory results, while diseases due to remote causes do not respond so readily.

A few cases of mouth infection coming to my notice are worthy of mention at this time. I have had two patients with gonorrheal infection of the mouth; both these patients were traveling salesmen and while the treatment which was given was beneficial, they left the city before they were entirely cured and the final results were not ascertained.

The literature on gonorrheal infection of the mouth in adults is meager. Dr. W. L. Baum[1] remarks:

> Gonorrheal ulceromembranous stomatitis, is, according to Menard, always due to profound systemic infection and is always a secondary state. This position was opposed by J. P. Tuttle[2] more than a decade ago, who cited in opposition, among other cases that of C. W. Culter,[3] in which, in an adult, osculation of a gonorrheic penis was followed in a few hours by a raw, dry feeling in the mouth and in twenty-four hours by the lip vesicles. The gums by the third day were painfully swollen, and on the fifth day the mouth was intensely inflamed. A whitish fluid with a disagreeable odor and taste was secreted. The lips cracked and were covered with herpes; the lip and cheek mucous membrane was thickened, reddened, denuded of epithelium in spots, and in patches covered with a false membrane. Cases later reported by R. Larson[4] were of similar type and origin.
>
> Gonorrhea, a common epidemic in institutions for children, usually assumes the form of ophthalmia, vulvovaginitis and pyemia. In a number of cases of infant pyemia reported by R. B. Kimball,[5] no local lesion was found to explain the entrance of the gonococcus to the general circulation. In Kimball's opinion, the gonococcus may produce a stomatitis, from which a systemic infection could arise. Many conditions of the gums and alveolar process, such as occur prior to pyorrhea alveolaris, predispose to stomatitis, readily forming a culture medium for the gonococcus. Conditions like this in an infant can easily be mistaken for sprue and treated therefor, thus conceding a possible source of systemic infection resulting in pyemia.
>
> Gonorrheal stomatitis, in a case described by Juergens, developed on the gums and cheeks of a man who had recently had gonorrhea. The resultant dirty gray deposit contained the gonococcus.

A horny gonorrheal exanthem is described by G. Baermann.[6] The exanthem was secondary to a severe gonorrheal attack, and was hyperkeratotic in nature. It bore some resemblance to certain tertiary luetic results and to psoriasis. A bacillus was found which resembled the bacillus of the kerosis (xerosis?) group. Baermann is inclined to refer the results to this bacillus, as the gonococcus was not found. It would seem more probable from the results of Woodruff,[7] Baum remarks, that the gonotoxin, which is exceedingly irritating, was the proximate determining cause. The exanthem involved the upper surface of the foot as well as the sole, and was evidently related to the arthritic conditions which appeared in the case.

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* Read in the Section on Stomatology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

1. Baum, W. L., in the Practical Medicine Series, 1904, x.
2. Tuttle, J. P., in Morrow's System, 1893, i.
3. Culter, C. W.: New York Med. Jour., Jan. 25, 1889.
4. Larson, R.: St. Louis Med. and Surg. Jour., 1896.
5. Kimball, R. B.: Med. Rec., Nov. 14, 1903.
6. Baermann, G.: Arch. f. Dermat. u. Syph., lxix.
7. Woodruff: Practical Medicine Series, 1902, x.

That the gonotoxin could be drawn to the alveolar process when the elimination is interfered with elsewhere is undeniable. That processes could be set up similar to the hyperkeratotic states, ascribed by Baum to the gonotoxin, is equally indisputable; still the evidence in my two cases pointed to direct infection. The alveolar process, being a doubly transitory structure and an end-organ with poor vitality, is acted on very quickly and destructively by these germs. The absorption of the tissues is so rapid that the teeth soon loosen and drop out, if the disease be not arrested.

Two cases[8] coming to my notice are as follows:

Case 1.—*History.*—Traveling salesman, aged 36, unmarried, was sent to me by his physician for local treatment, May 3, 1904. There was a history of gonorrhea with continued urethral discharge.

The mucous membrane on the entire superior alveolar process was involved. The gingival border of the mucous membrane was destroyed and the alveolar process was exposed. Marked inflammation with excessive swelling occurred. Interstitial gingivitis extended throughout the alveolar process, the teeth were loose and sore to touch. The pain was so severe that sleep was out of the question. Salivation was excessive. The raw ulceration was covered with a glazed surface of greenish-gray color. A microscopic examination of a smear from the gums distinctly showed gonococci infection.

Local application of iodoglycerole was used for three days; then the patient left the city. The time was too short for any improvement of the mucous membrane to be noticed, but the pain was not so severe.

Case 2.—Clerk, aged 45, married, came for consultation. He had contracted gonorrhea twenty-four years previously, and had suffered with gleet ever since.

The anterior superior alveolar process was exceedingly inflamed, raw and badly swollen. He suffered severe pain. Interstitial gingivitis was very profuse through the alveolar process. The incisors were loose, two of which I was obliged to remove. The surface was ulcerated and raw with a glazed surface of greenish-gray color. He had been married eight years; no children. His wife had local trouble, for which she had had three operations; he did not know the nature of her trouble. He had been advised by a former consultant to have his jaw removed, because of its cancerous appearance. Dr. Hektoen's examination of the tissue for cancer proved it to be simply inflammatory. I suspected gonorrheal infection. Examination of the tissue proved my suspicion correct.

Applications were first made of iodoglycerole, then silver nitrate. The inflammation subsided in the anterior part of the mouth, but extended rapidly through the vault to the soft palate, which was reached in three weeks from the time I first saw him. On consultation with Dr. Baum, argyrol (25 per cent.) was used.

Both these men were apparently in good health, except for slight rheumatism. Both seem to have been infected by the fingers as an intermediary host of the gonococcus.

SPIRILLA INFECTION

Cases 3, 4 and 5.—Three patients with spirilla infection were most interesting. Mr. G., aged 30, just married; Mr. C., aged 31, unmarried, and Dr. DeC., aged 28, unmarried. The histories were alike. The mouths were very much inflamed, especially the gums. The gum festoons were very much swollen and ulcerated. Most excruciating pain on touch; teeth loose. The appearance of the gums was not unlike those mentioned before in the gonorrheal infections with the dirty gray appearance but the isinglass appearance on the surface was not present. A microscopic examination of each showed spirilla and spirochetes, though the spirochetes did not have the character of *Spirochæta pallida.* Mixed pus cocci was present in all; one had pneumococci. Blood and pus were present in each patient. Staphylococcus emulsion was made of cultures from the pus on gums. One drop contained 20,000,000 killed bacteria. The emulsion was injected into guinea-pigs with negative results. Since spirilla mouth infections are properly due to uncleanliness, a removal of the filth deposit around and between the teeth and a local application of a 20 per cent. solution of argyrol healed the tissues in from one to two weeks.

APHTHÆ

Aphthæ were supposed to be the result of impaired digestion. When these ulcers made their appearance in the mouth, it was thought the stomach secretions were in an abnormal condition. They may be located on any part of the mucous membrane of the tongue, gums, cheeks or lips. Sometimes they are the size of the head of a pin and in one instance coming under my notice, the entire mucous membrane of the mouth was covered. They are usually started by the irritation of a tooth brush, toothpick or any foreign substance causing irritation. The germs already in the mouth infect the part and the ulcer is formed in twenty-four hours. I have produced aphthæ ulcers in cleaning the teeth and massaging the gums. These ulcers usually occur on the mucous membrane of the cheeks and lips by accidental injury to the parts with the revolving brush.

I have seven patients in my practice who are subject to these patches and I have produced them by irritating the part with the revolving brush in cleaning the teeth. Some patients seem to be susceptible to special germ accumulation and infection. These ulcers are treated successfully by the use of silver nitrate, but a better and less painful method is the use of 20 per cent. argyrol which acts quickly and successfully.

NON-BACTERIAL DISEASE

INTERSTITIAL GINGIVITIS OR SO-CALLED PYORRHEA ALVEOLARIS

A disease which the stomatologist is called on to treat many times each day is that of interstitial gingivitis. The term "pyorrhea alveolaris" was given the disease in 1880, by Dr. Rehwinkel of Ohio, because in a few patients pus was discovered about the necks of the teeth. This term "pyorrhea alveolaris" has led many a good man astray. That there are a few patients with infection of the gums, all will admit; some of these have already been mentioned. These infectious diseases can easily be differentiated from the ordinary interstitial gingivitis patients so common in practice. The disease presented us many times each day, however, has not been shown to be infectious. Research work has been done by many scientists, Galippe,[9] Miller,[10] Rhein, George T. Carpenter,[11] Sudduth[11] and myself,[11] none of whom has been able to show it to be a germ disease. It may be possible later to demonstrate infection as a cause. My own researches[11] have shown that the interstitial gingivitis is due to an irritation of both a local and a constitutional nature. These experiments have been made by every conceivable method on human beings and animals. I admit that when pyorrhea is present, pus infection has taken place, but only about 10 per cent. of patients are so infected. This condition, however, is always secondary to the primary disease. If my views should prove to be correct, the opsonic and vaccine methods of treatment are certainly not in harmony with proper methods of treatment, and much time and labor has been wasted. The local use of iodin and the sulphocarbolates by the operator and a stiff brush by the patient, with proper care of the general system will cure all interstitial gingivitis and pyorrhea patients, if undertaken before the teeth become loose.

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[8] Talbot, E. S.: Internat. Dent. Jour., April, 1905.

[9] Galippe: Die Infektiöse Artho-Dentaire Gingivitis, 1884.

[10] Miller: Microorganisms of the Human Mouth.

[11] Interstitial Gingivitis or So-Called Pyorrhea Alveolaris.

As I stated at the outset of this paper, more original research work is necessary before a proper course of treatment can be given.

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THE PROPHYLAXIS OF CEREBROSPINAL MENINGITIS

WITH SOME OBSERVATIONS AS TO CARRIERS *

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The most important contribution to the prophylaxis of cerebrospinal meningitis is the knowledge, recently acquired, that the causative organism—the *Diplococcus intracellularis meningitidis* of Weichselbaum—has its natural habitat in the nose and throat and that the disease is spread through the medium of an intermediary or healthy carrier. With these two facts well established, a formidable point of vantage in combating the spread of the infection is obtained.

The *Diplococcus intracellularis meningitidis* first obtains lodgment in the throat or the nasopharyngeal cavities, more frequently in the latter, these localities representing the original sites of infection and proliferation. As to the route the infection pursues from these points to the meninges, there is a diversity of opinion. A consideration of these differences will be of assistance and for this reason they will be treated briefly.

Exposure of the sinuses by splitting the skull sagitally fails to reveal to the naked eye any evidences of a direct extension of the mischief from the throat or nose to the cranial cavity. Some observers believe that the infectious process starts from the throat or the nose and through the cribriform plate makes its way to the base of the brain. For many reasons the theory of direct extension of this disease is not tenable, the foremost of which is that were the process by direct extension from the nose or throat, the lymphatics would be the route traversed. As an argument against this conclusion let us review some of the primary features of scarlatinal infection. Scarlatina is often associated with severe streptococcic infection of the throat, and the organism, the *Streptococcus pyogenes*, giving rise to this infected throat does so via the lymphatics, but practically never gives rise to a meningeal condition. Again, the cord suffers much more severely from the infection than does the base of the brain, demonstrating that cerebral damage is always secondary to that of the cord. It has been suggested that the *Diplococcus intracellularis meningitidis* is ingested and reaches the lymph-stream by way of the bowel. Those inclined to the "bowel infection" theory call attention to the great swelling and congestion of the mesenteric glands in meningeal conditions.

In view of the foregoing it is evident that the *Diplococcus intracellularis meningitidis* travels from the nose and throat to the cerebrospinal canal via the blood-route. In many cases the organisms have been found in the blood. The diplococcus first invades the blood-stream, and then localizes in the meninges because of its specific affinity for meningeal tissue. This specific affinity for meningeal tissue, however, would seem to be limited to human tissues, for all attempts to produce meningitis in animals by inoculations of the *Diplococcus intracellularis meningitidis* into parts more or less removed from the central nervous system have been unsuccessful. The organism has been obtained in pure culture from the pericardium, pleura, joints and spleen. In two cases the diplococcus gave rise to a malignant endocarditis. The organism has also been obtained from the urine of a patient suffering from the disease.

The blood invasion probably occurs in the following manner: The onset of the disease is insidious. In many cases there is throat infection associated with severe inflammatory reaction. Frequently the inflammation is so severe as to cause a membranous exudate not unlike that of diphtheria and frequently mistaken for this condition. In this exudate rests the *Diplococcus intracellularis meningitidis* enmeshed or lying in the leukocytes. The lymphatic absorption of such exudate might very well be accomplished by a blood invasion of the organisms free or within the leukocytes. Not every invasion of the blood, however, is followed by an infection of the meninges; it is usually necessary that there be some other factor leading to a lowering of tissue resistance or to an increase in the virulency of the organism. This predisposing factor may in some instances be due to trauma.

Another condition having a bearing on the selection of the cerebrospinal canal as the seat of the infection may be the properties of the cerebrospinal fluid and the blood-serum. The probability of infection would be regulated by the bactericidal properties of the cerebrospinal fluid and blood to the *Diplococcus intracellularis meningitidis*. Very frequently the blood-serum will exhibit a certain bactericidal action to the causative organism, while the cerebrospinal fluid will fail to show the slightest evidence of bacterial antagonism. This difference between the blood-serum and the cerebrospinal fluid in regard to those necessary factors of immunity would naturally point to the cerebrospinal canal as being a *locus minimæ resistantiæ*. Add to this the specific affinity of the meningitis diplococcus for meningeal tissue and it is not difficult to understand the manner in which the infection arises.

Reverting to the mode of transmission and the rôle the carrier plays in the spread of the disease, a great deal of our knowledge is based on the history of recent outbreaks of cerebrospinal meningitis. The disease is undoubtedly transmitted directly from person to person, for the *Diplococcus intracellularis meningitidis* is of such low vitality that it succumbs quickly to drying, sunlight and other noxious influences. Because of its virulency individuals suffering from the disease are decidedly restricted in their sphere of potential pathogenicity, and as only a very few of those who acquire the organism are sensitive or susceptible to it, the perpetuation and dissemination of meningitis must depend on the healthy carriers who transmit the diplococcus from one to another until an impressionable subject is reached—the result is infection.

The number of persons who are thus made carriers during an outbreak of meningitis is far greater than the number of cases of meningitis. Nearly one-fourth of all individuals residing in the immediate vicinity of meningitis cases act as meningococci carriers, harboring the germs in the respiratory passages without displaying any evidence whatever of disease or inconvenience. In, apparently, the healthiest of subjects meningococcal organisms, in their maximum degree of virulency, have been isolated, and even the saliva has been found contaminated with the *Diplococcus intracellularis meningitidis*. Only occasionally do these bacterial carriers present signs of a nasopharyngitis, or symptoms of a mild meningococcic infection. In carriers the germs are rarely found in the anterior part of the nasal fossæ or in the regions of the tonsils, but they are abundant in the posterior part of the nasal chambers and in the rhinopharynx. Other persons equally exposed as carriers, but not inhabiting the same dwelling, rarely become infected. Aside from epidemic outbreaks, the germ is seldom discoverable in healthy persons; there are, however, occasional persons who, once sheltering the diplococcus in the nasopharynx, carry it permanently, thus perpetuating the disease. These chronic carriers are especially active during the periods intervening between epidemics. It appears that the *Diplococcus intracellularis meningitidis* can readily obtain a foothold on the mucous membranes of the majority of individuals, but with only a comparatively small proportion of these subjects is it able to invade the tissues and manifest its pathogenic effects.

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* Studies from the Laboratory of Tropical Medicine and Hygiene under the direction of Creighton Wellman, Tulane University of Louisiana—No. 8.

To the present time there has been discovered no absolutely efficacious means of causing the disappearance of the *Diplococcus intracellularis meningitidis* from the respiratory passages, and especially the nasopharynx, of the carriers. Notwithstanding, there are certain measures within our power which, if rigidly observed, would tend to limit the extent and severity of epidemics. To rob this disease of its horrors—the high rate of mortality and pitiful postmeningeal sequelæ—means a persistent educational campaign on the broadest possible lines; to carry this educational campaign to a successful conclusion, it is essential that a few primary facts be recognized.

1. Earnest cooperation should be secured between the people and the health authorities, in the enforcing of all necessary health regulations.

2. The detection and isolation of all apparently healthy germ-carriers, the actual propagators of the disease, is essential.

3. Efforts should be directed toward rendering these apparently healthy germ-carriers harmless.

The work of the health authorities would embrace the ordinary sanitary control of the contagious diseases, such as diagnosis, notification, isolation or removal to a contagious diseases hospital, fumigation and disinfection. Quarantine measures to check the spread of this disease are not only absurd, but unscientific.

Household inspection by competent officials, to ascertain the sanitary conditions of back yards, alleys and outhouses, would prove beneficial to the health of the community in various ways. Tenement inspection should be conducted by those especially trained in this branch of service. Defective plumbing and insufficient toilet requirements should be made the subject of special investigation and correction. In rural districts, soil pollution should be inquired into closely. Particular efforts should be directed to the extinction of the fly, the louse, the roach, the bedbug and the rat in living quarters.

Garbage disposal should be conducted under the supervision of the health authorities working in conjunction with the department of public works. Street cleaning and paving should be brought up to the highest possible state of efficiency.

Circulars of information, dealing with the prophylaxis of the disease and the dangers of carriers, should be distributed to the pupils of public and parochial schools, and the children should be impressed with the necessity of taking them home for their parents also to read. In addition, these circulars of information should be distributed through the various industrial plants of a community or those places where the number of employees is large.

Medical inspection of school children should be thorough and efficient. A particularly distressing feature, in summarizing the beneficent results of medical school inspection, is the antagonistic attitude displayed by those in charge of private and parochial schools to this most necessary educational, hygienic and health-conserving measure. Some provisions should be made for the medical inspection of the pupils of private and sectarian schools. During epidemic periods rhinologic and laryngologic examinations in schools, orphanages, and like institutions, should be conducted by specialists in that line. An earnest and scientific cooperation between the medical school examiner and the bacteriologist would promptly lead to the detection of carriers among school children. This alone would bring about the isolation of many carriers. Lectures on oral and nasal hygiene should be delivered to the pupils of public and private schools and the inmates of all public institutions. The children should be given practical demonstrations of the correct methods of brushing the teeth, blowing and cleaning the nose, and, if necessary, syringing that organ, and gargling and rinsing the mouth. Inquiries should be made every morning of all school children as to any illness existing at home; by so doing it is often possible to check the spread of many contagious diseases. School-teachers should be acquainted with the elementary outlines of the disease in order that they might impart to their pupils certain prophylactic principles.

Popular lectures to the public on the same plan as that followed in San Francisco during the recent plague, and in New Orleans during the period of the yellow fever epidemic in 1905, would also prove fruitful.

The scope of the powers of the health authorities should be so regulated that these powers might be amplified at any time according to the needs of the situation.

A very important question, and probably the weightiest, in the prophylaxis of cerebrospinal meningitis is what to do with the carrier once he is detected, always remembering that the carrier has certain recognized rights; and, secondly, what means of prevention are necessary for the individual to adopt to avoid becoming a carrier.

Once a carrier of the disease is recognized as such, he should be placed in care of the health authorities for observation and treatment. During this period he should be treated by a throat and nose specialist, working in conjunction with a trained bacteriologist. It should be the aim of the attending physician to bring about a condition of bacterial freedom in the regions of the throat and nose. By some means the *Diplococcus intracellularis meningitidis* should not only be turned out of its natural habitat—the respiratory tract—but also completely extinguished. All carriers, especially the chronic, should be inoculated with the antimeningococcal serum. The results of the bacteriologic examinations should be the gauge as to the efficiency of whatever treatment might be adopted. In cases of chronic carriers we should endeavor to restrict their sphere of activity and impress on them their danger to the public, and instruct them accordingly. Special directions as to spitting, sneezing and coughing should also be a part of the instructions to carriers. Fomites, such as handkerchiefs, spoons, cups and so forth, which have become contaminated by carriers, may infect susceptible persons and should be disinfected or destroyed.

In the prevention of carriers oral and nasal hygiene should be made a part of the daily routine. All faucial or nasal irritation should be inquired into. One way to avert the disease is to keep the teeth well brushed, the mouth and throat as clean as possible and the nasal cavities clear and clean. The public should be taught not to hesitate to gargle or rinse the mouth with a good oral antiseptic; to have no fear of a tooth-brush, and to display no antipathy to a nasal douche, if one is necessary. These measures will in all probability minimize the possibilities of contracting cerebrospinal meningitis when the disease becomes epidemic in any section.

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CONTUSION OF THE CHEST FOLLOWED BY PERSISTENT HEMOPTYSIS AND PRESYSTOLIC MURMUR AND THRILL *

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The following case, sent to me in April, 1911, has been under my observation from time to time for nearly six months. It is reported as a contribution to the subject of valvular disease of the heart following traumatism.

The physician who sent the patient to me is a very well-trained and careful practitioner, and had had personal knowledge of the patient for more than six years prior to the accident, had attended his family and had occasionally prescribed for him in trifling ailments. This physician regarded the patient as a healthy man, always able to discharge the duties of an occupation calling for irregular but severe muscular effort, and absolutely free from rational symptoms or physical signs suggestive of disease of the lungs or heart.

History.—G. A. B., aged 36, married, is a lock-tender by occupation and a hearty-looking, stout fellow of medium stature. About the middle of December, 1910, he received, as the result of a boat fouling one of the gates, a violent blow on the left chest from the heavy balance-beam, against which he was leaning, and was thrown to the ground with great force, striking on his breast. He was able to rise but had severe pain in the left side of his chest and symptoms of shock. In a little time he had an abundant hemoptysis, the blood being bright red and frothy and coughed up without effort. There was no evidence of fracture of the ribs. In the course of a day or two recovery from the other immediate effects of the accident appeared to be complete but the blood-spitting continued. It occurred every eight or ten hours for about three weeks and subsequently at longer intervals until this date, April 14, 1911. The attacks came on with a sense of oppression followed by cough and spitting of red, frothy blood. At present there is mucus mixed with blood every morning and two or three mouthfuls of pure blood every few days, otherwise there is no cough or expectoration of any kind. The family history and previous personal history have no bearing on the present condition. It is to be noted that the patient had a mild attack of enteric fever in his early youth and that he has never had rheumatic fever, nor can he recall having had tonsillitis.

Examination. (April 14, 1911).—Patient complained of an inconstant precordial pain which sometimes extended to the left shoulder, especially just before an attack of blood-spitting. There was more or less constant sense of weight in the lower part of the left posterolateral region of the chest. Dyspnea and palpitation were absent. There was a very slight relative diminution of respiratory excursus over the lower part of the left chest with diminution of resonance. The respiratory murmur was normal everywhere with the exception of some enfeeblement in this region and there were no râles. Pulse was small and regular, 80-84; respiration, 18-20; temperature, 98 F. Blood-pressure (Pachon) corresponded to systolic 125, diastolic 80 mm. Hg. The heart was slightly enlarged in its transverse diameter, the apex being about 1 cm. to the left of the mid-clavicular line in the fifth intercostal space. Indistinct pulsation in the second and third intercostal spaces to the left of the sternal border was present. On auscultation the following signs were noted: Faint systolic murmur in the aortic area (not heard at subsequent examination), very faint aortic second sound; accentuation of second sound in pulmonary area; loud, rumbling presystolic murmur accompanied by a thrill, both being intensified by exertion, in the mitral area and to the right of it and a snapping first sound coincident with the palpable impulse. At this time the second sound was not reduplicated. There was no tracheal tugging or other sign of aneurysm; no friction rub or other sign of pericarditis. The urine was normal.

Course.—Oct. 13, 1911: There are small blood-spittings every day and eight or ten large ones amounting to half a tumblerful or more two or three times a week. The presystolic murmur and thrill are more intense and are increased on effort, as in walking. Pulse small, with well-filled arteries, 80 in recumbent, 90 in erect posture. Blood-pressure corresponding to systolic 120, diastolic 80 mm. Hg.

November 15: Very little change in subjective sensations of the patient. He says that he has not lost a pound and that he feels quite well except for the blood-spitting which alone prevents his returning to work. The pain in the chest and shoulder has disappeared. There is slight relative dulness over lower part of the left chest and the inspiratory expansion is less than on the right side. Cardiac dulness at the level of the fifth costal cartilage extends 6 cm. to the right and 10 cm. to the left of the median line. Indistinct pulsation in second and third intercostal spaces to left of sternal border. The systolic murmur in the aortic area is no longer audible and the aortic second sound very faint. There is marked accentuation of the second sound in the pulmonary area with reduplication and a coarse, rumbling, low-pitched presystolic murmur over the body of the heart mesially to the apex, accompanied by a very distinct thrill restricted to the same area. At the apex is heard a faint systolic murmur, which is transmitted toward the axilla. Blood-pressure, systolic 150, diastolic 100. Examination of the blood gave the following result: hemoglobin, 67; red blood-corpuscles, 4,100,000; white blood-corpuscles, 16,600; color index, 0.8+; polynuclears, 66 per cent.; lymphocytes, 25 per cent.; hyaline, 6 per cent.; eosinophils, 1 per cent.; transitionals, 2 per cent. It is important to note a leukocytosis of 16,600.

Examination of the fluid expectorated in the night preceding the patient's visit to me yielded the following facts:

The specimen consisted of 250 c.c. of bloody fluid, partially clotted, neutral in reaction and containing no elastic fibers. Treated with acetic acid it showed a few epithelial cells and numerous leukocytes. Tubercle bacilli were not present in the centrifugated sediment either by the Ziehl-Neelsen or the antiformin method.

Pulse 80, small and regular; temperature at 11 a. m., 98 F.; no dyspnea, edema or other general manifestation of cardiac disease.

Eleven months after the accident the general condition of the patient was the same. The signs of mitral stenosis were more distinct, reduplication of the second sound at the base had appeared and there were evidences of some increase in the size of the right ventricle. The blood-spitting continued and was wholly uninfluenced by treatment. Various drugs had been administered in conventional doses, the spirit of glyceryl trinitrate, stypticin, the oil of erigeron, various preparations of digitalis and iron, without effect. Periods of rest in bed had not prevented the recurrence of hemoptysis.

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*Read before the Section of Medicine of the College of Physicians, Philadelphia, Nov. 27, 1911.

Taken as it now presents itself, the case has the features of a well-developed mitral stenosis with good compensation and a marked tendency to bronchopulmonary hemorrhage. This symptomatic manifestation of mitral disease, especially of mitral stenosis, is much more common than the text-books would indicate. In fact, most of them and some of the special treatises on diseases of the heart do not mention it at all. Among the more recent authoritative statements in regard to the matter are those in the article on mitral obstruction by the late A. E. Sansom,[1] and in James Mackenzie's remarkable monograph on diseases of the heart.[2] The former writer states, after calling attention to the fact that epistaxis is one of the earliest symptoms to attract attention in this form of chronic valvular disease, that hemoptysis has often been recorded and that it also occurs in the course of the lung affections in this disease, while the latter affirms that "at various stages patients may be seized with great bleeding from the lungs. Here doubtless the cause is the back-pressure in the pulmonary circulation and rupture of the blood-vessels." And he adds, "As a rule this is a grave sign, the patient dying sometimes shortly after an attack." I have never seen this accident and cannot concur in this opinion. On the contrary, hemoptysis in mitral stenosis, though often very alarming, is usually followed by abatement of the cardiac symptoms and sometimes by prolonged improvement. I have recently reported two cases which are interesting in this connection.[3]

A woman, 52 years old, the mother of four children, consulted me in 1906 for blood-spitting in small amounts, from which she had suffered for ten years. There were well-characterized signs of mitral stenosis. She had never had rheumatism, chorea or puerperal sepsis. There had been no habitual cough and there were neither symptoms nor signs of pulmonary tuberculosis. Tubercle bacilli were not found in the sputa. Her weight had risen from 136 to 150 pounds. She came again, Sept. 22, 1910, stating that she had been entirely free from blood-spitting until May 20, 1910, when she had a single copious bleeding amounting to "at least a quart." Since then she had been well. There were at this recent examination no pulmonary signs whatever and she had neither cough nor expectoration. The signs of mitral disease were the same as four years previously and she complained of slight dyspnea on exertion, but nothing else.

A Jewess, 45 years old, seen in consultation, was unable to recall any attack of rheumatism and regarded herself as well except for some shortness of breath on exertion, which she attributed to increasing weight. Coming home from the theater this patient was seized with profuse hemoptysis, which continued until the following day. There were no signs or symptoms of pulmonary tuberculosis and no tubercle bacilli in the clots, but a coarse presystolic thrill, a loud rumbling murmur at the same period in the cardiac cycle and absolute absence of cough or expectoration after the hemorrhage ceased, which it presently did, showed that it had been due to stenosis of the mitral valve. After several months this patient remained free from hemoptysis.

These hemorrhagic cases of mitral stenosis are very often erroneously regarded as irregular or obscure cases of pulmonary tuberculosis.

With reference to traumatism as a cause of mitral disease, and in particular of mitral stenosis, symptomatic writers are even more silent. The authors in Allbutt's "System"[4] make, however, the following very positive statement:

> Traumatic influences occasionally give rise to the lesions of mitral obstruction. Indirect injury very rarely produces any changes in the mechanism of the mitral valve unless there has been previous disease, but direct violence, such as a blow on the anterior chest-wall, is not a very rare cause of the affection.

Bernstein,[5] in 1896, collected the reports of cases of heart disease directly following traumatism, 124 in number, but a careful examination of this list shows a very limited number in which the valves were implicated and not one which presents the characters of my Case 1. Stern's monograph,[6] "Die traumatische Entstehung innerer Krankheiten," contains a limited number of further cases of valvular disease, but none like this one. Riesman[7] reported a case of mitral stenosis of traumatic origin in which the injury was indirect, being the result of violent exertion on the part of the patient in fleeing from footpads. In most of the cases reported the signs of valvular lesions have been attended by indications of acute endocarditis and in a large proportion the diagnosis has been established or confirmed by necropsy.

In the above case a leukocytosis of 16,600 at this late period and the evidence of a persistent, though gradually subsiding, congestion of the lower lobe of the left lung, probably associated with a low-grade chronic bronchopneumonia, may be invoked to account for the continuing blood-loss in connection with an advancing mitral stenosis.

1509 Walnut Street.

SALVARSAN IN PERNICIOUS ANEMIA *

ALFRED FRIEDLANDER, M.D., CINCINNATI

Miss E. V. (nurse) had been in California, where the diagnosis of pernicious anemia was made. Oct. 10, 1911, the blood examination showed a typical picture of pernicious anemia, with great numbers of megaloblasts, and all the other concomitant features. The red-cell count at this time showed 887,000. Physical examination was negative, except for slight cardiac dilatation. The patient had had large quantities of iron and arsenic before reaching the city. Oct. 10, 1911, 0.3 gm. salvarsan in sesame oil was given in the gluteal region by Dr. Tauber. This was repeated October 18. Hypodermic injections of cacodylate of iron, gr. 1, were then begun and were administered on alternate days, twenty-seven doses being given. The patient's improvement was rapid and, as can be seen from the table, she now presents no evidence of pernicious cachexia. Her diet has been meat-free with large quantities of buttermilk. The blood-picture is now merely that of a mild anemia. Details of the blood-counts can be seen from the accompanying table. It is, of course, too early to pronounce the patient cured; but the changes after the administration of salvarsan were certainly very striking.

Date	R. B. C.	W. B. C.	Hb.	Col. Ind.	Stain Spec.
10/10/11	887,000	7,200	20	1.1	Typical pernicious.
10/23/11	820,000	4,800	17	1.1	Large numbers of normoblasts.
10/31/11	1,060,000	6,600	19	0.8	
11/ 6 /11	2,537,000	6,800	25	0.8	
11/20/11	2,670,000	8,200	45	0.8	
11/28/11	2,900,000	7,400	43	...	Very few indicated reds.
12/11/11	2,820,000	6,800	45	...	
12/21/11	3,200,000	6,400	52	...	

Salvarsan, 0.3 gm., in sesame oil each on October 10 and October 18; on October 27, iron cacodylate, gr. 1, hypodermatically, and every other day thereafter, twenty-seven doses in all.

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[1] Revised by G. A. Gibson in the later edition of Allbutt and Rolleston's System of Medicine, 1909, vi, 366.

[2] Mackenzie, James: Diseases of the Heart, 1908, p. 226.

[3] Wilson, J. C.: Pa. Med. Jour., May, 1911, p. 596.

[4] Allbutt's System of Medicine, 1909, vi, 340.

[5] Bernstein: Ztschr. f. klin. Med., 1896, xxix, 519.

[6] Stern: Verhandl. d. deutsch. path. Gesellsch., 1908, xii, 172.

[7] Riesman: THE JOURNAL A. M. A., Sept. 20, 1911, p. 1126.

* Reported before the Clinical Society of the Cincinnati Hospital, Dec. 21, 1911.

THE HORMONES, WITH SPECIAL REFERENCE TO PERISTALTIC HORMONE*

CHARLES D. AARON, Sc.D., M.D.
DETROIT

It has been demonstrated recently that the cells of the mucous membrane of the stomach elaborate a chemical substance that stimulates the peristalsis of the intestine. Starling calls such a substance which has a specific action a hormone. The term is derived from the Greek word ὁρμάω, meaning "to stimulate." The hormones are formed during normal metabolism and stimulate certain cells. In the stomach we find a gastric hormone secreted in the antrum pylori. When absorbed, this substance induces the secretion of gastric juice. It is an essential peculiarity of most hormones that they act on other organs of the body, whereas the hormones of the gastro-intestinal tract have no influence on the general system. The hormones of the digestive apparatus act on the digestive secretion, exciting the sense of taste and inducing the secretion of the peptic glands. These peptic glands are stimulated, as Gross and Edkinds[1] have shown, from the antrum pylori by way of the blood. If the extract of ground mucous membrane of the antrum pylori is injected into dogs with a solution of hydrochloric acid, meat extract or peptone, the glands in the fundus of the stomach begin to secrete. Extracts of the pylorus mucous membrane by themselves or extracts of the fundus mucous membrane treated in a similar way do not produce this result. We may assume, therefore, that the antrum mucous membrane, being stimulated by the meat extract, produces a hormone, the so-called gastric secretin, which after absorption stimulates the secretion of the gastric juice. This, I believe, has as yet not been sufficiently recognized in gastric diagnosis.

Curschmann and others have attempted to substitute an appetite-meal for the Ewald test-breakfast, by which, through stimulating the secretion of the gastric juice, the effect is determined by the sense of taste through the nervous system. But this would make the examination dependent on the changing factor of taste and the mental poise of the patient. While, of course, the item of taste cannot be entirely ignored as a stimulant of secretion of the gastric juice, a more uniform result can be obtained by the ordinary test-meal which assures the formation and the action of secretin. Borchardt has given a bouillon test-meal consisting of 250 c.c. of hot water and Maggi cubes, with a roll or a slice of bread, and he has been able to ascertain a percentage of acid similar to that obtained by the Ewald method.

In the intestinal mucous membrane there is another hormone, which stimulates the secretion of the pancreatic juice. It is elaborated by the action of the hydrochloric acid of the gastric juice on the intestinal epithelium. The question of the intensity of the secretion of the pancreas in case of achylia gastrica is not yet cleared up. A number of tests have been made but the proof, whether there is a reduced or an entirely suspended function of the pancreas, has not yet been determined. Tabora's investigation shows the probability that a reduction of the secretion of the pancreas is present in achylia. He found very serious disturbances of protein absorption which could be corrected by the giving of hydrochloric acid by the mouth. A positive result, however, from the Schmidt sac-test has as yet not been obtained.

The existence of a lacteal or mammal hormone is proved by the observation of Baasch on the Blazek twins; these twins are united by a broad commissure in the sacrococcygeal region, but are otherwise fully developed normal individuals. After one of them became pregnant, following delivery, lacteal secretion took place also in the non-puerperal sister.[2] Since the blood of one sister enters, by way of the commissure, into the other, it is evident that the hormone of the gravida has actually induced the lacteal secretion in the non-gravida.

Seitz[3] believes that a pathologic ovarian hormone is the natural exciter of the growth of uterine myomata. That the growth of the latter is arrested by ovariotomy is well known. It is also well understood that the ovary possesses a principle — or principles — which stand in close relationship not only to menstruation and uterine hyperplasia but also to growth and nutrition of organs which bear no known relation to sex, as well as to organs which possess secondary sexual characteristics. The same principle which presides over the increase of the muscle-fibers of the uterus in pregnancy is also responsible for the growth of uterine myomata; but in the latter case the hormone is no longer physiologic but the product of a diseased ovary. That uterine myomata have a tendency to increase in size during pregnancy is well known, as is also the opposite tendency to decrease in size after the puerperium. The favorable action of the x-rays on myomata appears to be due to their destructive action on the ovaries.

The hormone which has thus far been best studied is epinephrin.[4] It regulates the pressure of the blood and also the mobilization of the sugar in the body. We are indebted to Zuelzer and Blum for the latter demonstration. It has also been observed that the pancreas hormone, which is the product of secretion of the pancreas, antagonizes and neutralizes the epinephrin, and may therefore be designated as the pancreas anti-hormone. Starling attributes therapeutic importance to it, its possibilities having been demonstrated in a few cases of grave diabetes. Hansemann explains the absence of diabetes after the complete destruction of the pancreas through carcinoma, by the fact that the carcinomatous tissue has assumed the function of the organ in which it originated. All glands with internal secretions have something to do with carbohydrate metabolism. The most frequent disturbance of metabolism is diabetes mellitus, and it has a relation to the internal secretion of the pancreas. Mering and Minkowski have shown that the total extirpation of the pancreas produces grave, fatal glycosuria. Still, despite the most thorough-going experiments, it has not been possible to obtain anatomic evidence in all cases of pancreatic diabetes in man. The views of Lepine,[5] O. Cohnheim,[6] R. Hirsch and J. de Meyer[7] that in diabetes pancreaticus the destruction of sugar in the blood is deficient has not been generally accepted. Glycosuria plays a subordinate rôle in diabetes, even if it should be proved that the excretion of sugar is reduced. Much more important are the derangements in the glycogen metabolism in the liver. The fact that pancreatic diabetes appears after section of the splanchnics shows that the internal secretion of the pancreas acts on the liver and not on the central nervous system. It is therefore assumed that the pancreas hormone controls the nerves of the liver, and that after the removal of this check, the increased production of glycogen leads to glycosuria. It is more probable that the pancreatic hormone favors the formation of glycogen in the liver and that, after the cessation of the function of the pancreas, there is a reduction of glycogen in the liver. The internal secretion of the suprarenal capsules and the hypophysis are antagonistic to the hormone of the pancreas. They also remain operative after the section of the splanchnic nerves. It is not known whether they influence the formation of diastatic ferments in the liver. It is probable that the pancreas hormone favors the formation of glycogen, while the hormone of the suprarenal capsules, thyroid and the hypophysis checks it. In fact, a distinction is already being made between hormones which are aggressive and stimulate certain organs or check excessive activity in other organs, and other hormones whose function is rather to annihilate certain noxious substances which might otherwise enter the circulation of the organism. Such a one is the anti-hormone which, as Blum believes, neutralizes the intestinal toxins entering into the circulation of the organism.

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* Read before the Wayne County Medical Society, Dec. 11, 1911.

[1] Gross and Edkinds: Arch. f. Verdauungskr., 1906, xii, 507; Jour. Physiol., 1906, xxxiv, 133.

[2] Baasch: Deutsch. med. Wchnschr., 1910, No. 21.

[3] Seitz: Med. Rec., New York, 1911, No. 23, p. 142.

[4] Dohrn, Marxer and Zuelzer: Deutsch. med. Wchnschr., 1908, No. 32.

[5] Lepine: Soc. de biol., 1892.

[6] Cohnheim, O.: Ztschr. f. physiol. Chem., 1903, 39, 42, 44.

[7] Hirsch, R., and de Meyer, J.: Soc. de biol., 1907, No. 63, 385.

Zuelzer[8] observed the specific effect which peristaltic hormone has in stimulating intestinal peristalsis and uses the splenic substance for the production of it for therapeutic purposes. This hormone is probably developed in the gastric mucous membrane and is stored up in the spleen. In fact, this organ is regarded as a storage-place for the peristaltic hormone because it contains these in large quantities. The peristaltic hormone has the capacity of stimulating the peristalsis of the intestine. It was found at first in the mucous membrane of the stomach, later in abundant quantities in the spleen; and it has been used in chronic constipation and in acute paralysis of the intestine. But the treatment is not altogether without distress, for it frequently causes pain and fever. If used for therapeutic purposes this peristaltic hormone must be introduced intravenously or intramuscularly and its absolute sterility must therefore be made certain. It has, in fact, been found that its intramuscular introduction produced pain and a rise of temperature, and the intravenous method is being preferred owing to the fact that it reduces the pain, fever and discomfort to the patient.

The observed fact that the hormone stimulates intestinal peristalsis, led quite naturally to its employment in chronic constipation. In spastic constipation we have an overstimulation of the intestine and the use of the hormone in such cases is, of course, irrational. In the atonic form, however, the hormone becomes valuable. Zuelzer[8] reports success in 71 per cent. of many cases of chronic constipation, in which evacuations had previously not been possible for a period of years without cathartic or enemas. He feels himself justified in urging that, in the light of the discovery of the peristaltic hormone, the whole subject of constipation be revised. He suggests two theories with regard to the nature of the therapeutic effect of the peristaltic hormone. In the first place, in cases of chronic constipation we have a complete absence of the normal production of the peristaltic hormone or a quantitative insufficiency of it. When peristaltic hormone is introduced, it stimulates the beginning of a normal elaboration of it in the body. And in the second place, it may be that the stimulus for the start of the intestinal peristalsis in atonic chronic constipation is produced when the hormone is administered, by the intervention of the nervous system. The hormone may exert a specific stimulant action on the abdominal ganglia. The ability to convey the stimulus may have been disturbed or dulled. An artificial saturation of the organism with peristaltic hormone may vigorously stimulate the nerve-cells and enable the body to react again to the normal stimuli.

Zuelzer uses 40 c.c. of peristaltic hormone for an adult and 20 c.c. for children. The injection is made only once and the median vein is the best place for it. The skin is prepared aseptically and an Esmarch bandage applied on the upper arm to make the vein prominent. The fine needle of the syringe is introduced into the vein, the Esmarch bandage loosened and the contents of the barrel of the syringe are slowly forced into the vein. The needle is removed and a slight pressure with gauze is applied to the point of entrance. A small piece of adhesive plaster is then applied. Usually no reaction ensues. It is advisable to follow up the injection with one dose of castor oil. It serves as a lubricant while the hormone induces the normal peristaltic action. As against other remedies employed in chronic constipation, the peristaltic hormone has the superior merit that, having started evacuation, there is no need to inject more of it.

Henle,[9] Saar[10] and Unger[11] studied the action of peristaltic hormone, in postoperative intestinal paresis, in the case of epileptics who had previously suffered from chronic constipation, and in the case of an almost moribund patient, with total intestinal paresis, with intestinal loops partly obstructed by inflammation, and proved that the peristaltic hormone is an innocuous substance. Several cases of ileus, in which intravenous injection of the peristaltic hormone was made in patients who were advanced in years, and who had some time previously been operated on, show that peristaltic stimulation produced by the hormone is not violent and causes no grave disturbance even if there is organic derangement and obstruction.

Zuelzer thinks that the peristaltic hormone may turn out to be also a means for differential diagnosis, for he cites a case of an aged man concerning whom it had been previously impossible to decide whether the constipation he was subject to was due to a volvulus, incident to an intestinal tumor, or to an obstruction of the intestine by the tumor. The administration of the peristaltic hormone, however, produced a visible peristalsis which could be demonstrated by auscultation. It is likely that further experiments will bear out Zuelzer's hope that a negative result after an intravenous injection of peristaltic hormone may constitute a diagnostic proof of an organic stenosis or of the absence of a paralytic or dynamic ileus.

Saar,[10] who reports three interesting cases of successfully treated chronic constipation, suggests that the injection be made in the early morning hours; he further suggests the use of a lubricant, that is, of an ample dose of castor oil. He calls attention, however, to a case of an old, arteriosclerotic patient, with accumulations of feces in the sigmoid flexure, which could not be dislodged by the treatment with the peristaltic hormone. Though both intravenous and intramuscular

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8. Zuelzer, G.: Med. Klin., 1910, No. 11.

9. Henle: Zentralbl. f. Chir., 1910, No. 42.

10. Saar: Med. Klin., 1910, No. 2.

11. Unger: Berl. klin. Wchnschr., 1911, No. 11.

methods are followed by similar effects of a fairly painless character. Znelzer and Henle[12] prefer the intravenous to the intramuscular injection.

My observations in the Hasenheide Hospital in Berlin lead me to the belief that we have in the peristaltic hormone treatment of constipation a new and very promising method. To be sure, it is in this instance, as in all instances of medication, necessary to discriminate. The peristaltic hormone treatment must not be regarded as a cure-all and in the end, it must be left to the judgment of the practitioner whether or not he has a case at hand for its proper application.

32 West Adams Avenue.

FOCAL FATTY DEGENERATION OF THE MYOCARDIUM ASSOCIATED WITH LOCALIZED COLONIES OF SPIROCHÆTA PALLIDA *

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Focal fatty degeneration of the heart-muscle due to the presence of localized colonies of the *Spirochæta pallida* in the heart-wall has not previously been described. Nor has fatty change in the myocardium been regarded as due primarily to the syphilitic infection by any writer except Guggenheimer (1897), who reported a rare form of fatty degeneration of the heart in a syphilitic infant. He was, however, unable to prove any definite relationship between the syphilis and the cardiac lesion. In an article on "Congenital Syphilis of the Heart,"[1] I have described a characteristic form of focal or diffuse myocarditis due to the presence of the *Spirochæta pallida* in the stroma of the heart-wall. In the description of this form of cardiac lesion I called attention to the occurrence of fatty degeneration of the heart-muscle in and about the foci of myocarditis, and also to the presence of patches of markedly vacuolated fibers in the neighborhood of the larger blood-vessels, these patches being free of cellular infiltration and proliferation. In these areas of marked fatty degeneration around the larger blood-vessels fewer spirochetes were found than in the areas of interstitial change. It was, therefore, suggested that the fatty change was more likely the result of localized circulatory changes than of the presence of the spirochetes themselves.

Since the publication of that article I have been extending my observations on cardiac syphilis with a large number of new cases of congenital syphilis, and in every case have found fatty degeneration of the heart-muscle to be present, either as a diffuse fatty change or as a focal process. The diffuse fatty change is found in the more severe cases of diffuse interstitial change, and is associated with the cellular infiltration, fibroblastic proliferation and myxomatous stroma of this form of syphilitic myocarditis. In lesions of this type spirochetes are always found in great numbers. The focal fatty areas may occur independently of any infiltration or proliferation, or of any vascular obliteration. They often, however, represent definite colonies of spirochetes lying between the degenerated muscle-fibers. The space between the muscle-fibers is increased without any proliferation of the stroma, the intercellular substance appearing semifluid. Kresyl-echt-violett often gives a decided mucin reaction in these intercellular spaces. With hematoxylin and eosin preparations the appearances of these areas suggest simply an edema with fatty degeneration of the muscle-fibers. As a rule the number of spirochetes in these focal areas of fatty change is not so great as it is in the areas in which the stroma shows a more marked change. The relation of the colony of spirochetes to the fatty area is, however, very clear.

As every transition-stage may exist between the areas of fatty change without interstitial change to the more severe lesions characterized by both the pale and fatty degeneration of the muscle-fibers with marked changes in the interstitial tissues, I believe that the colonies of spirochetes associated with focal fatty change alone represent either a milder or a more acute infection. In very mild or latent infections I have found colonies of spirochetes in tissues showing no histologic changes at all.

Focal fatty degeneration of the myocardium, either alone, or associated with the picture of a myocarditis, occurs in other infections (diphtheria, typhoid fever, small-pox, scarlatina, streptococcus septicemia), and may also occur in fatty embolism, leukemia, chronic nephritis, chloroform poisoning and other conditions. It may be caused by a local tissue-asphyxia, or by the action of parasites or their toxic products. It is usually the *primary lesion* of a focal myocarditis, and may be the only change apparent in the muscles, although most frequently associated with the pale, hyaline muscle-degeneration or cloudy swelling. As far as the organism of syphilis is concerned it may cause a focal or a more diffuse degeneration of the myocardium before any interstitial changes occur; in other words, the *Spirochæta pallida* may cause a purely parenchymatous change in the heart-muscle. I also believe that this parenchymatous lesion may heal without an interstitial reaction. In a late stage of congenital syphilis I found calcification of some of these focal areas of fatty degeneration, while others were being replaced by hyaline connective tissue very poor in cells and without cellular infiltration. Focal fibroid areas as well as focal calcification of the degenerate muscle-fibers can, therefore, follow the primary lesion of the myocardium caused by the spirochete of syphilis.

E. R. Cullen[2] has collected reports of cases of spontaneous focal myocarditis with calcification of degenerated muscle-fibers, adding two cases of his own. In none of the reported cases is syphilis considered as a possible etiologic factor, nor does Cullen consider it as a possibility in his two cases. Nevertheless, his description of the myocarditis in his second case and his Figure 3 are so very much like the focal changes due to the presence of spirochetes that I am led to believe that his second case at least was syphilitic. In conclusion:

1. Focal or diffuse fatty degeneration of the myocardium may be associated with the presence of numerous spirochetes of syphilis, without reaction on the part of the interstitial tissues. Such changes probably represent a very acute or mild (latent) infection. It occurs very frequently in congenital syphilis.

2. Calcification or fibroid change may follow the parenchymatous change without a definite interstitial inflammatory reaction. In such areas the spirochetes are few in number or have entirely disappeared, according to the stage of the secondary process.

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[12] Znelzer and Henle: Zentralbl. f. Chir., 1910, No. 42.

* From the Pathological Laboratory of the University of Michigan.

[1] Warthin: Am. Jour. Med. Sc., 1911, cxli, 398.

[2] Cullen: Bull. Johns Hopkins Hosp., 1906, xvii, 267.

AN IMPROVISED NOISE-PRODUCER FOR DETERMINING UNILATERAL DEAFNESS

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It being manifestly impracticable for a surgeon to have always at hand one of the bulky and expensive noise-producers operated by the electric current or by compressed air, and cases often presenting which require immediate diagnosis as to the presence or absence of unilateral deafness, the improvisation of a noise-producer becomes necessary.

This may be very satisfactorily accomplished by using a piece of ordinary rubber tubing, or better an otologic auscultation tube, or a stethoscope, one ear-piece being stopped up, if it is a double instrument. One end of the device should be inserted into the patient's ear, using care to prevent any occlusion of the lumen of the tube or ear. The other end should be held a few inches below and in front of the operator's mouth, and a fine column of air blown through the lips into and across the extremity of the apparatus thus adjusted. If a stethoscope is used, blow into its bell. The blowing will produce a loud confused roaring sensation in the hearing ear, and will prevent this ear from detecting any other sounds. If, while this is operating, a third person talks or shouts into the ear under examination, the patient will hear the shouting only if the deaf ear possesses some power of sound perception. This simple device will cut off all perception of sound by air, or by bone conduction. This may be proved by using a double stethoscope in normal ears, and blowing into the bell.

If necessary the patient can do the blowing, but this is not, for obvious reasons, as satisfactory a method of procedure.

Vibrations from the lower tuning-forks will often be felt, and misinterpreted as sound sensation. Patients must be cautioned against this mistake.

616 Madison Avenue.

Therapeutics

PRESCRIPTION NONSENSE

EXPECTORANT MIXTURE FOR CHILDREN

The following prescription received large circulation by being copied by one of our best journals, from a recommendation by one Sheffield in *Merck's Archives*, of December, 1910. This mixture is supposed to be a treatment for bronchitis and bronchial pneumonia in children, and to produce "free expectoration":

"℞.

Ammonium carbonate	gr. xvi.	
Wine of ipecac	ʒss	
Compound syrup of squills	ʒi	
Fluidextract of squill	8.	c.c.
Fluidextract of senega	8.	c.c.
Antimony and potassium tartrate	.2	gm.
Purified talc	2.	gm.
Sugar	75.	gm.
Water, to make	100.	c.c.
Syrup of senega	ʒi	
Syrup of tolu	ʒiv	
Distilled water	q.s. ad.	℥ii

M. et Sig.: One teaspoonful every two hours for a child 2 years old."

CRITICISM

1. There are supposed to be sixteen doses in this prescription. Therefore each dose would represent 1 grain of ammonium carbonate. As a matter of fact, a teaspoonful represents more than one fluidram, and unless the dose is taken in a medicine glass, there will not be eight doses to each fluidounce. Therefore, the patient gets more than the physician intended.

2. While the dose of ammonium carbonate is small, there seems to be no good reason why the irritant ammonium carbonate should be preferred to the almost non-irritant ammonium chlorid. Ammonium chlorid seems to act as a stimulant to mucous membranes of the body, and especially of the respiratory tract. Ammonium carbonate seems to act as an ammonia, and therefore is more or less of a circulatory stimulant. As an expectorant only, ammonium chlorid is far better than ammonium carbonate, to say nothing of the difficulty, on account of the irritant effect on the throat and stomach, of administering the latter to a patient.

3. This child, 2 years of age, would receive at each dose about 2 minims of wine of ipecac, according to the prescription. As a matter of fact, the wine of ipecac is a 10 per cent. preparation from the fluidextract of ipecac. This fluidextract solution in alcohol and white wine is precipitated by the water into which it is put. Therefore, it is very doubtful if each individual dose would represent any regular quantity of ipecac. The wine of ipecac should be given in alcoholic solution, or else given alone; in the next place, the official wine of ipecac is not needed. A small dose of fluidextract, if that is what is desired, could be given, dropped into water or other menstruum at the time of administration. The value of the wine of ipecac in the above prescription is mythical. Ipecac is a valuable expectorant, promoting secretion, but if given in a mixture should generally be used as the syrup of ipecac.

4. This little patient receives at each dose about 4 minims of compound syrup of squills. The compound syrup of squills contains fluidextract of senega (why repeat the syrup of senega?) and tartar emetic. There is no question that compound syrup of squills, if given in sufficient dose, is depressant and promotes all secretions, and therefore that of the bronchial tubes and that of the skin. Incidentally, if not carefully watched, it produces nausea, vomiting and prostration, which are not desirable in a child two years old, suffering from bronchitis or bronchial pneumonia. This miserable and time-honored mixture added to the above prescription is inadvisable.

If it is desired to obtain the depressant effect of tartar emetic, which is probably rarely good judgment, it should be given in such a way that its effect could be carefully watched in order that it may be stopped as soon as disagreeable symptoms appear.

5. The child would also get about 4 minims of the irritant and disagreeable syrup of senega, in addition to that in the compound syrup of squills. The expectorant action of senega is practically *nil*. Like squills, it is irritant to the stomach, and it and syrup of squills should both be dropped from the Pharmacopeia as nauseating and useless expectorants, and it should be considered a cause of complaint to have them introduced into any trusting child's stomach.

6. The addition of about 15 minims of syrup of tolu to try to smooth the rest of the disagreeable mixture is laudable, but certainly of no advantage, and causes the taste that is disagreeable to remain a little longer on the child's tongue. Tolu has no expectorant action. It will be found generally more satisfactory, when a disagreeable drug must be given to a child, to give it either

in plain or aromatic water, and then let the mother fix the dose for administration in either sweetened water, or lemonade, or orangeade, as she and the child find best. Or, the taste from time to time can be varied. A bad taste perpetuated by a sweet soon palls, and the child, though at first taking the medicine readily, often soon objects to it.

Finally, there is no excuse for such a complex "shotgun" mixture.

It is not the object of these articles on prescription nonsense to condemn what an individual physician finds of value or prefers to use, but it is to deplore such advice being copied and spread broadcast as advice of value, or as representing what an editor thought was advice of sufficient value to be exploited.

SCARLET FEVER

The following recommendation was copied some months ago as good advice by one of the prominent medical journals. It was taken from an article by Dr. F. G. Crookshank, on "The Diagnosis and Home Treatment of Scarlet Fever," in the December, 1910, number of the *Practitioner*. The advice was to use salicylates and salol to prevent rheumatism from becoming a complication in scarlet fever.

Joint rheumatism is a rare complication of scarlet fever, while nephritis is a frequent one. Therefore, drugs that are used to prevent an improbability should not be so irritant as to aid in producing a frequent probability.

He advises the routine use of the following mixture in scarlet fever:

"℞.
Potassium salicylate ....gr. x
Tincture of nux vomica..............♏ iii
Tincture of capsicum..................♏iii
Syrup of orange peel................ʒss
Water ....ad ℥i
M.

"Such a draught may be given every four hours to a child 12 years of age. If the temperature rises, the dose of salicylate should be increased; as the temperature falls, it should be lessened, but not abolished until the fever is quite gone."

CRITICISM

1. There seems to be no excuse for using potassium salicylate in place of sodium salicylate. Potassium salicylate is likely to deteriorate, and must be kept in tightly stoppered bottles.

2. Ten grains of a salicylate given every four hours to a child 12 years of age is very large dosage. Salicylism must of necessity be caused. If the child has much fever, he advises that the dose be increased. Such treatment is absolutely unjustifiable. The cerebral excitement, and possibly delirium, to say nothing of the possible kidney irritation from such doses of salicylate in a child who is ill with scarlet fever, renders the use of such a prescription absolutely inexcusable.

3. Three minims of tincture of capsicum is of no therapeutic value and might be a stomachic detriment.

4. To give every four hours one ounce of the above sweet, bitter, hot, sour mixture would no doubt be strenuously objected to or refused by a child. It would also seem an unusually good stomach that would tolerate it, even if the child did.

The same article and the abstract referred to advises the use of "salol suspended in the liquid food in some instances." The statement is further made that "salol may be given freely, 5 grains every three or four hours for several days at a time, even to children, though a watch of course should be kept for saloluria. In septic cases it sometimes does great good: but it should be given until the patient reeks of it."

It should be remembered that salol (phenyl salicylas) is a compound of phenol and salicylic acid, into which component parts it breaks up in the intestine. Its disintegration and absorption is normally rapid, the reaction for salicylic acid appearing in the urine generally within from half an hour to an hour. While salicylic acid is more rapidly eliminated from the system, phenol is slowly eliminated, and the frequent administration of even small doses of salol (and 5 grains of salol every three or four hours for a child is a large dose) will cause phenol urine, i. e., a urine that turns dark or black when it has stood for a while exposed to the air, and is indicative of phenol poisoning. If the salol is not immediately stopped, all of the symptoms of phenol poisoning, including acute irritation of the kidneys, develop.

To administer salol at all, and certainly in any such dosage as above recommended, to a child with scarlet fever, who is likely to have nephritis as a sequence, is absolutely without justification.

The "septic cases" above referred to probably means septic joints occurring during the course of scarlet fever. This is a very rare complication, but offers no excuse for the administration of salol in scarlet fever.

New and Nonofficial Remedies

The following additional article has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Its acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

GYNOVAL.—Gynoval is isoborneol isovalerate $CH_3.CH(CH_3).CH_2.COO.C_{10}H_{17}$, the isovaleric acid ester of isoborneol.

Gynoval is said to be prepared by the esterification of isoborneol with isovaleric acid.

It is a colorless neutral fluid of a peculiar aromatic odor and mild oleaginous taste. It is difficultly soluble in water, but easily dissolves in alcohol, ether, acetone, chloroform, benzol and petroleum-benzin. It is stated to have a boiling point of 132° to 138° C., under 12 mm. pressure, and a specific gravity of 0.952-0.957 at 15° C.

Gynoval dissolves in concentrated sulphuric acid with formation of a red-brown color and liberation of an odor of sulphurous and valeric acids. On heating gynoval with an alcoholic solution of potassium hydroxide for several hours on a water bath it is completely split up into its components. On diluting this saponification liquid iso-borneol separates in solid form, while potassium valerate remains in solution.

Actions and Uses.—The action of gynoval is said to be that of a mild nervine and antispasmodic, resembling that of valerian, with the advantages of a much more agreeable odor and of being better tolerated, especially not giving rise to unpleasant eructations. It is said to have been given in single doses of 4.0 Gm. to dogs without any disturbances. Like other valerian preparations, it is said to be indicated in nervous headaches, nervous insomnia, nervous disorders of the climacteric, hysteria, cardiac and gastric neuroses and neurasthenia.

Dosage.—0.25 Gm. to 0.50 Gm. (4 to 8 grains) two to four times daily, best given after meals. These doses may be increased according to the indications.

Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany (Farbenfabriken of Elberfeld Co., New York). No U. S. patents. U. S. trademark No. 44,069.

Gynoval Pearls.—Each pearl contains gynoval 0.25 Gm. (4 grains).

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SATURDAY, FEBRUARY 10, 1912

A NEW THEORY OF THE COAGULATION OF THE BLOOD

The coagulation phenomena of the blood concern the internist and the surgeon in a variety of practical ways. The stoppage of hemorrhage, the production of intravascular clots leading to thrombosis, the non-coagulability of the blood in certain diseases, with its attendant consequences, are a few familiar instances of the problems which daily arise for consideration in this connection. Despite the enormous amount of attention which has been devoted to the theoretic aspects of the question, physiologists have been unable to agree on any approximately adequate solution. One by one the investigators have pointed out additional factors which have served only to increase the complexity of the situation. Any one who attempts to study the literature of the subject of the coagulation of the blood in an up-to-date text-book will soon find himself entangled in the meshes of apparently irreconcilable observations, antagonistic facts, conflicting views, and new nomenclatures serving to conceal the extreme obscurity of the processes.

It may be accepted as probable—to use a conservative expression—that the clotting of shed blood is due to a reaction between a protein, fibrinogen, and a substance, thrombin, whereby insoluble fibrin is formed. It is furthermore demonstrated that in the absence of calcium salts the blood will remain fluid indefinitely. Lastly, it has been noted that tissue extracts (and extracts of the blood-corpuscles as well) furnish something which greatly facilitates clotting. The secret of coagulation is concealed in the processes that lead to the production of thrombin, which is apparently present in the blood in some antecedent form, prothrombin.

One of the most reasonable of recent theories (proposed by Morawitz, and Fuld and Spiro) assumes that the tissues over which blood may pass or the disintegrating platelets in shed blood furnish an activator or kinase which, in the presence of calcium salts, converts prothrombin into thrombin, thus bringing about the coagulation. Recently a counter theory has been proposed by Professor Howell[1] of Johns Hopkins University, which offers an ingenious explanation of the familiar phenomena. Its fundamental feature is the assumed existence in normal blood of a substance antagonistic to coagulation. Clotting of blood can thus occur when the antagonist, antithrombin, is counteracted. The situation here presented can be comprehended readily:

"In the circulating blood we find as constant constituents, fibrinogen, prothrombin, calcium salts and antithrombin. The last-named substance holds the prothrombin in combination and thus prevents its conversion or activation to thrombin. When the blood is shed, the disintegration of the corpuscles (platelets) furnishes material (thromboplastin) which combines with the antithrombin and liberates the prothrombin; the latter is then activated by the calcium and acts on the fibrinogen. According to this view the actual process of coagulation involves only three factors, fibrinogen, prothrombin and calcium. These three factors exist normally in the circulating blood, but are prevented from reacting by the presence of antithrombin."

It will be noted, as Howell points out, that according to this hypothesis the circulating blood contains normally the necessary factors of coagulation and its fluidity is maintained by the presence of the antithrombin; and the blood is ready to clot as soon as the antithrombin is removed. Diminished coagulability is here attributable to excess of antithrombin. Davis[2] has shown that when an excess of thrombin is introduced into the circulation, there is an almost immediate output of antithrombin. May we not assume that a "part of this automatic regulation may be due to the fact that the prothrombin or thrombin itself constitutes a hormone which excites the secretion of antithrombin"? It appears as if we were here dealing with another of the remarkable chemical mechanisms by which physiologic equilibrium is ordinarily maintained.

OZONE MYTHS

Faith in the subtle and far-reaching effects and the health-giving virtues which have at one time or another been attributed to ozone has somehow been instilled into the popular mind. Seaside and mountain resorts alike have benefited by the reputation of "ozone in the air" in the neighborhoods involved. The excusable longing of an ever-ailing population for a stimulating atmosphere and for an ideal antiseptic has led many to look hopefully toward that substance which appears to represent the acme of the valuable properties of oxygen. The honest manufacturer and the medicine faker have both been alert to avail themselves of the opportunity for public service, so that "ozonizers" and "ozonized" products are displayed in abundance.

The ozone question presents its facts as well as its fiction. Ozone undoubtedly has antiseptic power; but for such effects a concentration of at least thirteen parts per million in the atmosphere appears to be necessary; and even here the action is not penetrating. Such quantities are by no means innocuous to man. It was at one time believed that the disappearance of epidemics in certain localities was associated with the germicidal ozone content of the atmosphere. This appears most unreasonable to-day, because of the extremely small quantities of ozone which are actually found in the air at any time.

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[1] Howell: The Rôle of Antithrombin and Thromboplastin in the Coagulation of Blood, Am. Jour. Physiol., 1911, xxix, 187.

[2] Davis: The Intravenous Injection of Thrombin, Am. Jour. Physiol., 1911, xxix, 160.

It had been hoped that inhalation of ozone-laden air might facilitate oxidation in the tissues, and especially advantageous results were looked for in such conditions as pulmonary tuberculosis. As a matter of fact, even small proportions of ozone were soon found to be irritant to the respiratory passages — an effect at once ascribed to contaminating oxids of nitrogen which have always offered an obstacle to the satisfactory study of the subject. Lately it has become possible to prepare undoubtedly pure ozone and thus the way has been opened to a renewed investigation of its physiologic properties by Prof. Leonard Hill and Dr. Martin Flack of London.[1] They have noted that "a concentration as little as one per million is irritating to the respiratory tract. Exposure for two hours to a concentration of fifteen to twenty per million is not without risk to life. The irritative effect and the discomfort produced thereby — cough, headache — give ample warning and there is no risk from inhaling ozone so long as an outlet for the instinctive escape from its influence is open."

The London investigators have pointed out that from a hygienic point of view ozone may be useful as a deodorizer. It does not destroy the odoriferous substance, such as the smell of tobacco, but masks it. To the nervous system, however, it makes little difference whether a bad odor is masked or destroyed, so long as its disagreeable quality is no longer recognized. In any event it is important that systems of ventilation to which ozone may be applied should be dealt with by those experienced so that harmful concentrations will not be supplied.

The concentration of ozone necessary to kill bacilli would also kill tissues in which they occur. Ozonized ointments have not been observed to exhibit any superior efficiency in cleaning up infected parts such as are found in superficial ulcers. To give the widely heralded ozone the advantage of the most favorable reports, we can at best merely conclude with Hill and Flack that "the beneficial effect of ozone obtained by the ozone ventilating systems is to be explained by its effect on the nervous system. There is no harm in breathing weak concentrations of ozone, such as can be scarcely perceived by the keen sense of smell. Ozone in somewhat higher concentrations (one per million) may have some value as a therapeutic agent if inhaled for brief periods; by irritating the respiratory tract it may act as a blister or fomentation and bring more blood and tissue lymph to the part. The blood and tissue lymph contain the immunizing and curative properties." But this is, after all, a rather far-fetched way of applying a "blister" to the respiratory tract. In respect to real therapeutic usefulness the burden of proof may well be shifted on the ozone, so long as there is no paucity of other curative agencies.

LEAD-POISONING AND ITS PATHOLOGY

We recently[1] gave a brief review with comments on a bulletin of the Department of Commerce and Labor on industrial lead-poisoning, which gave statistical information concerning this subject in the United States and Great Britain. In that report Oliver discusses the more recent researches on the entrance, absorption and elimination of the lead salts, on the pathology of lead paralysis and on diagnosis.

That a lead trade is dangerous in proportion to its dustiness has long been noted by sanitarians; and Oliver refers to the experiments of Goadby which tend to show not only that the inspired dust is swallowed and absorbed from the intestinal tract, but that there is also probably absorption from the bronchial mucosa and perhaps penetration into the blood-stream by way of the lung capillaries. Cats exposed to red and white lead dust developed acute poisoning even when prevented from licking their fur, and examination of the lungs showed deposits of lead along the capillaries. Oliver and Bedson report experiments to show that human saliva has a slight solvent action on lead carbonate and that the presence of albuminous food in the stomach inhibits to a decided extent the solvent action of the gastric juice.

The character of certain occupations has an influence on the type of lead-poisoning which develops. Thus Teleky finds that, while compositors in Vienna seldom suffer from colic or from the severer types of lead-poisoning, they are subject to an unusual extent to diseases of the lungs and kidneys. The relation between tuberculosis and chronic plumbism is shown in Hahn's diagrams based on the records of typographical trades in Vienna and Berlin, the curves of the two diseases showing a remarkable parallelism. Colic is said by Legge to be most frequent among workers in white lead, red lead, enameling, storage-batteries, coach-painting (which means sandpapering) while the severer form with paralysis is found in brass-workers, plumbers, printers, file-cutters and tinsmiths. The former are very dusty trades; poisoning occurs rapidly and encephalopathy is more frequent than paralysis.

Basophilic granulation of the red cells Oliver has "not found to be either so frequent or to be the early and important sign of plumbism which Grawitz and other writers have claimed for it." It occurs, but as he has found basophilia present in only a small percentage of cases, he does not attach the diagnostic value to it which many continental physicians do. In doubtful cases he advises examining the urine for lead, and he states that Bedson found traces of lead in the urine of all of twenty-three apparently healthy lead-workers. This condition Oliver calls latent plumbism.

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[1] Hill and Flack: The Physiologic Influence of Ozone, Proc. Roy. Soc. London (B), 1911, lxxxiv, 404.

[1] The Journal A. M. A., Jan. 27, 1912, p. 279.

In going over the histories of fatal plumbism in the report of Andrews, we find cerebral complications frequent. One instance each is noted of acute mania, hallucinations and convulsions, prolonged insomnia following somnolence, partial coma for four days, mental derangement, cerebral disturbance. Cerebral hemorrhage caused the death of four, uremic convulsions four. Death during an acute attack of colic is considered rather unusual, but it occurred in four of these cases.

THE EFFECT OF STRYCHNIN ON THE BLOOD-PRESSURE

Much confusion still exists in the medical profession, not only among the rank and file of practitioners, but also among those who speak as authorities, regarding the effect of strychnin on the blood-pressure. Opinion is divided on the question whether or not its administration is followed by a rise in the arterial pressure. Obviously this should not be a matter of opinion but of clinical demonstration.

The results of animal experiment have been somewhat contradictory. Toxic (convulsive) doses undoubtedly raise the blood-pressure enormously; but with smaller doses the effect is so small that it has often escaped observation. It is also conceivable — indeed probable — that the response would be modified by pathologic conditions. Evidently we are more concerned with the therapeutic than with the physiologic effects of the drug. Reports which show the effect of strychnin in clinical use have the most weight in shaping our judgment, and here unfortunately there is conflicting evidence.

R. C. Cabot[1] in a report of fifty cases, all febrile, gives absolutely negative results so far as a rise in blood-pressure is concerned. Pressure readings were taken for days and in some cases weeks preceding and following the administration of strychnin. A total daily amount of from 1/8 to 1/6 grain was given, in some cases by mouth, in others hypodermically. No charts showing existing pressure and intervals at which pressure was taken, are given in the communication.

On the other hand Cook and Briggs[2] in an article entitled "Clinical Observations on Blood-Pressure," give charts taken from extended and systematic series of blood-pressure observations, including a large number of conditions such as shock, child-birth, febrile conditions, surgical operations, etc., and show blood-pressure readings taken at intervals of five minutes during the observations preceding and following the administration of various drugs and other procedures. In the administration of strychnin the doses varied from 1/60 to 1/10 grain, and were given hypodermically.

Cook and Briggs conclude their observations on strychnin as follows: "Strychnin gives a rise in blood-pressure somewhat delayed in onset and lasting from one to four hours. Strychnin is a most satisfactory cardiovascular stimulant for long-continued routine administration, maintaining a satisfactory blood-pressure level free from intervals of depression." They noted that strychnin failed to raise the blood-pressure in the following: (1) moribund patients and hopeless cases; (2) normal persons with heart and circulation apparently in healthy tone; (3) cases in which the pressure is already maintained at a "stimulation level" by previous stimulations. The conflict between this and previous evidence might possibly be explained on the assumption that the observations with negative results were made on patients in one of the three conditions in which an increase of blood-pressure is not to be expected from strychnin.

It would not be safe, however, to accept this assumption without further proof; evidently, the clinical effects of strychnin are in need of further investigation. Exact clinical observations by accurate methods, under a variety of conditions, are needed. This will require the collaboration of a number of clinical workers. The Council on Pharmacy and Chemistry has a committee carrying on an investigation along this line, and the committee, we feel sure, would be glad to hear from any who are willing to participate in the work.

DEMONSTRATION OF THE IDENTITY OF SO-CALLED BRILL'S DISEASE WITH TYPHUS FEVER

In a recent editorial[1] reference was made to the symptom-complex described by Brill and regarded by him as an infectious disease of unknown origin. It was he who originally suggested the clinical resemblance, in many respects, between this disease and typhus fever; and Friedman,[2] on clinical grounds, recently expressed the opinion that the above-mentioned syndrome was identical with mild and moderately severe cases of typhus fever; but no experimental data were presented to demonstrate the identity of the two diseases.

Anderson and Goldberger[3] have now, however, presented the results of studies of this disease, in the Hygienic Laboratory and in Mexico City, from which they conclude that the disease described by Brill is identical with the typhus fever (tabardillo) of Mexico, and that the typhus fever of Europe and the tabardillo of Mexico are identical. These investigators, as a result of studies made in Mexico City in 1909 and 1910, report the successful experimental production of Mexican typhus fever in monkeys, and express the opinion that the disease is transmitted in nature by means of the body-louse. These investigations were interrupted by the dangerous illness of Goldberger from typhus fever; but Ricketts and Wilder, who were also engaged in similar investigations in Mexico City at the time, although the former contracted later a fatal form of the disease, were able, before Ricketts' death, to inoculate monkeys with typhus fever, and succeeded in transmitting the infection from one monkey to another by means of the body-louse.

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[1] Cabot, R. C.: Med. Communicat. Mass. Med. Soc., 1904, xix, 945.

[2] Cook and Briggs: Johns Hopkins Hospital Reports, xi, 512.

[1] The Journal A. M. A., Nov. 18, 1911, p. 1700.

[2] Arch. Int. Med., Oct. 15, 1911, p. 427.

[3] Public Health Rep., Feb. 2, 1912, p. 149.

Being struck by the close clinical resemblance between Mexican typhus fever and so-called Brill's disease, Anderson and Goldberger undertook investigations to determine, if possible, the relationship between the two diseases. The blood of three patients who were ill with Brill's disease in New York was obtained and inoculated into rhesus monkeys, which developed characteristic symptoms of infection, and this infection has been carried through eleven monkey generations by inoculations of blood.

It is reported that one attack of the infection has served, in every instance thus far tested, to confer immunity to infection by subsequent inoculation with virulent blood. Having established the susceptibility of rhesus monkeys to infection by the inoculation with blood from a patient suffering from Brill's disease, and the immunity conferred by an attack thus brought on, investigations were resumed in Mexico City to determine, by immunity and other experiments, the identity of Mexican typhus fever and Brill's disease. As a result of these experiments, it was shown that an attack of Brill's disease in the monkey confers an immunity to subsequent infection with Mexican typhus. The conclusion appears justified, therefore, that the two diseases are identical, and since the New York strain is held to be of European origin, it is also concluded that the typhus fever of Europe and the tabardillo of Mexico are identical.

These results have a direct bearing on the public health and are of far-reaching importance. Typhus fever has undoubtedly been present in certain districts of some of our large eastern cities for a number of years, and while the disease is of a very mild character, it is important that its manifestations should be recognized by physicians generally. By this means, and by further studies, will additional light be thrown on the methods of transmission and the measures necessary to its control.

Current Comment

TYPHOID FEVER AGAIN IN MILWAUKEE

On several previous occasions we have referred to the excessive amount of typhoid fever in Milwaukee, a condition plainly due to water pollution. It is much to be regretted that the health officials of that city have chosen to shut their eyes to the danger from this source. The day has gone by when "southern vegetables" or any other hypothetical vehicle of infection can reasonably be held responsible for such a condition as exists in Milwaukee. The recent action of the Milwaukee County Medical Society in issuing a warning to boil the water is highly commendable. It is indeed difficult for any one familiar with the situation to understand the position taken by the health officials. It is generally known (1) that a large volume of sewage enters Lake Michigan within a few miles of the water intake; (2) that bacterial examinations of the public water-supply have shown the presence of colon bacilli, and (3) that typhoid fever has during some years prevailed excessively in Milwaukee. In 1910 the city of Milwaukee had the highest typhoid fever rate (45.7) of any of seventeen large cities reported on by the United States Census Bureau. How can any intelligent person be ignorant of the conclusions to be drawn from such facts? The issue is too serious to be played with for political or other reasons. Why do the citizens of Milwaukee not insist on the use of hypochlorite?

WHEN THE HEN EMBALMS HER EGGS

Apropos of a recent discovery commented on in these columns,[1] to the effect that hexamethylenamin and some other antiseptics, given in the food of the hen, affect the egg, we wonder what Dr. Wiley will do with a hen that embalms her own eggs. By the aid of science, it seems, she can now do it, and, from what we know of this perverse fowl, we fear that she will do it. Such a discovery as this can scarcely elude the grasp of the astute poultry producers and egg embalmers. Will it be applied practically, and, if so, will its effects be pernicious or beneficent? Shall we be poisoned by both the ham and the eggs, or will it now become possible for every farmer to stock his own storage warehouse and hold down the winter prices on hen fruit?

HEALTH RESORTS AND INFECTION

Among the laity the idea is occasionally found current that cities or communities frequented by tuberculous persons present conditions favorable for the infection of the well. This assumption is mentioned in the report of the Committee on Laws and Methods of Control of Tuberculosis in a Health Resort State, in The Journal, December 9. While it was difficult to secure conclusive evidence to prove the error of the assumption referred to, yet a study of the question by the members of this committee—physicians from health-resort states—convinced them that casual contact and house infection were of relatively slight importance, and that if the presence of a large number of "open cases" were a factor of great importance in spreading tuberculosis, there should be some correlation between the death-rate of imported and acquired cases in the various communities. None of the states except Arizona classifies separately the deaths from imported cases and those from locally acquired tuberculosis, but it is found that in Arizona the coefficient of correlation amounts to less than 0.006. It is found that in Denver, which also makes this distinction in classifying these deaths, the death-rate from locally acquired tuberculosis, while it fluctuates somewhat, is low and is certainly not increasing. California also classifies these deaths according to length of residence and while the line cannot be distinctly drawn between imported and locally acquired cases, yet the conclusion is that the death-rate from tuberculosis is no higher in southern California, which receives most of the imported cases, than it is in the central and northern portions of the state. The abundance of sunshine, which quickly destroys the bacillus, and the possibility of outdoor life in most of these communities together with the supervision exercised by physicians over this class of patients and the instruction given them as to the spread of infection and adoption of correct hygienic measures, make these communities as safe for the general public as the communities less favored by climate. Since tuberculosis is notoriously a disease dependent on poverty, malnutrition, dust, bad air and bad housing, these conditions in the closely populated industrial centers with less supervision over the cases really afford much greater opportunity for the spread of this infection than the presence of many open, but supervised cases, as in the health resort communities.

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[1] Unique Food Preservation, The Journal A. M. A., Feb. 3, 1912, p. 347.

ANNUAL CONFERENCE ON MEDICAL EDUCATION AND PUBLIC HEALTH

The Eighth Annual Conference on Medical Education and on Legislation will be held at the Congress Hotel, Chicago, February 26 and 27. These annual conferences have come to be regarded as important features in the work of the Association. To the Conference on Medical Education come delegates from the state societies, representatives appointed by the governors of the states, members of faculties of medical schools, colleges and universities. The Conference on Medical Legislation is attended by the members of the National Legislative Council and members of state examining boards. The two conferences, which met separately at first, have for three years past met in joint session, to the distinct advantage of both. This year, for the first time, public health has been added to the topics to be discussed and a call has been issued for a meeting of representatives of state boards of health to consider the advisability of forming an advisory Council on Public Health, under the auspices of the Council on Health and Public Instruction. The conference will cover two days and will, it is hoped, be largely attended. An attractive program has been arranged. The Council on Medical Education invited Mr. Frederic G. Hallett, Secretary of the Conjoint Board of the Royal College of Physicians and Surgeons, of London, to attend this conference. He will be present and will explain the methods of conducting examinations in Great Britain, and other matters relating to the methods of licensing in that country. These conferences offer an excellent opportunity for a free exchange of opinions and a comparison of local and state problems. Only by the broadest discussion and the most careful deliberation can the difficult problems connected with medical education, legislation and public health be solved. A full attendance at, and a general participation in, these conferences will be of great value in harmonizing individual views and in making possible concerted and effective action.

AGGLUTINATION REACTION BEFORE AND AFTER ANTITYPHOID VACCINATION

In a recent experiment at the University of Kansas, the agglutinative power of the serum was tested before and after the antityphoid vaccine treatment.[1] The serums of about twenty-five students were tested (1) before taking the treatment, (2) a few weeks after treatment, and (3) after a period of a year had elapsed. In the first tests, the normal serums caused agglutination of typhoid bacilli at dilutions ranging from 4 to 16, examined microscopically. Serums from the same individuals a few weeks after treatment caused positive agglutination at dilutions ranging from 64 to 192. After more than a year's time the agglutinative power had decreased somewhat but was still very considerable, the dilutions at which agglutination occurred ranging from 32 to 128. The experiment is of interest as indicating relatively the persistence of the results of antityphoid vaccination. While it is known that the increased resistance and the agglutinative power of the serum do not run parallel, it is also known that patients who have had typhoid fever retain their resistance to the disease longer than their serums retain their agglutinative power. This fact gives basis for the assumption that considerable resistance to the disease is retained after a longer period than one year following the vaccine treatment. Another point is suggested by the experiment, namely, that physicians in using the agglutination test for diagnostic purposes should not fail to assure themselves that the patient has not received antityphoid vaccine treatment within two or three years previously. Otherwise an error in diagnosis might result, as these patients' serums have increased agglutinative properties for a considerable time following the inoculations with typhoid bacilli.

SACCHARIN AGAIN

Time and again we have called attention to the fact that the attitude of the Department of Agriculture on any subject connected with public health is: When in doubt, let the public take the risk. For years those who are competent to speak on the subject have declared that the use of saccharin in foodstuffs is deleterious to health, but the Department of Agriculture permitted its use in unlimited quantities with the understanding that the referee board was to investigate the question and report on it. In the course of time the report was sent in—and it was adverse to the use of saccharin! On the strength of the board's findings, the department declared that after July 1, 1911, foods containing saccharin would be regarded as adulterated within the meaning of the Food and Drugs Act. Naturally enough, those manufacturers that have grown rich in substituting a cheap drug—saccharin—for an expensive but wholesome foodstuff—sugar—at once brought all the pressure possible to bear, to have the decision of the department either rescinded or modified. As is usually the case, when the interests of the manufacturers clash with the interests of the public health, public health got the worst of it and the users of saccharin were given an additional six months during which it would still be legal to add this chemical to foodstuffs. As January 1, 1912, the end of the period of probation, drew near, a little more pressure was applied to those officials who are supposed to stand between the public and the food sophisticators. Again the officials yielded and another extension of time was given to February 1, 1912. The newspapers for January 30, 1912, contain the statement that still another extension has been given, to March 1, 1912. How much longer this will go on can be best judged by those who are familiar with the methods of official Washington. The spectacle is not a pretty one and does not tend to increase public confidence in the Department of Agriculture.

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[1] Moon, Virgil H.: Tr. Chicago Path. Soc., Feb. 1, 1912, viii, No. 7.

Medical News

CONNECTICUT

Gift to Medical School.—Yale Medical School has received $15.000 from an anonymous donor, to be added to the fund for the support of the university clinic.

Personal.—Dr David M. Trecartin has been elected president of the board of health of Bridgeport.——Dr. Oliver T. Osborne, New Haven, has announced that he now restricts his professional work to consultations, office and hospital practice.——Dr. Caroline R. Conkey has been appointed assistant resident consulting physician and surgeon to the Waterbury Hospital.

New Officers.—New Haven Medical Society: president, Dr. Norton R. Hotchkiss, secretary, Dr. Robert G. Tracy.——Torrington Medical Society: president, Dr. Thomas L. Thompson (reelected), secretary, Dr. Daniel P. Platt (reelected).——Bristol Medical Association: president, Dr. Charles R. Upson, secretary-treasurer, Dr. Benedict M. Whipple.——Greenwich Medical Society; president, Dr. Virgil C. Piatti, secretary, Dr. Stacey W. Boyle.——Hartford Medical Society: president, Dr. Oliver C. Smith, secretary, Dr. John Carter Rowley.——Bridgeport Medical Society: president, Dr. Daniel C. DeWolfe, secretary, Dr. George H. Warner.

GEORGIA

College Merger.—Word has been received from Atlanta that the Hospital Medical College has been merged with the Georgia College of Eclectic Medicine and Surgery.

State Board Upholds Secretary.—At a meeting of the State Board of Health, Atlanta, on January 6, the letter sent by Dr. Willis F. Westmoreland to the governor denouncing Dr. Henry F. Harris, secretary of the board, was considered, and the board decided unanimously that the charges made were groundless, and exonerated Dr. Harris.

New Officers.—Colquitt County Medical Association: president, Dr. J. H. Green, Hartsfield, secretary-treasurer, Dr. John E. Lanier, Moultrie.——Georgia Medical Society: president, Dr. Victor H. Bassett, secretary-treasurer, Dr. A. J. Waring, both of Savannah.——Ware County Medical Society: president, Dr. James C. Rippard, secretary-treasurer, Dr. Thomas J. Carswell, both of Waycross.——Clarke County Medical Society: president, Dr. Allen C. Holliday, Athens.——Fulton County Medical Society: president, Dr. L. Benjamin Clarke, and secretary, Dr. Richard R. Daly, both of Atlanta.——Bibb County Medical Society: president, Dr. Frank M. Cunningham, secretary-treasurer, Dr. Will D. Hereford, both of Macon.

ILLINOIS

New Officers.—Effingham County Medical Society: president, Dr. Emery W. Brooks, Beecher City, and secretary, Dr. Clarence C. Holman, Effingham.

County Society Bulletin.—On the first of January, the *Bulletin of the Champaign Medical Society*, a four-page monthly, made its appearance. The *Bulletin* contains the list of officers, portrait of a member, report of the previous meeting, the program of the coming meeting, and news items, and is a creditable production.

Personal.—Dr. Ralph P. Grimm, Glasford, who has been ill at the home of his father at Canton, is reported to be convalescent.——Dr. John A. Hoffman, Pesotum, is reported to be seriously ill.——Dr. William O'R. Bradley, Galesburg, suffered amputation of the thumb, January 24, in a Chicago hospital.——Dr. Chauncey Sherrick, Monmouth, who was operated on for the removal of gall-stones at Monmouth Hospital, January 14, is convalescent.

Recent Deaths of Scientists.—Rev. Frederick Howard Wines, D.D., first secretary of the board of commissioners of Public Charities of Illinois, and for thirty-five years in that position, sometime president and secretary of the National Prison Association and president of the National Conference of Charities and Correction; an expert on the collection and tabulation of statistics relative to the defective, dependent and delinquent classes, crime, pauperism and benevolence, the founder of the Kankakee State Hospital, the first institution to be organized in the United States on the cottage or village system; died at his home in Springfield, January 31, aged 73.——Waldemar Koch, associate professor of pharmacology in the University of Chicago, formerly assistant professor in the Harvard Medical School, one of the leading physiologic chemists of the United States and an authority on chemistry of the brain, a nephew of Dr. Robert Koch, died in Wesley Hospital, February 1, from pneumonia, aged 36.——Charles Gilbert Wheeler, for twenty-one years professor of chemistry in the University of Chicago, a geologist, mineralogist and chemist of note, consul to Nuremberg, Germany, under President Lincoln, died at his brother's home in Chicago, January 30.

Chicago

The Owens Semi-Centenary.—The trustees and medical board of St. Luke's Hospital give a dinner February 10 at the Chicago Club, in honor of Dr. John E. Owens, who on that day completes his fiftieth year in the practice of medicine.

Tuberculosis Institute Meeting.—At the annual meeting of the Chicago Tuberculosis Institute, January 29, directors were elected, including Drs. Robert H. Babcock and Frank S. Johnson, and the plans of the institution for the year were announced, namely, to gain the cooperation of employers of labor, so that employees of all kinds can be examined for tuberculosis and to have a traveling exhibit bearing on the nature, prevention and cure of tuberculosis, shown in the central locations of the city.

To Improve the Conditions of Child Life.—Open house was held by the Elizabeth McCormick Memorial Fund, January 29, in its new quarters on Plymouth Court. The foundation was established May 20, 1908, and aims to promote the cooperation of agencies dealing with the welfare of children. It has already established the Elizabeth McCormick Open-Air School, and ten stations are to be established for sick babies, educational work is to be done among mothers and information regarding child welfare is to be disseminated.——The Infant Welfare Society of Chicago, at its annual meeting January 25, reported that during 1911, 2,129 babies were cared for and that the nurses in its employ have made 16,706 calls at homes to assist mothers in caring for their babies. Among the officers for 1912 are Drs. Frank S. Churchill, secretary, Dr. Isaac A. Abt, William A. Evans, Caroline Hedger and George B. Young, directors, and Dr. Henry F. Helmholz, medical director.

INDIANA

Office Moving Day.—New Year's Day was a notable moving day for physicians of Indianapolis; thirty-nine practitioners moved to the new Hume-Mansur Building, designed for the special use of professional men.

University Takes Charge of Dispensary.—The Indianapolis Board of Health has entered into a contract with the University School of Medicine to pay the University $12,000 a year, the university agreeing to furnish and superintend the City Dispensary for that period.

Building for Physicians.—In the eight-story building to be erected by the Indiana National Life Insurance Company in Indianapolis, accommodations will be furnished sufficient for one-fifth of the medical practitioners of the city. Six of the eight floors of the building will be devoted to offices for physicians.

State Fund for Hydrophobia.—The State Board of Health has issued a certificate blank, which, when properly filled out by the county health officer and the township trustee, will admit a needy person who has been bitten by a mad dog, or a dog supposed to be mad, to free Pasteur treatment for hydrophobia.

State Board Elections.—At the annual meeting of the State Board of Medical Registration and Examination held in Indianapolis, Dr. James M. Dinnen, Fort Wayne, was elected president; Dr. William A. Spurgeon, Muncie, vice-president; Dr. William T. Gott, Crawfordsville, secretary, and Dr. Moses S. Canfield, Frankfort, treasurer.

State Water Supply.—The Indiana Sanitary and Water-Supply Association will hold its annual meeting in Indianapolis, February 15 and 16. The principal addresses will be delivered by F. H. Newell, chief of the Reclamation Service of the Department of the Interior, and Dr. Milton J. Rosenau of the Department of Hygiene of Harvard University.

Long Will Build State Hospital and Dispensary.—The trustees of the Indiana University have agreed to the proposal that a tract of land on West Michigan Street be offered the city as a location for the State Hospital, to be erected by Dr. Robert W. Long, Indianapolis. This will obviate the necessity of using Military Park for this purpose. On this tract of land the Indiana University School of Medicine expects to erect its own buildings. Dr. Long has also stated that he will build and equip a dispensary for the city.

Old Practitioners.—Dr. William H. Wishard, Indianapolis, celebrated his ninety-sixth birthday anniversary, January 18, and during the day he was visited at his home by a committee of the Indianapolis Medical Society, who extended the best wishes of the society to the venerable and honored practitioner.——Dr. John Ott, Indianapolis, celebrated his eighty-seventh birthday anniversary, January 14.——Dr. Abner H. Shaffer, Huntington, on the celebration of his eighty-third birthday anniversary, January 15, was called on and congratulated by a number of members of the local profession.

Personal.—Dr. Charles R. Sowder, Indianapolis, fractured his arm while cranking his automobile.——Dr. William A. Shobe, Ligonier, was operated on in a hospital in Fort Wayne, January 24, for appendicitis and is reported to be doing well.——Dr. Eli L. Schlotterback, Ligonier, is ill with pneumonia at the home of his daughter, near that place.——Dr. Theodore B. Templin, Gary, is said to have given up more than a quart of blood by transfusion in an unsuccessful endeavor to save the life of his wife.——Dr. John W. Crismond, Anderson, is ill with influenza at St. John's Hospital.——Dr. Edward E. Wagner, Fort Wayne, who was operated on recently at St. Mary's Hospital, Rochester, Minn., has returned home convalescent.——Dr. James A. Rawley, Brazil, had a narrow escape from drowning, January 18.——Dr. Thomas M. Staley, Bicknell, has resigned from the board of trustees of the Good Samaritan Hospital, Vincennes.——The home of Dr. Columbus L. Myers, Covington, was destroyed by fire, January 6.——Dr. Jesse F. Davidson, Crawfordsville, sustained severe burns about the face in an explosion of gas from the furnace of his residence, January 9.

New Officers.—Johnson County Medical Society, at Whiteland: president, Dr. Daniel W. Sheek, Greenwood, and secretary-treasurer, Dr. Rufus W. Terhune, Whiteland.——Tenth District Medical Association, at Gary, January 11: president, Dr. Simon J. Young, Valparaiso, and secretary-treasurer, Dr. Otis B. Nesbit, Valparaiso.——Physicians' Club of Mishawaka, January 8: president, Dr. Chris A. Dresch, and secretary-treasurer, Dr. James G. Bostwick, both of Mishawaka.——Elkhart County Medical Society, at Elkhart, January 8: president, Dr. Martin K. Kreider, Goshen, and secretary, Dr. Enos M. Hoover, Elkhart.——Indianapolis Medical Society, at Indianapolis, January 2: president, Dr. Harry E. Gabe, and secretary-treasurer, Dr. Homer R. McKinstray (reelected), both of Indianapolis.——Owensville Medical Society: president, Dr. George B. Beresford, and secretary-treasurer, Dr. Karl S. Strickland.——Blackford County Medical Society, at Hartford City: president, Dr. James A. Taylor, Montpelier, and secretary, Dr. Manford M. Clapper, Hartford City.——Kosciusko County Medical Society, at Warsaw: president, Dr. Angus C. McDonald, Warsaw, and secretary-treasurer, Dr. C. Norman Howard, Warsaw.——Vanderburg County Medical Society, at Evansville: president, Dr. Porter H. Linthicum, Evansville, and secretary-treasurer, Dr. William S. Ehrich, Evansville.——Wabash County Medical Association, at Wabash: president, Dr. Walter A. Domer, and secretary, Dr. Lawrence E. Jewett, both of Wabash.——Jackson County Medical Society, at Seymour: president, Dr. James H. Carter, and secretary-treasurer, Dr. L. Butler Hill, both of Seymour.——Montgomery County Medical Society, at Crawfordsville: president, Dr. Paul J. Barcus, Crawfordsville, and secretary-treasurer, Dr. James L. Beatty, Crawfordsville.

MARYLAND

New Officers.—Talbot County Medical Society, at Easton, January 17: president, Dr. Philip L. Travers, Easton, and secretary-treasurer, Dr. William N. Palmer, Easton.——Baltimore County Medical Society, at Towson, January 17: president, Dr. William L. Smith, Sherwood, and secretary, Dr. G. Carville McCormick, Sparrows Point.

Baltimore

German Physician in Baltimore.—Dr. Edwin Lick, Dantzig, who is making a tour of the United States, recently spent a few days in Baltimore.

Personal.—Dr. Patrick F. Martin, coroner of Baltimore County, is convalescent after an attack of influenza.——Dr. Louis McLane Tiffany has gone to Florida for a month.——Dr. Marcus L. Dillon, superintendent of the Franklin Square Hospital, is said to be critically ill in that institution from septicemia, following an operation wound.

Elections.—At the annual meeting of the Adjunct Medical Faculty of the University of Maryland, Dr. William Tarun was elected president; Dr. Erasmus H. Kloman, vice-president, and Dr. Harry D. McCarty, secretary-treasurer.——The medical staff of St. Luke's Hospital, at its meeting January 22, elected Dr. Ira L. Fetterhoff, president; Dr. M. Bowman Hood, vice-president; Dr. Barrett C. Catlin, secretary, and Dr. John A. Evans, treasurer. Dr. Austin E. Robinson was added to the staff and placed in charge of the children's department.

The Holman Association.—The first report of the Holman Association, whose aim is to teach the people in the country the value of hygiene and good living and to promote rural nursing, hygiene and social service, gives a concise history of the needs, which when brought before the citizens of Baltimore, crystallized in the formation of the association, a little over a year ago. Dr. William H. Welch is president of the association; Dr. George T. Tyler, physician, and Drs. DeWitt B. Casler, William H. Welch and William W. Russell are members of the board of directors.

MASSACHUSETTS

Library Bequeathed to College.—By the will of the late Dr. Albion S. Whitmore, Boston, his medical library is bequeathed to Bowdoin College.

Fire Destroys Hospital.—The main building of the Maternity Hospital of the New England Reform Society, Jamaica Plain, Boston, was destroyed by fire, January 17, with a loss of $25,000.

Fire in Leper Colony.—The administration building of the Massachusetts Leper Colony on Penikese Island at the entrance of Buzzard's Bay, was destroyed by fire January 13, with a loss of $10,000.

New Hospital for Melrose.—Plans for the new hospital at Melrose have been prepared. At present $55,000 has been bequeathed or subscribed to the hospital, which is to cost altogether about $110,000. The semi-pavilion type of hospital has been adopted by the trustees.

New Officers.—Fall River Medical Society, at Fall River: president, Dr. John F. Lowney, and secretary, Dr. George Blood.——Massachusetts Surgical and Gynecological Society, at Boston: president, Dr. Arthur H. Ring, Arlington, and secretary, Dr. Harry J. Lee, Boston.

Must Establish Hospitals.—The State Board of Health has sent notices to those municipalities which have not yet complied with the law relative to the maintenance of isolation hospitals, including tuberculosis hospitals or wards, calling their attention to the law and insisting on its observance.

Personal.—Dr. William D. Swan, Cambridge, has been appointed medical examiner for Middlesex.——Dr. John W. Coughlin, Fall River, has been appointed a trustee of the state farm.——Dr. Edgar A. Fisher has succeeded Dr. Charles L. Nichols as treasurer of the Worcester Milk Commission.——Dr. Alexander A. McDonald, Dorchester, Boston, was struck by an automobile and sustained a fracture of the left elbow and scalp wounds.——Dr. Edward T. Manix, city physician for the Western district of Lynn, has resigned.——Dr. Edward M. Looney has been appointed assistant to the port physician of Boston.——Dr. George L. Farrell has been elected mayor of Malden, and Dr. Jeremiah J. Corbett, school director.——Dr. Milo A. Jewett, Boston, has been nominated as consul at Kiehl, Germany.

Boards of Health Meet.—At the annual meeting of the Massachusetts Association of Boards of Health held in Boston, January 25, Dr. Henry P. Walcott was reelected president; Drs. Samuel H. Durgin and Charles V. Chapin were elected vice-presidents, and Dr. Francis G. Curtis, Chestnut Hill, was elected treasurer. Resolutions were passed in opposition to two house bills, which proposed a reorganization of the State Board of Health and which gave the state board authority to regulate local boards of health. Papers were read by Prof. T. P. Corham of Brown University, Providence, R. I., on "The Sanitary Regulation of the Oyster Industry"; by Prof. Earl B. Phelps on "The Chemical Disinfection of Sewage," and by Dr. William H. Davis of the Boston Board of Health on "The Breast-Feeding of Infants."

MICHIGAN

New County Medical Society Organ.—The Alpena County Medical Society has established an official organ known as the *Alpena Medical News*, which is to be published in the interests of the professional men of the county, and contains the program, the medical society notes, minutes of the meeting and news items.

School for Tuberculous Children Opens.—As the result of the efforts of the Detroit Society for the Study and Prevention of Tuberculosis, the Detroit Hospital School for Tuberculous Children has been opened in direct connection with the Detroit Hospital, so that children can be treated and taught at the same time.

State Laboratory Requested to Make Wassermann Tests.—At the December meeting of the Muskegon-Oceana County Medical Society, a resolution was adopted that the secretary be instructed to write to the State Board of Health, requesting that it make arrangements to enable physicians of the state to have the Wassermann tests for syphilis made at the state laboratory without charge, in the same manner as is now arranged for sputum examination in cases of suspected tuberculosis.

New Officers.—Detroit Oto-Laryngological Society, January 12: Dr. Eugene Smith, president, and Dr. Emil Amberg, secretary-treasurer.——Adrian Medical Society, January 19: president, Dr. Frank Andrews, and secretary, Dr. Willie S. McKenzie.——Houghton County Medical Society, at Houghton: president, Dr. Will H. Dodge, Hancock, and secretary-treasurer, Dr. Robert B. Harkness, Houghton.——Michigan State Medical Association, at Battle Creek, January 11: secretary and editor, Dr. Wilfred Haughey, Battle Creek (reelected).——Marquette-Alger County Medical Society, at Negaunee: president, Dr. William B. Lunn, and secretary-treasurer, Dr. Harry J. Hornbogen, both of Marquette.——Charlotte Medical Club, at Lansing: president, Dr. Warren H. Rund, and secretary, Dr. Allison R. Stealey.——Berrien County Medical Association, at St. Joseph, January 18: president, Dr. Louis A. King, Baroda, and secretary, Dr. Henry G. Bartlett, St. Joseph.

The Fight Against Tuberculosis.—At a joint meeting of the Detroit Tuberculosis Sanatorium and the Detroit Society for the Study and Prevention of Tuberculosis, January 16, it was decided June 11 should be Tuberculosis Blue-Star Tag Day. The sanatorium reported that during the last two years it had built and equipped a sanatorium, with accommodations for fifty patients and maintained it for a year with a total of 148 patients. The sanatorium at present represents an equipment of $89.000, on which there is some indebtedness.——At the annual meeting of the Grand Rapids Antituberculosis Society, January 3, Drs. Collins H. Johnston and Thomas M. Koon were elected members of the executive board, and these, together with Drs. Horace J. Beel, Ralph H. Spencer, Ralph C. Apted and Roy T. Urquhart were elected members of the medical staff. It was announced that $1.506 had been netted from the sale of Christmas seals. During the year 342 patients received treatment; 2,125 home calls were made and 483 calls at the free clinic.

Personal.—Dr. James Orton Edie, Grand Rapids, was struck by a street car January 25, and painfully injured.——Dr. William Hughes, Nunica, is reported to be critically ill.——Dr. Charles B. De Nancrede, Ann Arbor, is seriously ill and has gone to Johns Hopkins Hospital, Baltimore, for treatment.——Dr. Johnson B. Kennedy has been elected vice-president of the Detroit Board of Health.——Dr. Karl V. Arminen has resigned as health officer of Hancock.——Dr. John H. Kellogg, Battle Creek, has returned from Europe.——Dr. Benjamin P. Brodie, Detroit, is reported to be seriously ill with pneumonia.——Drs. George L. Koessler and James B. Hodge have been appointed assistant obstetricians on the staff of Grace Hospital, and Dr. Neil I. Bentley, assistant obstetrician and oto-laryngologist. A department of special therapy and research has been established at Grace Hospital, with Dr. Rollin H. Stevens as *x*-ray specialist and Dr. George P. Myers as pathologist. The hospital has also established a department of orthopedic surgery, under the charge of Dr. F. C. Kidner.

MISSOURI

Meningitis in Kansas City.—Between January 1 and 24, eight cases of spinal meningitis were treated at the Kansas City General Hospital and five patients are still under treatment in the institution.

Personal.—Dr. Carl C. Leeper, Excelsior Springs, is a patient in the South Side Hospital, Kansas City, ill with septicemia affecting the right foot.——Dr. William C. O'Neal, La Grange, while making a professional call in the country, fell from his buggy and a wheel passed over his ankle, causing a severe sprain.

State Board Elected.—At the annual meeting of the Missouri State Board of Health in Jefferson City, January 16, Dr. Frank B. Fuson, Springfield, was elected president, and Dr. Milton P. Overholser, Nevada, vice-president. The secretary, Dr. Frank B, Hiller, and state bacteriologist, Dr. Murray C. Stone, both of Jefferson City, were reelected.

Hospital News.—A bill is to be introduced in the state legislature having for its object the changing of the state laws so that the health departments of St. Joseph and Buchanan County may be consolidated and merged into one.——The Kansas City General Hospital, in use only three years, with accommodations for 230 patients, is overcrowded and an extension is necessary. There is still a provision in the original plans of the hospital for a second wing, which would provide accommodations for 150 additional patients.

New Officers.—Macon County Medical and Surgical Society, at Macon: president, Dr. George F. Brewington, Bevier, and secretary-treasurer, Dr. Alfred B. Miller, Macon.——Jackson County Medical Society, at Kansas City, January 2: president, Dr. James Q. Chambers, and secretary, Dr. Rush E. Castelow, both of Kansas City.——Clinton County Medical Association, at Plattsburg: president, Dr. Chester H. Risley, Cameron, and secretary-treasurer, Dr. Frank H. Fulton, Plattsburg.——Pike County Medical Society, at Louisiana, January 1: president, Dr. Donnell M. Pearson, and secretary, Dr. John W. Turner, Louisiana.——Holt County Medical Society, at Mound City, January 4: president, Dr. Willard C. Proud, and secretary, Dr. Walter S. Wood, Oregon.——Grundy County Medical Society, at Trenton: president, Dr. Edgar A. Duffy, Trenton, and secretary, Dr. George W. Belshe, Brimson.

St. Louis

Library to Medical Society.—By the will of the late Dr. Edward Borck, his pictures and library, after the death of his widow, are bequeathed to the St. Louis Medical Society.

The City Hospital Alumni Banquet.—At the thirteenth annual meeting and banquet of the Medical Society of City Hospital Alumni, held January 4, Dr. John C. Falk was elected president; Dr. Charles W. Thierry, vice-president; Dr. Frederick C. Simon, secretary, and Dr. Percy H. Swahlen, treasurer.

Police Surgeons Named.—Drs. Charles W. Bassett, George W. Becker, Lancaster G. Washington and Paul Vinyard have been named as assistant surgeons to the police department. Dr. Bassett is to have charge of the physical training of the police department and the three others are to have charge of the southern, northern and western districts of the city, respectively.

Hospital Contract Awarded.—The building contract for the Barnes Hospital, to be erected on King's Highway, has been awarded for $808.000. The building is to be completed, ready for equipment, inside of eighteen months. The present plans provide for the erection of six buildings, namely: a private patients' ward building, surgical ward, administration building and medical ward, service building and laundry. All of these buildings are to be connected by corridors.

The Defective Child.—The program committee of the St. Louis Medical Society announces that it has arranged for a series of symposiums devoted to the defective child and its problems. On January 20 the oto-laryngologic aspect of the question was considered under the auspices of that Section. On February 10 the symposium subject is "The Physically Defective and Crippled Child" and on March 2 the Ophthalmic Section discusses "The Eye Conditions in the Defective Child."

NEW JERSEY

Money to Aid Consumptive Children.—Andrew Carnegie and John D. Rockefeller are reported to have subscribed $10,000 each to the $150,000 fund being raised for new buildings for the Tuberculosis Preventorium for Children, Farmingdale, N. J. Only $15,000 now remains to be subscribed.

State Health Officers Elected.—At the annual business meeting of the Health Officers' Association of New Jersey, held in Trenton, January 17-18, Dr. Edward Guion, Atlantic City, was elected president; B. H. Obert, Asbury Park, vice-president, and J. Scott McNutt, Orange, secretary and treasurer.

New Officers.—Burlington County Medical Society, at Mount Holly, January 10: president, Dr. William P. Melcher, Mount Holly, and secretary-treasurer, Dr. George T. Tracy, Beverly.——Atlantic County Medical Society, at Atlantic City, January 12: president, Dr. David A. Berner, and secretary-treasurer, Dr. Edward Guion (reelected).

Marvel Wins Suit.—In the suit brought against Dr. Emery Marvel, Atlantic City, by Mrs. Eva A. Folsom, in which it was alleged that Dr. Marvel or some assistant, following an operation for appendicitis on the plaintiff, had accidentally left a forceps sewed into the wound, and that in consequence the plaintiff has suffered to the extent of $20,000, the jury returned a verdict in favor of Dr. Marvel.

NEW YORK

Recommends Improvement at Quarantine.—In his annual report to the legislature, Dr. Alvah H. Doty, health officer of the port of New York, recommends that a legislative committee be appointed to inspect the quarantine establishment, especially Hoffman and Swinburne Islands, with a view to securing an appropriation for construction, reconstruction and equipment.

Personal.—Dr. George S. Allen has been appointed postmaster of Clyde.——Dr. Charles W. Clendenan, North Tonawanda, while attempting to crank his automobile, January 28, fractured his right arm at the wrist.——Dr. George H. Minard has been appointed health commissioner at Lockport.——Dr. C. H. Benson has been elected secretary and registrar of the Sycamore Free Dispensary.

State Society Meetings.—The annual meeting of the Medical Society of the State of New York will be held in Albany, April 16-18. Drs. Harvey W. Wiley, Washington, D. C., and Abraham Jacobi, New York City, will be the principal speakers on the opening day.——The annual meeting of the Woman's Medical Society of New York State will be held May 10 in Buffalo, under the presidency of Dr. Grace Peckham Murray, New York City.

New Officers.—The Associated Physicians of Long Island, at Brooklyn, January 27: President, Dr. William B. Brinsmade, and secretary, Dr. James Cole Hancock, both of Brooklyn.——Westchester County Medical Society, at White Plains, January 15: President, Dr. Frank E. Russell, Tarrytown, and secretary, Dr. Edward W. Weber, White Plains.——Schenectady County Medical Society, at Schenectady: President, Dr. Albert S. Fay, Schenectady.——Amsterdam City Medical Association, January 11: president, Dr. Julius Schiller, and secretary-treasurer, Dr. David Wilson, both of Amsterdam.——Canandaigua Society of Physicians and Surgeons, January 13: President, Dr. Orlando J. Hallenbeck, and secretary-treasurer, Dr. Henry C. Burgess.——Oneida County Medical Society, at Utica, January 8: President, Dr. Thomas H. Farrell, and secretary, Dr. William B. Roemer.

New York City

Mott House Sold.—The old Mott Memorial and Surgical Library Building, 64 Madison Avenue, the history of which was referred to in The Journal of last week, has been sold by auction, for $70,000.

Refused Vaccine Appropriation.—The request of Commissioner of Health Lederle for a special appropriation of $10,000, with which to employ a staff of thirty or forty physicians, for vaccination, was refused by the Board of Aldermen, January 30.

Personal.—Dr. James J. Walsh, dean of Fordham College, has been appointed a member of the consulting editorial staff of the New York *Herald*.——Drs. George S. King and Frank M. Gardiner, Bay Shore, have resigned from the staff of the Babylon Hospital.

New Officers.—The Northern Medical Society of the City of New York was recently organized by physicians of Upper Manhattan and the Bronx. Dr. William J. Robinson was elected president and De Witt Steddan, corresponding secretary.——Burough Park physicians have organized the New Utrecht Medical Society, with Dr. James Bertram Dowd, president, and Dr. Murray B. Gordon, secretary.

Prohibits Sale or Use of Wood Alcohol.—At the meeting of the Department of Health of the City of New York, January 23, a new section in the sanitary code was adopted whereby the sale or use of wood alcohol in any food or drink, or in any preparation or mixture intended for internal or external use by man is prohibited. This action is directed not only against the use of wood alcohol in food and drink, but also against its use by barbers and others in hair tonics, face lotions and other external preparations.

NORTH CAROLINA

Sanatorium Incorporated.—The Blue Ridge Sanitarium has been incorporated at Hendersonville, by Dr. John R. Williams and associates, with a capital of $50,000.

Personal.—Dr. William W. McKenzie, Salisbury, who was injured in an automobile wreck two years ago, is in Baltimore undergoing a second operation on the injured foot.——Dr. Louis J. Picot, Raleigh, for four years second assistant physician of the State Hospital for the Insane, was elected superintendent January 30, vice Dr. James McKee, deceased, and Dr. Thomas O. Coppedge, Kenansville, was elected second assistant physician. Dr. Picot has served as secretary of the State Society for six years, as a member of the State Board of Medical Examiners for six years and later as its president.——Dr. Alfred A. Kent, Lenoir, president of the Medical Society of North Carolina, is convalescent at his home after an attack of lobar pneumonia.——Dr. William K. Reid, Charlotte, while wrestling, January 20, fell, breaking his right leg near the ankle.——Dr. Albert R. Wilson has been elected city physician of Greensboro.

OHIO

Personal.—Dr. Louis M. Early, Columbus, had his left arm amputated at the shoulder, January 26, at Mount Carmel Hospital, for malignant disease due to an *x*-ray burn.——Drs. Fred G. King and Lauren E. Flickinger have succeeded Dr. Silas B. Post as city physician of Canton.——Prof. Eugene F. McCampbell, Columbus, was elected secretary of the State Board of Health, January 24, vice Dr. Charles O. Probst, Columbus, resigned.——Dr. Joshua R. McCally has been elected president and Dr. Charles C. McLean, secretary, of the Dayton Physicians' Business League.——Dr. Michael H. Carmedy has been appointed local surgeon at Painesville for the Baltimore and Ohio Railroad.——Dr. Louis Kahn has been appointed health officer of Columbus and Dr. Harry C. Gabriel president *pro tempore* of the board of health.——Dr. John Donley has been appointed a member of the board of health of Columbus.

New Officers.—Cleveland Academy of Medicine, at Cleveland: president, Dr. John V. Gallagher, and secretary, Dr. Jacob E. Tuckerman.——Ashland County Medical Society, at Loudonville, January 16: president, Dr. Wilson M. McClellan, and secretary, Dr. William F. Emery, both of Ashland.——Guernsey County Medical Society, at Cambridge, January 22: president, Dr. Fred W. Lane, and secretary, Dr. Albert B. Headley, both of Cambridge.——Butler County Medical Society, at Hamilton, January 17: president, Dr. Louis H. Frechtling, and secretary, Dr. Wilmer E. Griffith, both of Hamilton.——Stark County Medical Society, at Canton, January 16: president, Dr. Daniel S. Gardner, Massillon, and secretary-treasurer, Dr. Charles A. LaMont, Canton.——Logan County Medical Society, at Bellefontaine, January 3: president, Dr. Frank R. Makemson, Lewiston, and secretary-treasurer, Dr. Guy H. Swan, Bellefontaine.——Marion County Medical Society, at Marion, January 2: president, Dr. Fillmore O. Young, and secretary, Dr. Robert C. M. Lewis.——Seneca County Medical Society, at Tiffin: president, Dr. Robert G. Steele, Melmore, and secretary, Dr. Edwards H. Porter, Tiffin.——Allen County Medical Society at Lima: president, Dr. Lewis F. Laudick, and secretary, Dr. Edgar J. Curtiss, both of Lima.——Coshocton County Medical Society, at Coshocton: president, Dr. Fremont M. Marshall, and secretary-treasurer, Dr. Jacob D. Lower, both of Coshocton.——Crawford County Medical Association, at Bucyrus: president, Dr. Claude A. Lingenfelter, Bucyrus, and secretary-treasurer, Dr. Edward R. Schoolfield, Bucyrus.

PENNSYLVANIA

County Society Buys Club House.—The Venango County Medical Society has purchased a club house at Reno, midway between Franklin and Oil City and on the railroad and street car lines, and fitted it up for society meetings.

Bulletin Suspends Publication.—The *Bulletin of the Luzerne County Medical Society*, one of the largest and best of the county society papers, has suspended publication.

Personal.—Dr. Rudolph A. Kern of Erie, who has spent the past year in Berlin, has resumed his practice in Erie.——Dr. John A. McKenna, Lansdowne, has been appointed state medical inspector for the eastern district of Delaware County.

Philadelphia

St. Timothy's Staff Inoculated.—During the epidemic of typhoid fever, the staff of the St. Timothy's Hospital, Roxborough, were inoculated with the anti-typhoid serum, and while there have been many patients suffering with typhoid admitted to the hospital, not one of the staff or nurses has taken the fever.

Birthday Anniversaries.—On the occasion of the seventy-fifth birthday anniversary of Dr. William W. Keen, January 2, his three daughters tendered him a reception and tea, which was attended by several hundred who brought congratulations and gifts.——Dr. Monroe L. Van Zant celebrated the ninetieth anniversary of his birth, January 26.

New Officers.—Section on Ophthalmology of the College of Physicians: chairman, Dr. William M. Sweet, and clerk, Dr. Thomas B. Hollaway.——Philadelphia Clinical Association: president, Dr. Nathan G. Ward, and secretary, Dr. Harry Hudson.——Samaritan Hospital Medical Society: president, Dr. John Leedom, and secretary-treasurer, Dr. Chas. T. Russell, Jr.

City Eye Clinic Assistant.—Dr. Joseph S. Neff, director of public health and charities, has asked Mayor Blankenburg to recommend the appointment of an assistant ophthalmologist at a salary of $800. Since the City Eye Clinic was started in 1908, 5,000 children with defective vision have been examined and of this number 3,695, or 74 per cent., were shown to have been backward in school. They were backward to the extent of 8,434 years, representing a money loss to the tax-payers of the city of $295,190, based on the cost of instruction of $35 a year for each child. At the present time, Dr. Lewis C. Wessels, the ophthalmologist, keeps the records and does all the clerical work, and in addition makes all examinations.

Personal.—Dr. S. Weir Mitchell was reelected president of the Franklin Inn Club, February 1.——Dr. Frederick C. Chirinos, Jr., has been appointed consul for Venezuela in Philadelphia.——Dr. Matthew Woods will spend February, March and April in Europe and Asia.——Dr. Burton Chance has resigned as secretary of the Wills Hospital Ophthalmic Society to become chief ophthalmic surgeon to the Pennsylvania System. He has been succeeded as secretary by Dr. J. Milton Griscom.——Dr. Walter L. Pyle is spending his mid-winter holiday at Belleair, Fla.——At the inauguration day exercises of Johns Hopkins University, February 22, the honorary degree of LL.D. will be conferred on the orator of the occasion, Dr. S. Weir Mitchell, who is to speak on George Washington.

TENNESSEE

Pellagra Commission Appointed.—Dr. John W. Barksdale, the retiring president of the Tri-State Medical Association, has appointed as the Tennessee members of the commission to obtain needed legislation on pellagra in Arkansas, Mississippi and Tennessee: Drs. William Krauss, Memphis; Landon A. Yarbrough, Covington, and Nicholas Walker, Dyersburg.

Personal.—Dr. Morton M. Snow, medical referee for the Massachusetts Life Insurance Company at Nashville, has been made medical inspector for the company, with headquarters at Springfield, Mass.——Dr. Cooper Holtzclaw, Chattanooga, starts on a trip around the world, via San Francisco, February 6.——Dr. Albert S. Witherington, Munford, was caught in a log-chain near that place and thrown violently to the ground, fracturing his left leg.——Dr. Henry P. Dulaney, Blountville, surgeon to the National Soldiers' Home, Johnson City, has been transferred to the National Soldiers' Home, Danville, Ill.

Medical Corps Reorganized.—As a result of an examination recently conducted at Chattanooga for aspirants to commissions in the medical corps of the Tennessee National Guard, the following physicians have been appointed: Majors James H. McCall, chief surgeon, Huntingdon; James R. Nankivell, sanitary inspector, Athens; Buford N. Dunavant, Memphis, and Henry M. Cass, Morristown; Captains Larkin Smith, Nashville; John Moore, Nashville; Robert B. Underwood, Memphis; Samuel L. Wadley, Memphis; J. Logan Morgan, Chattanooga; Stanley R. Teachout, Nashville; James B. Cox, Huntingdon; Robert H. Newman, Knoxville, and John H. McSwain, Paris; lieutenants, C. C. Hacker, Elizabethton; Karl H. Rogers, Knoxville; Edwin A. Sayers, Nashville; Percy A. Perkins, Memphis.

WASHINGTON

Personal.—Dr. Thomas A. M. Ward, Seattle, has assumed his duties as medical adviser of the Alice J. Prather Sanatorium at Walla Walla.——Dr. George W. M. Wimberly, Davenport, has reentered the government Indian service as physician in charge at Fort Simco, near North Yakima.——Dr. Henry Baer, Mansfield, while making a professional call, was caught in a snowstorm, fell asleep and narrowly escaped death from cold.——Dr. Leon G. Woodford has been appointed health officer of Everett.——Drs. Frank Rose and John H. O'Shea have been appointed local physicians for the Northern Pacific Beneficial Association at Spokane.——Dr. Walter F. Hoffman, Seattle, has gone abroad.——Drs. Frank S. Pratt, Stevenson; Henri L. Pettit, Chehalis; N. C. McLafferty, Winlock; Charles C. McCown, Vancouver; R. A. Quigley, Everett; Richard L. Smith, Washougal, and Donald C. Urie, Camas, have been appointed physicians to the State Industrial Insurance Commission.

WEST VIRGINIA

Successful Campaign for Hospital.—The eleven-day campaign for $250,000 for a new city hospital for Wheeling closed triumphantly December 19, with total subscriptions of $262,805.92, or $12,805.92 more than the amount required. The hospital, as planned, is to be erected at Twentieth and Eoff Streets, and will be fire-proof, six stories in height and will accommodate about 135 patients.

Personal.—Dr. James W. Abercrombie, Dallas, mayor of Warwood, who underwent a serious surgical operation in December in the City Hospital, Wheeling, is convalescent and has resumed practice.——Dr. Cassius C. Hogg has been appointed medical examiner for the public schools of Huntington.——Fire in the Hibler Block, White Sulphur Springs, caused the total destruction of the office of Dr. Girlonza L. Wyatt.

WISCONSIN

Ill and Injured.—Dr. Arthur T. Holbrook, Milwaukee, fractured his right arm while cranking his automobile, January 23.——Dr. Ralph R. Chase, Eau Claire, was thrown from his buggy several weeks ago, fracturing his ankle, is convalescent and has resumed office work.——Dr. Olaf M. Sattre, Rice Lake, who has been taking treatment for rheumatism at Mount Clemens, has returned greatly improved.——Dr. G. Warren Newell, Burlington, who has been ill with an infection of the eye in Mercy Hospital, Chicago, is convalescent and will soon return home.——Dr. Harry A. Vedder, Edgar, has recovered from an attack of typhoid fever.——Dr. Carl Von Neupert, Stevens Point, who has been ill for two weeks, is convalescent and has resumed practice.——Dr. Archibald D. Campbell, Richland, who has been seriously ill at his home, is reported to be improving.——Dr. Eli J. Smith, Neenah, who was operated on at Oshkosh recently for the removal of particles of glass from his hand, has returned and resumed practice.——Dr. August L. Beier, Chippewa Falls, is reported to be ill with pneumonia.——Dr. Frederick A. Thayer fractured his wrist while cranking his automobile, January 3.——Dr. William O. McBride, Marinette, is ill with typhoid fever at the Menominee River Hospital.

GENERAL

Tri-State Association.—The fourteenth annual meeting of the Tri-State Medical Association of the Carolinas and Virginia will be held in Columbia, S. C., February 21 and 22, under the presidency of Dr. J. Howell Way, Waynesville, N. C. Dr. Rolfe E. Hughes, Laurens, S. C., is secretary and treasurer. The program figures more than sixty papers from the three constituent states. Only members in good standing in their respective state societies are eligible to acquire or retain membership in this association.

Prizes at Boston Otologic Congress.—At the ninth International Otologic Congress, to be held in Boston this year, several prizes are to be awarded. *Lenval Prize:* In 1881, Baron Leon de Lenval, at the instigation of Dr. Benni of Warsaw, gave $600 (3,000 francs), the income of which (about $25), accumulating in the interval between two congresses, is given to the author of the best work on the anatomy, physiology or pathology of the organ of hearing, published during these three years. The award of this prize is a majority vote of a jury of nine, elected by the general assembly of the last congress. The printed works must be sent to the president of the jury, four months before the congress. Authors who have received any prize founded for the International Otologic Congress cannot compete for the Lenval prize. The award of the prize must be announced during the congress, after which the prize is sent to the successful candidate.——*Adam Politzer Prize:* In 1909, Professor A. Politzer, in Vienna, gave $600 (3,000 kronen, Austrian), the interest of which, between two congresses, is to be awarded to the author of the best work in the field of otology published in print within the last three years. The Lenval rules hold good also for this prize.—— *Cozzolino Prize:* The Cozzolino fund of $200 (1,000 lire) was founded by the late Professor Vincenzo Cozzolino of Naples in 1909; the interest, accumulating in the interval between two congresses, is given to the author of the best publication on the anatomy or pathology of the organ of hearing, on clinical therapeusis, local and general, and on the application of electric mechanical appliances for the treatment of lesions indicated by progressive impairment of hearing and subjective noises, published during the interval between two congresses. The Lenval rules hold good here also. Dr. C. J. Blake, 226 Marlboro Street, Boston, is a member of the jury. The other members are in Europe.

FOREIGN

The Silver Jubilee of a Belgian Medical Society.—In December the Liége Société Médico-Chirurgicale celebrated by a banquet and gala theater performance the fiftieth anniversary of its foundation. There was also a scientific meeting the following day at which Professor P. Heger delivered an address with moving pictures on the "Battle of the Cells," first paying homage to two famous members of the society, T. Schwann and E. van Beneden, the former first demonstrating the analogy in shape and structure between the plant and animal cell, and consulting his bishop before promulgating his discovery, for fear that it might undermine religious faith. The festivities closed with a second banquet, at which a collection was taken up for the widow of a confrère.

The Approaching International Tuberculosis Congress.—Extensive preparations have been made for this international gathering to be held at Rome, Italy, April 14 to 20, 1912, to discuss ways and means to prevent and cure tuberculosis. The congress was postponed from last fall to this date on account of the cholera in Italy in 1911. Membership is open to all interested in the study and prevention of tuberculosis, and an antituberculosis exhibition will be one of the main features. A large membership of physicians from this country has already been enrolled, many of them delegates from institutions and societies. The annual international tuberculosis conference precedes the congress, being called for April 13. This is the seventh congress of the kind, the last having been held at Washington, D. C., in 1908, with 4,000 delegates in attendance at the first general meeting, representing thirty-three foreign countries. At the approaching congress Guido Baccelli, the eminent medical statesman of Italy, teacher, clinician and archeologist, will preside. The general secretary and treasurer is Professor V. Ascoli, 36 Via in Lucina, Rome, Italy.

LONDON LETTER

(*From Our Regular Correspondent*)

London, Jan. 27, 1912.

The Health of the People

An important report has been issued by the local government board on public health and local administration. The passing of the Housing and Town-Planning Act of 1909 has resulted in a more careful consideration of the housing problem in many districts. During 1910 returns were received from 252 urban and fifty-five port sanitary authorities, controlling an aggregate population of 19,532,548, showing the cases of infectious disease notified. There were 71,710 cases of scarlet fever with 1,619 deaths; 25,170 of diphtheria with 2,578 deaths; 15,247 of erysipelas with 519 deaths; 6,693 of typhoid fever with 1,189 deaths; 1,340 of puerperal with 550 deaths; 109 of smallpox with eleven deaths. In London the number of infectious cases has been comparatively small: scarlet fever, 10,509; diphtheria, 5,494; typhoid fever, 1,284; cerebrospinal meningitis, 115; and smallpox, seven. For tuberculosis some 600 beds have been provided in sanatoriums by sanitary authorities and 3,700 by private enterprise or charity.

Food and Adulteration

Careful inspection of food for sale has taken place. Samples numbering 100,740 were analyzed during the year. The proportion reported against was 8.2 per cent. as compared with 7.5 in 1909. The methods of procuring samples for analysis have been considerably changed. Formerly it was a common practice to send officers in uniform to select samples for the analyst. The result was that few were found adulterated. Now samples are procured informally by private purchasers. Of the total number of samples analyzed offenses were discovered in 8,510 cases. The examination of milk and cream receives a large amount of attention. Samples numbering 47,895 were examined during the year; 5,332 (11.1 per cent.) were found adulterated or failed to reach the minimum limits fixed by the Board of Agriculture. London appears to be better off in this respect than the provinces, for the percentage of milk and cream samples reported against was 9.9. In the eighteen largest provincial towns the rate was 11.5 per cent. and in the remainder of the country 11.6. The board continues to receive reports of the practice of reducing milk of good quality to the limits fixed by the milk regulations. Thus the analyst for Portsmouth says, "Some dairies in the town appear to reduce the whole of the milk they receive from farmers, generally by the addition of separated milk, until the amount of cream present is brought down to the limit fixed by law." Even when the milk is a little lower than the standard the offender usually escapes. The analyst is precluded, in certifying, from comparing the sample with the average of the district but has to compare it with the standard fixed for the whole country and convictions cannot be obtained for a small deficiency. Samples of butter, numbering 20,742, were examined and 1,048, or 5.1 per cent., were condemned. In London the percentage was 6.5. The adulterated butter contained in addition to foreign fats, an excessive amount of water.

BERLIN LETTER

(*From Our Regular Correspondent*)

Berlin, Jan. 12, 1912.

Personal

The well known ophthalmologist, Professor Horstmann, died in Berlin, from cancer, January 16, aged 64. He was for many years an assistant of Professor Schweigger, the successor of Albert von Graefe. In 1879 after study abroad, Horstmann joined the faculty of Berlin, and in 1898 he was made professor extraordinary. His numerous scientific works are both anatomic and clinical. After the death of Schweigger he became the chief editor of the *Archiv für Augenheilkunde*, and since their foundation he has been a collaborator on the *Deutsche med. Wochenschrift, Jahrbuch für praktische Medizin*, and the *Reichsmedizinalkalender* (annual medical directory). His practice was proportionately very extensive.

Discussion Regarding the International Opium Conference

A few days ago another conference was held in the state interior department (Reichsamt des Innern), to discuss the transactions to date of the international opium conference. The German delegates, who are now to return to The Hague, to which city the conference is adjourned, have requested information as to their further position. The conference has already adopted three resolutions proposed by England. According to these the export of raw opium to countries which forbid its import is to be hindered, and further marks of identity are to be established for the export of quantities over 5 kilograms, and, furthermore, the import and export shall be entrusted to the agency of certain specified persons. According to the proposal of Germany the transportation is to be regulated by the international postal union. Finally, a limitation may be imposed on importation and exportation, provided that the conditions of commerce do not oppose it.

Systematic Campaign Against Cancer

The last number of the *Zeitschrift für Krebsforschung* republished an address delivered last year before the central committee for cancer research by the Königsberg gynecologist, Professor Winter, on the campaign against cancer in the kingdom of Prussia, which contains a number of valuable general points on this important subject. As the conclusion of his work, which deals especially with the education of the public in regard to the symptoms of and ways and means for combating cancer, the lecturer proposed a number of measures which he urged the cancer committee to undertake. One suggestion is that the cancer committee should send to all clinical and academic medical teachers a circular requesting them, either personally or through their assistants, to publish in the medical press from time to time instructive articles on cancer and its prophylaxis. The cancer committee itself shall publish an article of instructions for physicians and send it to all Prussian physicians or have it sent out by the government. The government is to be requested to publish a supplement to the official book of instructions for nurses on the relations of nurses to cancer patients. Further, the government shall be asked to notify the district physicians to give thorough instructions to midwives at all of the regular supplementary examinations regarding the course they shall pursue if cancer is suspected. The cancer committee shall secure proper speakers for the instruction of the public in large assemblies. It shall further provide articles for the instruction of the public and make arrangements to get them published in proper periodicals. The government is to be requested to publish short instructions in official circulars, and to have a circular distributed by the officials to all householders in the country. [Winter's work as the apostle of prophylaxis of cancer of the uterus has often been mentioned in The Journal. His success in the local field has inspired him with the hope that similar measures, such as the above, might well be extended to the whole country.—Ed.]

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Jan. 16, 1912.

Wood Alcohol Prohibited in Austria in Foods and Drugs

As a consequence of the numerous fatal casualties in the asylum in Berlin, where more than sixty lives were lost recently (see Berlin Letter, The Journal, Jan. 27, 1912, p. 290) by the use of adulterated alcohol, the Austrian board of health has just issued an ordinance in which the use of methylated spirit is strictly specified and its sale limited to certain industrial purposes. In the manufacture of certain varnishes and in the leather business, as well as in the chemical industries, it is an indispensable substance; but a number of beverages, sweets and also pastry contain sometimes a small percentage of this alcohol. Its use for all and sundry articles has now been absolutely prohibited. It is also contemplated to replace it by other less dangerous substances, even in the process of making the ordinary spirit, used for heating and lighting purposes, unfit for human consumption. It will be remembered by medical men that some time ago, when Ehrlich's injections of salvarsan were tried in Prague, unfavorable reports came from that city regarding the effects of the compound. It was found out that the bad results were due to the presence of methyl alcohol in the solvent used, and since that time all medicinal preparations in Austria have had to be made without any trace of this dangerous alcohol.

Birthday Honors to Professor Ludwig

The lecturer on medical chemistry of the Vienna University, Professor Ludwig, recently celebrated his seventieth birthday. For a number of years this scientist has been active in this city and has been one of the most esteemed and beloved teachers of students. His pupils are in important positions all over Austria and Germany and he is himself one of the chief personalities of the Austrian board of health, which has become an important international organization through his perseverance. Forensic chemistry has been brought to such a high point by his endeavors that this alone would suffice to make his name widely known in the scientific world. His pupils and friends arranged a private celebration of the memorable day, while the official recognition of the date will take place later.

Marriages

Edwin Brooks Maynard, Lieutenant, M.R.C., U. S. Army, to Miss Catharine Lindsay Jarman of Charlottesville, Va., at Baltimore, January 22.

Vander Franklin Couch, M.D., Jennings, N. C., to Miss Mautie White of Yadkin County, N. C., at Statesville, N. C., January 16.

William Landram McFarland, M.D., New York City, to Miss Frances McElwee of Berlin, Germany, Dec. 27, 1911.

Lloyd Lewellyn Smith, Captain, M.C., U. S. Army, to Miss Mary Edith Conser, at Johnstown, Pa., January 24.

Frederick Snell Wright, M.D., McMechen, W. Va., to Miss Ida M. Gesner at Wilmington, Del., July 10, 1911.

Ethan Estey Waggoner, M.D., Tonkawa, Okla., to Miss Flora E. Garrett of Ponca City, Okla., January 14.

Robert McWilliam O'Neal, M.D., Reno, Nev., to Miss Aimee Hope Ford of Piedmont, Cal., Dec. 16, 1911.

Hildegarde H. Longsdorf, M.D., Carlisle, Pa., and John L. Ayer of Chester, Pa., at Media, Pa., January 27.

Rufus C. Franklin, M.D., Graymont, Ga., to Miss Winey Coleman of Swainsboro, Ga., January 17.

Jules L. Bierach, M.D., Harlan, Ky., to Miss Alyce Danforth of St. Joseph, Mich., Dec. 24, 1911.

Anton G. Rytina, M.D., Baltimore, to Miss Catherine Gier, at Washington, D. C., January 24.

Hermenegild Klima, M.D., Tyndall, S. Dak., to Miss Libuse Mencl of Chicago, January 30.

Oliver J. Flint, M.D., to Miss Josephine Stoody, both of Princeton, Ill., January 12.

George R. Clark, M.D., to Miss Louise H. Atha, both of Philadelphia, January 16.

Deaths

Mathias Adolph Edward Borck, M.D. University of Maryland, Baltimore, 1863; Washington University, St. Louis, 1874; a member of the American Medical Association; formerly vice-president of the St. Louis Medical Society; acting assistant surgeon in the United States Army and later assistant surgeon of the Tenth Maryland Volunteer Infantry and Third Maryland Volunteer Calvary during the Civil War; a practitioner of St. Louis since 1872 and one of the founders of, and professor of surgery in, the St. Louis College for Medical Practitioners; died at his home in St. Louis, January 20, from senile debility, aged 77.

Lewis H. Weatherby, M.D. Eclectic Medical Institute, Cincinnati, 1857; a surgeon of the Seventh Missouri Volunteer Calvary during the Civil War; a member of the Missouri State Commission for Revision of the Constitution in 1866; for many years a practitioner of Maysville; prosecuting attorney and probate judge of DeKalb County; postmaster of Maysville for several years and collector of internal revenue for the Western District of Missouri; one of the founders of the town of Weatherby, Mo., but for five years a resident of Hobart, Okla; died in a hospital in St. Joseph, Mo., January 20, aged 82.

William Asa Wheeler, M.D. Medical School of Maine, Brunswick, 1876; College of Physicians and Surgeons, New York City, 1877; for several years an officer of the U. S. Marine-Hospital Service and in charge of the United States Immigration Bureau, Ellis Island, New York; formerly professor in surgery in Niagara University, Buffalo, N. Y.; once president of the Portland (Maine) Board of Trade; died at his home in that city, January 20, aged 58.

Marion Fraser Marvin, M.D. Kentucky School of Medicine, Louisville, 1897; a member of the Association of Military Surgeons of the United States; from 1904 to 1906 a contract surgeon U. S. Army, and on the organization of the Medical Reserve Corps commissioned as lieutenant therein, with service in the Philippine Islands; who was honorably discharged from the Army, Oct. 16, 1909; died at his home in Jacksonville, Fla., January 15, aged 37.

Samuel Edgar Freeman, M.D. College of Physicians and Surgeons, New York City, 1858; surgeon of the Forty-Second Indiana Volunteer Infantry throughout the Civil War and thereafter a dentist of Buffalo, N. Y.; for many years president and librarian of the Buffalo Dental Society and secretary of the New York State Dental Society; died at his home in Buffalo, Dec. 11, 1911.

Asa Clark, M.D. Rush Medical College, 1848; a resident of California since 1849; a member of the American Medical Association; from 1861 to 1892 assistant physician at the Stockton State Hospital and from 1892 to 1896 superintendent of that institution; founder of Clark's Sanitarium, Stockton; died at his home in that city, January 20, from bronchitis, aged 87.

Philip Frank, M.D. Kentucky School of Medicine, Louisville, 1885; a member of the American Medical Association and once president of the Washington State Board of Health; for many years health officer of Yakima County and North Yakima; a pioneer practitioner of the Yakima Valley; died at his home in North Yakima, January 19, from nephritis, aged 60.

Atwell William Swett, M.D. Dartmouth Medical School, Hanover, N. H., 1864; a member of the American Medical Association; assistant surgeon of the Twenty-Ninth Maine Volunteer Infantry during the Civil War; a member of the staff of the Eastern Maine General Hospital, Bangor, from 1903 to 1910; died at his home in Bangor, January 17, aged 71.

Nathan D. Tobey, M.D. University of Maryland, Baltimore, 1863; a member of the Golden Belt Medical Society, formerly president of the Salina (Kan.) Medical Association; for twenty-five years a practitioner of Salina and for three years editor of the *Salina Herald;* died at his home in Vaughn, N. Mex., January 19, aged 74.

Robert Hume Tatum, M.D. University of Tennessee, Nashville, 1894; Chattanooga (Tenn.) Medical College, 1899; a member of the American Medical Association and formerly secretary and treasurer of the Walker County (Ga.) Medical Society; physician to the Georgia state penitentiary and local surgeon to the Central of Georgia Railway; president of the Chattanooga Academy of Medicine in 1904 and a member of the visiting staff of the Erlanger Hospital, Chattanooga; died at his home in that city, January 18, aged 38.

Lyman Watkins, M.D. Eclectic Medical Institute, Cincinnati, 1877; of Blanchester, O.; professor of pathology and physiology in his alma mater; a member of the Ohio State Medical Association; consulting physician to Seton Hospital; died suddenly in that institution, January 21, after a surgical operation, aged 57.

Adolph Billhardt, M.D. University of Leipsic, Germany, 1856; surgeon of volunteers during the Civil War; from 1904 to 1907 United States consul to Moscow, Russia; for forty-five years a resident of Upper Sandusky, Ohio; died at his home, January 22, from senile debility, aged 78.

James Fabius Beckwith, M.D. College of Physicians and Surgeons, Baltimore, 1881; of Plymouth, Pa.; died in Mercy Hospital, Wilkes-Barre, January 23, from embolism, complicating an acute appendicitis and ventral hernia at the site of a former operation on the gall-bladder, aged 59.

Charles Corfield McDowell, M.D. University of Maryland, Baltimore, 1874; a member of the American Medical Association and for many years attending physician to the Baltimore Orphan Asylum; died at his home in Baltimore, January 24, from heart disease, aged 60.

Joan A. Ospray, M.D. Northwestern University Woman's Medical School, Chicago, 1890; a member of the Illinois State Medical Society and formerly resident physician at the Norwegian Tabitha Hospital; died in Phoenix, Ariz., January 20, from tuberculosis, aged 48.

Charles W. Rennick, M.D. University Medical College of Kansas City, 1895; a member of the Kansas Medical Society; formerly of Garden City, Cherryvale and Gas City; died at his home near Wellington, from traumatic pneumonia, January 25, aged 41.

George Friebis, M.D. Jefferson Medical College, 1879; a member of the American Medical Association and a member of the staff of Wills Eye Hospital, Philadelphia; died suddenly at his home in that city, January 26, from heart disease, aged 65.

Leopold Burgheim, M.D. College of Physicians and Surgeons, New York City, 1879; a member of the American Medical Association and German Medical Society; died at his home in New York City, January 24, from heart disease, aged 68.

George C. Henkel, M.D. Medical College of Ohio, Cincinnati, 1860; a member of the Ohio State Medical Association and for nearly half a century a practitioner of Farmersville; died at the home of his daughter in Enon, O., January 25, aged 76.

Perry Hall Dudley, M.D. Hahnemann Medical College, Philadelphia, 1892; a member of the staff of the Children's and West Philadelphia Homeopathic Hospitals; died at the home of his sister in Philadelphia, January 17, from nephritis.

Lawrence A. Brumleve, M.D. St. Louis College of Physicians and Surgeons, 1901; a member of the Illinois State Medical Society; for two terms coroner of Effingham County, Ill.; died at his home in Teutopolis, January 19, aged 32.

William T. Taylor, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1871; formerly editor of the *Philipsburg* (Kan.) *Plaindealer;* formerly of Oakland; died at his home in Topeka, January 20, from heart disease, aged 67.

Siegfroid Dandurand, M.D. Ecole de Médecine et de Chirurgie, Montreal, 1889; Victoria University, Cobourg, Ont., 1890; of Watertown, N. Y.; died in the Sisters' Hospital in that city, January 19, from pneumonia, aged 49.

Charles E. Downey, M.D. Northwestern University Medical School, Chicago, 1894; from 1896 to 1900 coroner of Will County, Ill.; died at the home of his parents in Joliet, January 21, from myocarditis, aged 40.

Horace Griffin Anderson, M.D. Rush Medical College, 1890; a member of the Illinois State Medical Society; died at his home in Chicago, January 2, from nephritis, a few days after a surgical operation, aged 52.

Jacob E. Powell, M.D. College of Physicians and Surgeons, Baltimore, 1890; from 1892 to 1894 coroner of Hancock County, Ohio; died at his home in Findlay, January 19, from broncho-pneumonia, aged 50.

Joseph Sager, M.D. Starling Medical College, Columbus, O., 1870; a member of the American Medical Association; a veteran of the Civil War; local surgeon at Celina, O., for the Cincinnati Western Railroad, and city health officer; died at his home January 22, from cerebral hemorrhage, aged 73.

Isaac Poole, M.D. Berkshire Medical College, Pittsfield, Mass., 1862; a surgeon in the Navy during the Civil War and the oldest practitioner of Evanston, Ill.; died at his home in that city, January 24, aged 74.

Thomas Herman Wilcox, M.D. University of Michigan, Ann Arbor, 1878; a retired practitioner of Brooklyn, N. Y.; died in that city, Nov. 14, 1911, as the result of a fall down an airshaft, aged 62.

Elias A. Keiser (license, Ohio, years of practice, 1896); a practitioner of Bryan for forty-five years and a member of the Ohio State Medical Association; died in Columbus, January 21, aged 73.

Orlando V. Shurtleff, M.D. Tulane University, New Orleans, 1855; for fifty years a practitioner of Brookhaven, Miss.; died at his home in Columbia, Miss., January 10, from senile debility, aged 78.

Edward W. Cornetet, M.D. University of Wooster, Cleveland, O., 1890; a member of the Ohio State Medical Association; died recently at his home in Piketon, from chronic nephritis, aged 45.

Blaine Empson, M.D. Kentucky University, Louisville, 1905; a member of the American Medical Association; died at his home in Dudleytown, Ind., January 10, from tuberculosis, aged 30.

William Benjamin Wiggins, M.D. University Medical College of Kansas City, Mo., 1909; of Kansas City; died at the home of his mother in Edna, Kan., recently, aged 28.

S. E. H. Gannon, M.D. Hahnemann Medical College, Chicago, 1879; of Matlock, Ia.; died at his home in Boyden, Ia., in November, 1911, from cerebral hemorrhage, aged 71.

Edwin J. Upton, M.D. Kentucky School of Medicine, Louisville, 1903; of Ericson, Neb.; died in St. Joseph's Hospital, Omaha, January 8, from heart disease, aged 43.

Harry Frederick Ryder, M.D. Cleveland (O.) Homeopathic Medical College, 1903; died at his home in Cleveland, January 12, from tuberculosis of the lungs, aged 31.

John A. Backus, M. D. Cleveland (Ohio) University of Medicine and Surgery, 1880; died at his home in Grand Rapids, Mich., January 18, from diabetes, aged 53.

Joseph Anderson Rogers, M.D. University of Nashville, Tenn., 1866; died suddenly at his home in Leeville, Tenn., January 11, from heart disease, aged 70.

Robert J. Bigelow, M.D. Jefferson Medical College, 1860; formerly of Ocoee, Florida; died at his home in Orlando, Fla., January 9, from senile debility, aged 76.

Harriet Avis Yergin, M.D. Hering Medical College, Chicago, 1908; of Sterling, Ill.; died in Mercy Hospital, Clinton, Ia., January 15, from pneumonia, aged 48.

Simon Cameron Struthers, M.D. Medical Chirurgical College of Philadelphia, 1903; died at his home in West Hazleton, Pa., January 8, from pneumonia, aged 34.

Gilbert John Dickson, M.D. Albany (N. Y.) Medical College, 1879; died at his home in Bovina Center, N. Y., January 10, from cerebral hemorrhage, aged 58.

Charles A. Dewey, M.D. Hahnemann Medical College, Chicago, 1881; died at his home in Chicago, January 23, from myocarditis, aged 55.

Isaac Lafayette Wall, M.D. University of Texas, Galveston, 1906; died at his home in White City, Tex., January 10, from pneumonia, aged 34.

William E. Shepherd, M.D. University of Louisville, Ky., 1875; died at his home in Taylorsville, Ky., January 2, from pneumonia, aged 60.

Simeon A. Thompson, M.D. Hospital College of Medicine, Louisville, 1903; died at his home near Louisville, January 12, aged 42.

George B. Chapman, M.D. Yale University, New Haven, Conn., 1875; died at his home in Dover Plains, N. Y., January 15, aged 71.

Arthur A. Craddock, M.D. Meharry Medical College, Nashville, Tenn., 1909; died at his home in St. Louis, January 13, aged 37.

L. B. Downs (license, Texas, years of practice, 1907); died at his home in Waco, January 9, from spinal meningitis, aged 58.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

STUART'S PLAS-TR-PADS

A Rupture Cure That is Exploited by Fake Analyses and is Advertised in Medical Journals

F. J. Stuart of St. Louis sells what he used to call "Adhesive Hernial Plaster Pads" but which he now calls "Adhesif Plas-tr-Pads." When sold under the earlier name, Stuart did business as "The Stuart Plaster Pad Company." His more recent trade name is the "Plapao Laboratories, Inc." The reason for this change of name is not known, but it occurred after some unenviable publicity had been given to the concern, due to a prosecution under the Food and Drugs act. The government's case against Stuart was dismissed in the lower court on a demurrer filed by the defendant. Stuart's contention seems to have been that his plaster pad was not misbranded, as the government charged, because he had not lied *on a label* but had confined his mendacity to *a circular* that was enclosed with the pad—and apparently the law does not prohibit falsehoods published elsewhere than on the label.

CLAIMS—OLD AND NEW

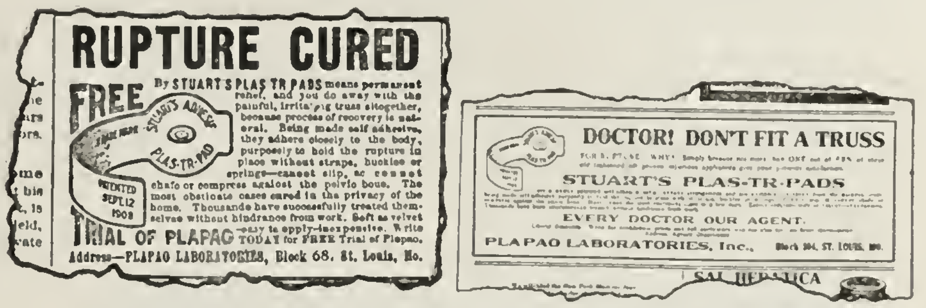
Before discussing the device itself it will be interesting to compare the claims made for it before the government commenced suit, with those made after suit had been brought. The arrangement in parallel columns of the assertions made before and after prosecution illustrates what a power for comparative righteousness is wielded by the Food and Drugs Act. The words and phrases that have been modified are put in italics:

Old	New
"Stuart's Adhesive Plaster-Pads *Cure Rupture.*"	"Stuart's Plas-tr-Pads *Give Quick and Permanent Relief.*"
" . . . the Plaster-Pads will *cure almost every case* . . ."	"The Plas-tr-Pads will *do all we* claim for them . . . "
"Stuart's Adhesive Hernial Plaster-Pads *cure* while you work and while you sleep."	"Stuart's Adhesif Plas-tr-Pads *work* while you work and while you sleep."
"They are made to *cure* rupture . . . and that is what every ruptured sufferer wants—a *cure* and not a mechanical support."	[Omitted entirely in new booklet.—Ed.]
"This is the reason why the Plaster-Pads *effect a cure* so quickly."	"This is the reason why Stuart's Plas-tr-Pads *produce results* so quickly."
"They are as *far ahead of* the truss as the great ocean steamships of to-day are *ahead of* the old-time sailing vessels."	"They are as *different from* the truss as the great ocean steamships of to-day are *different* from the old-time sailing vessels . . . "
"Within this pad is a reservoir or container, which is filled with *the essential curing medicine* . . . "	"Within this pad is a reservoir or medicine container which is filled with an *absorbent astringent medication.*"
" . . . they *hold and cure rupture* . . . "	" . . . they *relieve ruptured sufferers from the dangerous misconstructed truss.*"
"The question that I am discussing is '*How to Get Cured*'."	"The question that I am discussing is '*How to Get Rid of the* Truss' . . . "
"I had the opportunity to be *cured* offered me . . . "	"I had the opportunity to be *rid of the truss* offered me . . ."
"If you want to be *cured*, do your part and order Stuart's Adhesive Hernial Plaster-Pads."	"If you want *relief*, do your part and order Stuart's Adhesif Plas-tr-Pads."

A study of the foregoing demonstrates once more that the Food and Drugs Act has been responsible for the passing of the "lie direct" which has given place to the lie by inference. The methods of bringing the "plaster pads" to the notice of the public are those common to medical fakers in general. That is to say, Stuart uses such newspapers and magazines as will accept his advertisements and he also uses those medical journals that are not above taking money for this sort of thing. The wording of the advertisements in the newspapers differs but little from that which appears in medical journals.

ADVERTISING IN MEDICAL JOURNALS

The difference lies chiefly in the style of type and general appearance of the "copy." In the *Police Gazette*, for instance, we find the advertisement headed in large type "RUPTURE CURED"; in the medical journals, the heading runs "DOCTOR! DON'T FIT A TRUSS." The medical journal advertisements, however, are not distinguished by any particular conservatism, for we find such statements as this:


RUPTURE CURED

FREE

By STUART'S PLAS TR PADS means permanent relief, and you do away with the painful, irritating truss altogether, because process of recovery is natural. Being made self adhesive, they adhere closely to the body, purposely to hold the rupture in place without straps, buckles or springs—cannot slip, so cannot chafe or compress against the pelvic bone. The most obstinate cases cured in the privacy of the home. Thousands have successfully treated themselves without hindrance from work. Soft as velvet—easy to apply—inexpensive. Write TODAY for FREE Trial of Plapao.

TRIAL OF PLAPAO

Address—PLAPAO LABORATORIES, Block 68, St. Louis, Mo.

DOCTOR! DON'T FIT A TRUSS

STUART'S PLAS-TR-PADS

EVERY DOCTOR OUR AGENT.

PLAPAO LABORATORIES, Inc., Block 104, ST. LOUIS, MO.

Fig. 1.—Photographic reproductions of advertisements of Stuart's Plas-tr-Pads. The one on the left is from the *Police Gazette*; that on the right, from a leading medical weekly.

> "Have CURED the most OBSTINATE cases in a few days."

Apparently there are publishers of medical journals who see no outrageous exaggeration in the statement just given and who really believe that the "most obstinate" cases of hernia can be "cured in a few days" by means of a piece of adhesive plaster. At any rate, four or five medical journals of more or less prominence are, or have been, carrying the Stuart Plaster Pad advertisements. Believing that when the publishers have had their attention called to the viciousness of this device, they will delete these advertisements from their pages, we shall not publish, at this time, a list of those journals that carry the Plas-tr-Pad advertisements.

BUYING A MAILING LIST

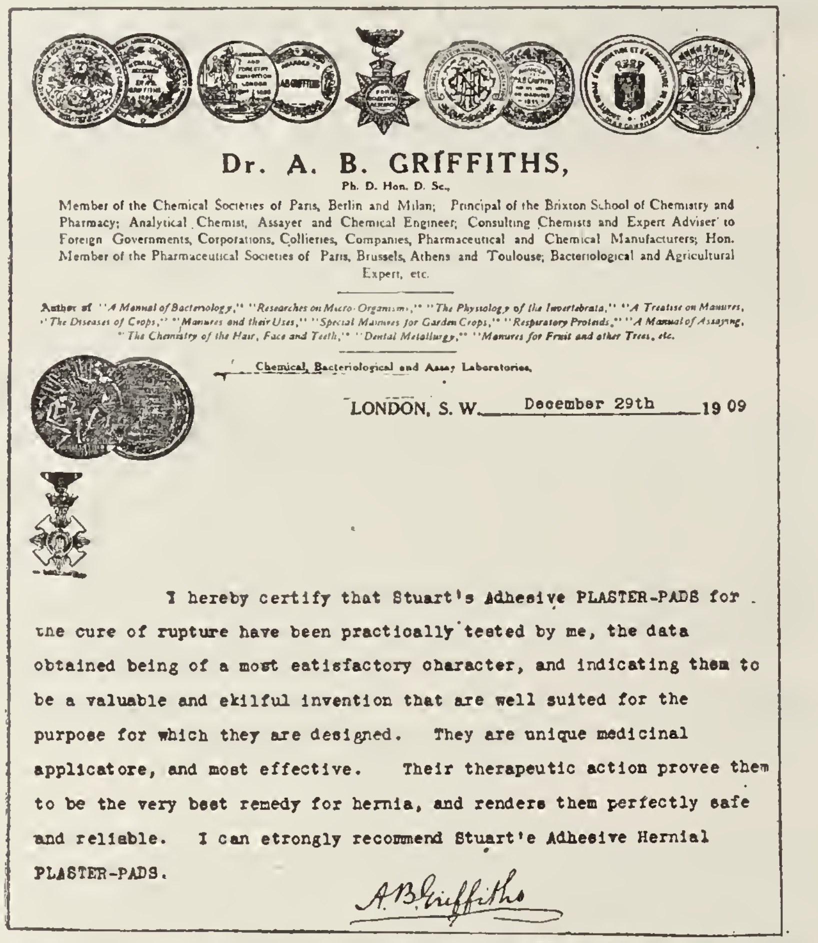
Apparently, Stuart does not expect the physicians to whom he appeals through these medical journals to fit these pieces of adhesive plaster to patients, although in a letter that is sent to those who answer such advertisements a discount of twenty-five cents on the dollar is offered. The real reason, however, for getting in touch with a certain class of physicians appears in the circular that the doctor receives telling him about "Our Plan for a Free Fever Thermometer." The physician is asked to send in the names and "complete and correct addresses" of ten people "positively known to be ruptured." For the mailing list thus furnished (and twelve cents in cash), the doctor receives a free thermometer. A thermometer seems rather a cheap bribe to offer a professional man for furnishing confidential information regarding the physical disability of people who have presumably entrusted him with their secrets. But the birthright of professional decency would doubtless not be highly valued by those who would thus become accessories before the fact in the furtherance of quackery.

THE PADS THEMSELVES

What are Stuart's Adhesive Plaster Pads? What is this wonderful device that, according to its exploiters, does in a few days what some of the most skilful physicians and surgeons are unable to accomplish in weeks or even months? It is, to all intents and purposes, a strip of adhesive plaster with a small pad containing a simple ointment. The padded portion of the plaster is placed over the hernial opening and the plaster itself applied to the skin. Then, if we are to believe the Plapao Laboratories, Inc.—which we are not—the medicine will "contract, strengthen and restore" the "stretched out and weakened muscles" and the hernia is cured! It is not necessary to tell physicians that this "medicine" will do nothing of the sort.

It would probably have been difficult to sell, even to the most gullible, a strip of adhesive plaster at $2 and more a strip. By using a simple ointment of secret composition and "playing it up" as the essential element in the "cure," it is not so difficult to humbug the public; for the mysterious always appeals to the uninformed. The government, in its report on this fake, had the following to say about the ointment—which is sold under the proprietary name "Plapao"—to which such marvelous properties are ascribed:

> "Said plaster pad and the compound drug contained in the cone thereon, were misbranded within the meaning of the act in that the label on the pad in question stated that said compound drug possessed qualities which would cure or tend to cure the disease of hernia or rupture, when as a matter of fact said compound drug did not possess such qualities, the statements on said label being thus false and misleading."



Dr. A. B. GRIFFITHS,
Ph. D. Hon. D. Sc.,
Member of the Chemical Societies of Paris, Berlin and Milan; Principal of the Brixton School of Chemistry and Pharmacy; Analytical Chemist, Assayer and Chemical Engineer; Consulting Chemists and Expert Adviser to Foreign Governments, Corporations, Collieries, Companies, Pharmaceutical and Chemical Manufacturers; Hon. Member of the Pharmaceutical Societies of Paris, Brussels, Athens and Toulouse; Bacteriological and Agricultural Expert, etc.

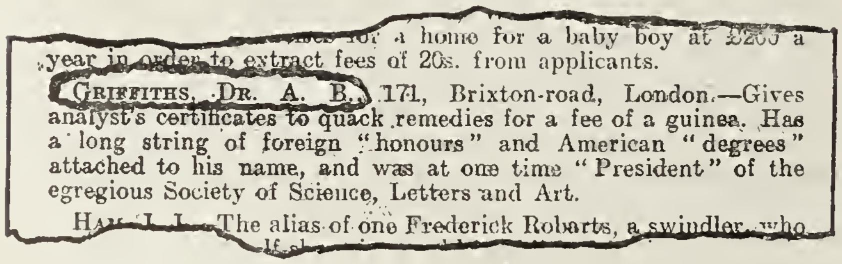
Author of *"A Manual of Bacteriology," "Researches on Micro-Organisms," "The Physiology of the Invertebrata," "A Treatise on Manures," "The Diseases of Crops," "Manures and their Uses," "Special Manures for Garden Crops," "Respiratory Proteids," "A Manual of Assaying," "The Chemistry of the Hair, Face and Teeth," "Dental Metallurgy," "Manures for Fruit and other Trees, etc.*

Chemical, Bacteriological and Assay Laboratories,

LONDON, S. W. December 29th 1909

I hereby certify that Stuart's Adhesive PLASTER-PADS for the cure of rupture have been practically tested by me, the data obtained being of a most satisfactory character, and indicating them to be a valuable and skilful invention that are well suited for the purpose for which they are designed. They are unique medicinal applicators, and most effective. Their therapeutic action proves them to be the very best remedy for hernia, and renders them perfectly safe and reliable. I can strongly recommend Stuart's Adhesive Hernial PLASTER-PADS.

A B Griffiths



for a home for a baby boy at £200 a year in order to extract fees of 20s. from applicants.

GRIFFITHS, DR. A. B., 171, Brixton-road, London.—Gives analyst's certificates to quack remedies for a fee of a guinea. Has a long string of foreign "honours" and American "degrees" attached to his name, and was at one time "President" of the egregious Society of Science, Letters and Art.

The alias of one Frederick Roberts, a swindler, who

Fig. 2.—The upper picture is a photographic reproduction of Dr. A. B. Griffith's "analysis"; the lower picture is reproduced from part of a page in *Truth's* "Cautionary List". Evidently, some analysts are without honor in their own country!

While the government lost its case in the lower court on a technicality, the assertions in the government chemists' report that the thing was a fraud are as true to-day as they were when they were written. A sample of this ointment was examined in the Association's laboratory and the chemists reported as follows:

LABORATORY REPORT

> "A specimen of Stuart's Plapao for Rupture consisting of a dark brown ointment, was found to be essentially a lanolin ointment containing tannic acid and perfumed with oil of pine needles, or some oil with a similar odor and colored dark brown. Neither potent alkaloids nor compounds of metals such as arsenic, mercury, aluminum or zinc could be detected."

The whole tenor of the Plapao concern's advertising matter is to the effect that the plaster pads will cure rupture—even the "most obstinate cases"—and make a truss entirely unnecessary; yet when Stuart applied for a patent on his device, he described it, not as a cure, but as a "hernia support" that was to be used alone *"or in combination with a truss."* In fact, in some of his advertising matter the following statement appears:

> "If so desired they can be worn in combination with any truss, *and in severe cases this combination is especially adaptable."* [Italics ours.—Ed.]

Nor is this all. That the poor victim of hernia may be caught both "coming" and "going" the Plapao concern, after exhausting every effort to sell its strips of adhesive plaster, finally sends the prospective patient a price list of trusses, suspensories, "uterine supporters," etc., which it has for sale. In other words, while Stuart can find no language strong enough to condemn trusses, he is perfectly willing to sell trusses if by no other means can he separate the sufferer from his money. The truss price list accompanies the last of a long series of follow-up letters.

ANALYSES AND TESTIMONIALS

Of course, the Plapao concern has testimonials. More than this, it has what purport to be chemical analyses of the ointment used in the pads. The "analyses" give no indication of the composition of the stuff—the point on which a chemist is competent to give an opinion—but do discuss its therapeutic value, a question altogether out of the province of chemical analysis. One of these analyses is from Delta E. Combs, who calls himself a "consulting and analytical" chemist. We understand that Mr. Combs is also president, treasurer and manager of the Combs Chemical Company of St. Louis, a concern that sells "ethical proprietaries" for the cure of alcoholism, the drug habit, the tobacco habit, sexual neurasthenia, etc.

Another "chemist," whose analysis is published, is "Dr." A. B. Griffiths, London, England. The Plapao people call particular attention to "Dr." Griffiths' analysis which they reproduce in facsimile. Griffiths' letterhead has pictures of a number of "medals" which, according to the Plapao Laboratories, indicates "that his reputation is world-wide." Some of our readers will remember that we have called attention to "Dr." Griffiths before. He is a gentleman who furnishes "analyses" for various classes of medical fakers, the charge being $5 for each "analysis."

His name very properly appears in the "Cautionary List" put out by London *Truth*.

A widely advertised obesity cure, a cure for baldness and a fake cure for alcoholism, all American humbugs, also publish "analyses" from Griffiths.

A few of the testimonials reported to come from individuals who had been cured by Stuart's Plaster Pads, were investigated. Letters were written to physicians in the towns in which such individuals lived. The following is the result of the investigation, the initials being those of the persons who had testified to their "cure":

G. W.: Rupture now "as bad as it ever was."
L. C. J.: Claims to be cured; could not be verified, as no examination was made.
W. M.: Not cured; umbilical rupture; imperfectly closed.
M. W. H.: Not cured; still wears a support.
W. E. B.: No information obtainable.
J. H. W.: No information obtainable.
J. M.: Claims to be cured; could not be verified, as no examination was made.
J. S. S.: Still ruptured.
A. J. M.: No information obtainable.

This represents names taken at random from a list published by the "plaster pad" concern. If this is the best showing that can be made for the "adhesive plaster treatment" of hernia coming from individuals whose names are published as striking examples of the success of the treatment, what would be the result if it were possible to write to the hundreds of victims whose names will never be made public but who have parted with their money for this worthless device?

"SCARE" METHODS

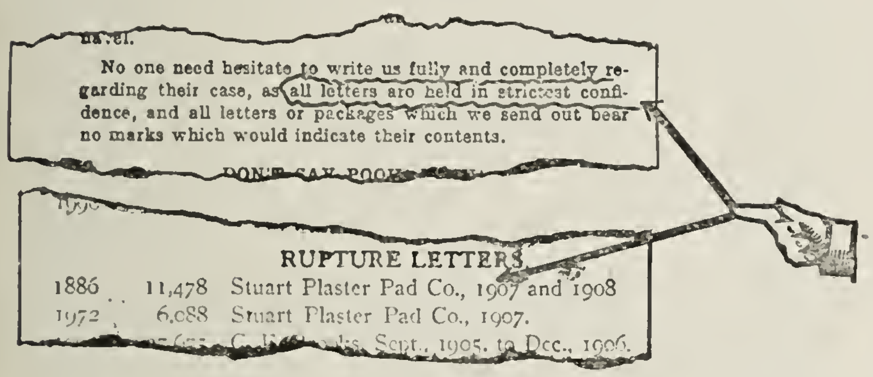
Like all medical fakes, the sale for this is stimulated by attempts to frighten the susceptible. The dangers and frequency of strangulation in hernia are harped on throughout the advertising matter and hair-raising pictures of people in deadly peril are used to play still more on the fears of those suffering from rupture. In one of the circulars there is a faked reproduction of an envelope sent out by the Stuart concern and returned to it with the inscription "Returned to writer: Dead" stamped on it.

PRIVATE AND CONFIDENTIAL

One more point connected with this concern and we are through. The following statements appear in the advertising matter sent out by the plaster pad company:

> "The utmost privacy is always maintained in all our correspondence and business relations . . . ."
>
> "No one need hesitate to write us fully and completely regarding their case, as all letters are held in strictest confidence."

In spite of this statement, we find advertised for sale by one of the largest letter brokers in the country, listed under "Rupture Letters" no fewer than 17,566 letters of the Stuart Plaster Pad Company. Privacy indeed!



No one need hesitate to write us fully and completely regarding their case, as all letters are held in strictest confidence, and all letters or packages which we send out bear no marks which would indicate their contents.

RUPTURE LETTERS

1886 11,478 Stuart Plaster Pad Co., 1907 and 1908
1972 6,088 Stuart Plaster Pad Co., 1907.

Fig. 3.—Photographic reproductions (1) of Stuart's advertising matter, where the assertion is made that "all letters are held in strictest confidence"; (2) of a portion of a pricelist issued by a firm that makes a business of buying and selling letters that have been sent in to mail-order medical fakes. It will be noticed that this firm has more than 17,000 Stuart Plaster Pad Co.'s letters for sale. Confidential, indeed!

To sum up, we have in the Plapao Laboratories, Inc., a concern that promises to cure rupture by means of a piece of adhesive plaster and a little ointment. The device is exploited both directly to the public by newspapers and indirectly to the public through the instrumentality of medical journals and of physicians who will sell the names of sufferers of hernia for the price of a cheap thermometer. Purchasers are obtained through fake analyses and misleading testimonials. Finally, individuals who have been unwise enough to answer Stuart's advertisements or who have been unfortunate enough to have their names sent in by a local physician, have had their names sold to letter brokers to be bought by any person, anywhere, who is willing to pay the few cents necessary to obtain them.

A Testimonial.—The following letter was received by a maker of liniment at Carmine, Tex., according to the Chicago *Tribune*: "Mrs. Hattie Louis says her sister have ben sick 6 weaks and 5 doctors treated her but fail to do her any good then she went to the horse pittle and the doctors claim there they could not reach her case. She wer swelling so she could not lie down. She would hafter be prop up in bed and could bairly sit down and she says the first time she was treated with your liniment she felt a change and now she are doing fine and the swelling are all gone and she are able to do all the cooking in 9 days time which her mother had gave her up to die."

Correspondence

Precocious Children.

To the Editor:—In The Journal, Jan. 27, p. 277, I note an editorial on precocious children as judged by Professor O'Shea in a recent issue of *Science*. As Professor O'Shea takes the liberty of speaking of my little daughter, Winifred Sackville Stoner, Jr., as an example of a precocious child, I consider it my duty to Winifred as well as to other children to reply to the professor's arguments.

As a great lover of children and an enemy to the present system of public school training, which I believe makes boy and girl automatons, I have been earnestly studying child-training for the past ten years. From these observations, I cannot agree with Professor O'Shea that precocious children do not observe people and Nature as much as children untrained in book knowledge. What are good books but store houses of knowledge gathered by great minds after long periods of research on various subjects? Children who are trained to love these best of friends from babyhood will love them through life and thus have friends that will never desert them. Besides, I have noticed, contrary to Professor O'Shea's observations, that children who read books telling of Nature's realms find much more enjoyment in looking at her works than those who see her beauties through untrained eyes.

While taking a party of children through a beautiful wood last summer, I could not help noticing, with pride, how much more enjoyment Winifred got out of her walk than the other children who knew nothing of the leaves, roots, etc., of the various trees. Everything added to one's storehouse of knowledge, even in babyhood, is an open sesame to many pleasures. As a mere baby, Winifred found far more pleasure in walking along the sea shore and talking of the formations of shells than the ordinary child who saw the shells as an ostrich sees them—simply because of their brightness.

I agree with Professor O'Shea in believing that children of 2 years who can read Milton, do not know the sense of what they are reading. In studying the ordinary child trained by modern public school reading methods, I have often found this to be true of children up to the age of 14. Many of these children are also poor spellers. Recently in a test given in the New York high schools out of 1,000 pupils 800 could not spell the simplest words correctly. This is the result of sounding words which have no meaning to a child's ear.

Winifred, I am glad to say, was not taught by this method. She knew how to spell each word and understood its meaning when she used it in reading, the true thought conveyor. She could read when less than 2 years of age, but not Milton. Her first reading book was the simple childish classic, "Peter Rabbit," which the child thoroughly understood and enjoyed.

Despite the belief of many literary people that Winifred is a genius, I do not wish to see her so classed. There is a narrow line between the genius and the fool. Many times the so-called genius is a lopsided creature who shines in one direction, but knows nothing of the great joys derived from a general knowledge of life.

Winifred, who at the age of 9 years can express her thoughts in a number of languages, has published three books and can talk intelligently on mythology, literature, history, geography, art, etc., is only a simple child who loves her playmates and dolls as much as her books. She delights in romping with children of her own age, but if left alone she is never lonely because she has her book-friends or her store of knowledge to carry her to new worlds. She is as full of energy as a race horse, but this energy has been directed into proper channels and does not work havoc as is often the case with children bubbling over with life. Early training through play has made the pathway of knowledge one of joy to Winifred. It has also given her great powers of concentration and observation. With these two seeds implanted early in any child's mind, I believe that child will succeed in some particular line. Every child has a talent. It is the duty of parents to discover this talent and nourish it so that it will bear good fruit.

As Winifred early showed a love of verse, I have striven to develop this love by leading her to the storehouses of great poets. She has never been compelled to study, but seeks knowledge only when she is hungry for it. Therefore her brain is never taxed, for it is only when interest flags that one is injured in thinking.

This child is such a happy, healthy youngster, who finds so much enjoyment in exploring realms very often hated by children, but which she calls her good giants Matematiko and Geografio, that I yearn to see all children finding the paths to knowledge as veritable playgrounds.

For the sake of our children to whom we owe everything (having brought them into the world without their asking) let me plead with parents not to take the advice of a few professors who believe in allowing children to grow as weeds until the sixth or eighth year. "As the twig bendeth so the tree groweth." One cannot begin too early in training the child's mind, which, like wax, is very impressionable. We should teach our baby beautiful thoughts while he is yet in the cradle. Early impressions are lasting. The old man forgets things which he learned in the strength of his manhood, but when the evening of life creeps upon him he goes back to the thoughts of his youth. Then, how grateful will he be for the storehouse of wealth you have given him.

Winifred Sackville Stoner, Pittsburgh, Pa.

The Management of Normal Labor.

To the Editor:—I should feel that I had neglected my duty if I failed to comment on an article on this subject in The Journal, January 27, p. 274. I am sure, in the main, that the treatment as laid down in this article does not coincide with the advice and teachings of those who are giving obstetrics more than a passing thought. Had the author but referred to any modern text-book on obstetrics, he would have discovered that there had been just as great advancement in this line of medicine as in the other branches and that much of the advice given by him belongs to a period antedating antiseptic surgery. I am surprised that this article should appear in The Journal of the American Medical Association, and more so that the article was given such a prominent position. It does not seem necessary that I should point out the errors, because they are plain to anyone keeping in touch with modern medical literature; and I am sure, had the article been properly edited, it would not have appeared in our valuable journal.

C. E. Paddock, Chicago.

To the Editor:—The article on normal labor, in a recent issue, was very clear and concise, but in one respect it surprised me extremely.

The subject of rubber gloves was omitted. A description of obstetric work without mention of rubber gloves is rather startling. If the author does not approve of gloves, and has other means of preparing the hands, why does he not mention the fact? Or does he take for granted that we all wear gloves, as a matter of course? Evidently not, as he advises us to rupture the membranes with our finger-nails.

Surely boiling water is always to be had. Therefore there can be no easier and quicker way of eliminating infection than using boiled gloves.

A clear understanding on this subject would surely be valuable to the many who were interested and instructed by the mentioned article.

W. C. Gayler, Saint Louis.

To the Editor:—The general character of The Journal is so high that it comes to your readers as a shock to find an article in its columns so much behind the times, and so full of errors that it would be a disgrace to a proprietary advertising sheet. Such a shock I experienced in reading the article on "The Management of Normal Labor."

As a guide to the management of labor for the general practitioner it is incomplete, as it omits very important directions and it gives advice quite contrary to all the modern teaching. Without going into a comprehensive criticism I shall mention only a few things.

Omissions: preparatory enema; satisfactory cleaning of the patient; dressing of patient; external examination of patient; measurement of pelvis; use of gloves.

Objectionable Advice: frequent internal examination; pushing cervix over the head; anointing the perineum and seizing placenta in the vagina; manual removal of placenta in forty-five minutes.

Questionable Advice: use of chloroform instead of ether; interference with cord around neck; delay thirty minutes in cutting cord; routine use of ergot.

The article is not a credit to The Journal.

C. S. Bacon, Chicago.

To the Editor:—The parody on obstetric technic published in The Journal, Jan. 27, was, no doubt, given to show how badly the thing could be done. It seems to me, however, that the mission of The Journal would be better fulfilled by giving a clean-cut, modern technic which might serve as an example, rather than one which pulls the average practitioner down to the level of the illiterate midwife.

Is it forgotten: 1. That the vulva is shaved and scrubbed with soap and water, as well as with an antiseptic solution?

2. That rubber gloves and not petrolatum are used in the twentieth century?

3. That the Kelly pad is not yet out of date?

4. That continual manipulations during the second stage are not good practice?

5. That petrolatum on the perineum is about as useful as a snowball in——Panama?

6. That the cut cord should immediately be protected from infection?

7. That the cord should not be pulled on when delivering the placenta?

8. That a prophylactic for ophthalmia neonatorum should be used?

9. That an abdominal binder is needed by the mother? [Our correspondent has overlooked the fact that this is mentioned in the article. Please do not make the article out to be any worse than it is.—Ed.]

If I am wrong in believing asepsis to be the sine qua non of obstetric practice, and that the technic given in The Journal is as poor a specimen as could well be devised by a modern medical journal, then the sooner I know it the better.

Archibald E. Chace, M. D., New York.

To the Editor:—There appeared an article in The Journal describing the conduct of a case of normal labor, which advocated certain procedures to be practiced by the attending physician. Some of them, if the conduct of a case of labor is to be regarded as a surgical procedure, which it most certainly is, are deserving of severe criticism. After sterilization of the hands the following is advocated on part of the physician: "Having lubricated the index and middle-fingers of his right hand with some sterile lubricant, such as petrolatum, the physician inserts these fingers into the vagina and examines the cervix uteri to determine whether it is dilated, whether the pains affect the muscular fibers of the cervix, what part of the child is presenting, if the head is presenting, to determine if possible the position in which it lies, and whether any part of the placenta is attached to the lower segment of the uterus. Incidentally he learns also the condition of the perineum, whether it is rigid, dilatable or relaxed; of the vagina, whether it is moist or dry; of the pelvic walls, whether they are broad or narrow."

Why anybody should advocate the smearing of the examining finger, or fingers, with a mess of petrolatum, which is rendered sterile only with great difficulty and is kept so with even more trouble, is beyond comprehension. It is certainly a reversion to antiquated methods of technic. Surely the fingers of a hand covered with a sterile glove can be readily made insertible by the application of sterile green-soap tincture. Not a word is said regarding the physician attempting to learn the progress of labor by external examination, a method of great value, used by modern obstetric surgeons a great deal, and without the danger of sepsis. The paragraph also presupposes, by its own words, that the attendant is in utter and absolute ignorance of the position and presentation of the child and the pelvic measurements of the mother, something that he should be well informed of before his call to active service. The advice is also given that "the perineum should be anointed with petrolatum or some unctuous substance so as to soften it and facilitate dilatation." Such advice is what one might look for from a midwife or neighborhood granny, not from someone who is describing the technic of labor in a period of modern surgery, and the man who conducts his cases along the lines indicated by the writer of this article should be congratulated if his patients escape with their lives.

It is not hard to understand why men get into trouble, have sepsis, dead babies, a dead or mutilated mother, if obstetrics is practiced along the lines of the above-mentioned article. The modern obstetrician is a surgically trained man and it certainly goes against the rudiments of the art when some of the methods mentioned above are advocated in a periodical of the class The Journal of the A. M. A. is in.

Frank H. Jackson, Houlton, Me.

[Comment: Many of the above criticisms are just and the letters are welcomed, for we are always glad to have errors pointed out, especially in an article on so important a subject. We intend to print nothing in The Journal that is not reliable and the occurrence criticized above is one of those unfortunate circumstances when something "gets by" the editor.

In the second place, the letters indicate the very gratifying fact that our readers insist on a high standard and will hold us to it. The highest standard is our ambition.

Third, these criticisms bring out prominently the great advance that has been made in obstetric technic in the last decade or two. It is worth while for our readers to be impressed with the advances in this field, even at the expense of our having to admit an oversight—or, to be more precise, a lack of oversight. In justice to the author of the article, however, it should be remembered that he had in mind the country practitioner and the exigencies of country practice, and, from this point of view, there may be ground for difference of opinion as to some of the points raised by our correspondents, but we will not confuse the issue by defending any particular detail. The important point is that the introduction of asepsis in surgery has revolutionized obstetrics and has rendered many of the manipulations, formerly held in high honor, useless and even dangerously objectionable. It is high time that the general practitioner should realize the necessity of being up-to-date in his obstetric work. While the majority of normal labors may terminate successfully with ordinary precautions, it is important for the obstetrician to feel that the life and the future health and happiness of the patient are in his hands, that aseptic methods in obstetric procedures are as important as in a surgical operation, and that any precaution which modern science may suggest to enhance the safety of childbirth is worthy of adoption.—Ed.]

The Army Canteen

To the Editor:—There have been a number of replies elicited by the petition of the 279 physicians to Congress asking for the passage of the Bartholdt Bill restoring the canteen. A number of the arguments have been of such a character that it would be needless to attempt to refute them. I desire, however, to call attention very briefly to the following points:

In Colonel Maus' letter (The Journal A. M. A., Jan. 13, 1912, p. 130) objection is made to the petition of the 279 physicians on the ground that we "know little of the sociologic condition of the soldier and his environment" and we are advised that "the shoemaker should stick to his last." I beg to quote three witnesses who do know the sociologic conditions and environment of the soldier quite as well as Colonel Maus. They are, first, General Wood, the Chief-of-Staff of the Army, whose entire life has been spent in the military service of his country. He says: "There is no question whatever in my mind or in the minds of the great majority of officers of experience in the service that the abolition of the canteen has done much to increase immorality and to relax the bonds of discipline in the Army. The intentions of those who were active in its abolition were undoubtedly good, but their ignorance of the actual situation prevailing was profound. It is difficult for anyone who was familiar with the conditions which existed in the Army under the canteen to discuss with patience the question of its abolition. The abolition of the canteen has been one of the strongest influences against discipline which we have had to combat, and I earnestly urge on you its restoration, being convinced that such restoration is in the interests of the morality and discipline of the Army."

My second witness is General Torney, Surgeon-General of the United States Army, who also has spent his life in the military service of his country. His letter was published in The Journal A. M. A. Jan. 20, 1912, p. 214. He calls special attention to the fact that the increase of venereal diseases, which Colonel Maus attributed to the institution of the physical examination of every soldier at stated intervals "took its abrupt and enormous rise ten years before the physical examinations began to be held at any considerable number of posts in the United States."

My third witness is a petition signed by nearly 2,400 army women, headed by Mrs. Leonard Wood and Mrs. Frederick D. Grant, and others, sisters, mothers, wives, and daughters of army men, many of whom have spent a large part of their lives at army posts and are thoroughly familiar with the sociologic condition and environment of the soldier, who say: "Having seen and felt the effects of the act of Feb. 2, 1901, prohibiting the sale on military reservations of beer and light wines; realizing, from an experience extending over ten years, that the effect of that act has been injurious to discipline, harmful to morality, and conducive to intemperance; having deeply at heart the truest interests of the Army, and therefore of the nation; believing that, from our close relation and intimate association with our soldiers, we are better judges of the effects on them of such legislation than those who look in from without or who act on mere theory or generalization; we, the mothers, daughters, sisters, and wives of officers and enlisted men, do respectfully urge and earnestly request, in the interest of discipline, morality, and temperance, the repeal of the said act."

On these three witnesses I am willing to rest our case. Per contra, I beg to call attention to the fact that so far as I know of the entire Medical Corps of the Army, Colonel Maus is the only one who has publicly upheld the opposite view.

W. W. Keen, Philadelphia.

Importance of Public Enlightenment on Venereal Disease.—In the matter of the hysterical attitude toward venereal diseases, there is a wheel within a wheel, writes Samuel Hopkins Adams, in the *Jour. Am. Pub. Health Assn.* The idea that of the two diseases, syphilis is incalculably the worse, and gonorrhea rather unimportant, is a fallacy of the widest acceptation. In fact there does not inhere in leprosy itself more of the terror of a word than in syphilis. Yet, by and large, and with particular reference to innocent wives infected by their husbands, it is certain that as much damage is inflicted on the race by the little-considered infection as by the superstitiously dreaded affliction. Syphilis can now be, in many cases, absolutely cured. But no man knows when gonorrhea, apparently eradicated, may reassert itself to the wreckage of the patient's life and the health of those dearest to him. To reconstruct the hysterical fear of syphilis into the just and logical dread due equally to both the sexual diseases, is perhaps the most vital problem of modern hygienic education. It all resolves itself into a question of patient, unremitting instruction of the public, through press, platform, pulpit and schools. Nowhere as in hygiene is that public capacity so needed which Bacon has set down as one part of wisdom, the capacity to learn not from the names of things, but from things themselves.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SERUM IN CEREBROSPINAL MENINGITIS

To the Editor:—1. Where can I get serum for the treatment of cerebrospinal meningitis?

2. Please state the method of using it.

H. P. Chesmore, M.D., Princeton, Mo.

Answer.—1. The serum is furnished by the Rockefeller Institute for Medical Research and is also for sale by H. K. Mulford Co., and a similar serum can be obtained from Victor Koechl & Co. (See New and Nonofficial Remedies, Ed. 1911, p. 187; Ed. 1912, p. 204.)

2. The serum is injected into the spinal canal after the removal of an equal quantity of cerebrospinal fluid. For further details see The Journal, Sept. 2, 1911, p. 823. Articles by F. S. Churchill (The Journal, July 24, 1908, p. 21, and Sept. 11, 1909, p. 841) may also be referred to for the technic. In some cases the serum has been injected into the ventricles of the brain (See S. R. Benedict, The Journal, Feb. 4, 1911, p. 346).

THERAPEUTIC VALUE OF BALSAM OF TOLU

To the Editor:—For years I have prescribed, with excellent results, in cases of chronic bronchitis, the following:

℞.	gm. or c.c.	
Terebinth. venetian		
Picis liquid ...āā	2	ʒss
Bals. tolutan	6	ʒjss
Sodii benzoat ...q. s.		

Ft. pil. No. 80.

Can we safely dispense with the balsam of tolu as being inert, or is it of much use as an adjuvant?

D. A. Zwigtman, Niles, Mich.

Answer.—Balsam of tolu contains cinnamic and benzoic acid. The action it has would be very similar to that of sodium benzoate. In the prescription quoted, the quantity of balsam of tolu prescribed is slightly over 1 grain to the pill, and as the average dose of balsam of tolu is 1 gm., or 15 grains, it is evident that the amount of tolu in this prescription can have very little therapeutic effect and might be omitted without detriment. From the composition of tolu, it does not seem warrantable to state that it has no therapeutic value, and its agreeable odor renders it a valuable addition to many expectorant mixtures.

VLEMINCKX' SOLUTION

To the Editor:—In several works on dermatology Vleminckx' solution is often referred to, but in none have I been able to find a formula. Please publish the formula.

M. V. Godbey, Charleston, W. Va.

Answer.—The formula is:

℞			Gm. or c.c.
Calcis	℥ss	or	16
Sulphur. sublim.	℥j		32
Aq. dest.	℥x		320

M. Coque ad ℥vj [200] deinde filtra.

PROTEID PERCENTAGE IN MILK AGAIN

To the Editor:—The inquiry of Dr. C. Mayfield in The Journal for January 27, p. 297, and the answer regarding the proteid percentage in milk might well be amended by reference to the test given by Boggs in the *Bulletin of Johns Hopkins Hospital* for October, 1906. This is an easier test than Woodward's and its accuracy has been proved by careful experiment. An ordinary Esbach test-tube and a 300 c.c. solution are the only things needed. The test is made as follows:

(The reagent: 25 c.c. phosphotungstic acid added to 125 c.c. aq. dest.; mix thoroughly and add 25 c.c. conc. HCl, plus 100 c.c. aq. dest.; keep in a dark bottle.)

Human milk should be diluted 1:10 and cow's milk 1:20; in the Esbach tube put in milk to the mark "U" and the reagent to the mark "R"; reckon from the bottom of the meniscus. Next, cork the tube and invert slowly a few times.

Put in the rack for twenty-four hours and a fine precipitate will form at the bottom; if the dilution was 1:10, read percentage directly from scale; if 1:20, multiply by two.

The precipitate of proteid is much finer than that found in the Esbach test for albumin in the urine and the test is very easily made.

Alexander C. Soper, Jr., Chicago.

The Public Service

Medical Department, U. S. Army

Changes during the week ended Feb. 3, 1912.

Ingalls, R. E., dental surgeon, January 17, reports for temporary duty at Boise Barracks, Idaho. Left from temporary duty at Fort Missoula, Mont., January 15.

Each of the following named officers is relieved from duty at the army medical school and in the medical reserve corps and will proceed to his home, and on arrival there will report by telegraph to the adjutant general of the Army: First Lieutenants Leo B. Allen, Sidney M. Bunker, William G. Gill, Charles P. Kennedy, William P. J. Ruddy and Frank Suggs.

The following named medical officers on arrival at San Francisco are ordered to duty at the posts named:

Woodruff, Charles E., lieut. col., medical corps, sanitary inspector, western division, relieving Lieut. Col. Henry S. T. Harris, who will proceed to Fort D. A. Russell, Wyo., for duty.
Purviance, William E., major, medical corps, Fort McDowell, Cal.
McCulloch, Champe C., Jr., major, Fort D. A. Russell, Wyo.
Truby, Albert E., major, Fort Jay, N. Y., relieving Persons, Elbert E., major, to Field Hospital and Ambulance Co. No. 2, presidio of San Francisco, relieving Bevans, James L., captain, to Fort Mason, Cal. Also attending surgeon, San Francisco.
Huntington, Philip W., captain, Fort Totten, N. Y.
McLellan, George H., lieut., to Fort McDowell, Cal., relieving Johnson, Howard H., captain, to Walter Reed General Hospital, Takoma Park, D. C.
Mueller, Armin, lieut., Fort Des Moines, Iowa.
Fronk, Clarence E., lieut., Fort Benjamin Harrison, Ind.
Watkins, Victor E., M.R.C., Fort Sam Houston, Tex.
Henry, Ziba L., M.R.C., Fort Sill, Okla.
Freeland, H. L., M.R.C., Fort Benjamin Harrison, Ind.
Conzelman, Fred J., M.R.C., Fort Mott, N. J., relieving MacDonald, Charles E., M.R.C., who on being thus relieved will proceed to his home. Lieutenant MacDonald will stand relieved from active duty, to take effect May 15, 1912.
Drake, Percy G., M.R.C., Fort McKinley, Me.

Rutherford, Henry H., major, January 27, granted one month's leave of absence with permission to apply for one month extension.

Johnstone, E. K., M.R.C., January 26, relieved from duty at Fort Shafter and ordered to Schofield Barracks, H. T., for duty.

Raymond, T. U., lieut. col., January 27, relieved from duty in the Philippines division July 15 and ordered on arrival at San Francisco to report to the adjutant general of the Army for orders.

Thomason, Henry D., captain, January 27, orders to the army field service school, Fort Leavenworth, Kan., revoked.

Eckels, L. S., lieut., January 30, ordered to Fort Andrews, Mass., for temporary duty.

Richards, R. L., captain, January 31, granted thirty days' leave.

Waring, J. B. H., lieut., February 1, granted thirty days' leave of absence, to take effect on expiration of present sick leave.

Persons, E. E., major, February 1, is detailed to enter the army field service school, Fort Leavenworth, Kan.

Medical Corps, U. S. Navy

Changes for the week ended Feb. 3, 1912.

Stibbens, F. H., P. A. surgeon, detached from the naval training station, San Francisco, and ordered to the *St. Louis*.

Charlton, C. F., and Davis, R. G., A. A. surgeons, appointed acting assistant surgeons from Jan. 26, 1912.

Murphy, J. F., P. A. surgeon, detached from the naval hospital, Las Animas, Colo., and ordered to Washington, D. C., for examination for promotion and to await orders.

Garrison, H. A., P. A. surgeon, ordered to the navy recruiting station, Cincinnati.

Duhigg, J. T., asst. surgeon, detached from the navy recruiting station, Cincinnati, and ordered to Washington, D. C., for examination for promotion and to await orders.

U. S. Public Health and Marine-Hospital Service

Changes for the two weeks ended Jan. 31, 1912.

Cofer, L. E., assistant surgeon general, directed to proceed to Philadelphia, Gloucester, N. J., and New York to inspect the operations of the service in the medical inspection of arriving aliens. Also, while in New York City to deliver an address before the New York Academy of Medicine on maritime quarantine.

Lavinder, C. H., P. A. surgeon, directed to inspect the South Atlantic quarantine station.

von Ezdorf, R. H., P. A. surgeon, directed to proceed via Austin to Dallas, Tex., to investigate cerebrospinal meningitis.

Anderson, J. F., P. A. surgeon, detailed to represent the service at the meeting of the National Committee on Milk Standards to be held under the auspices of the New York Milk Committee in New York, Jan. 25-27, 1912.

McCoy, G. W., P. A. surgeon, appointed by the governor of Hawaii as a member of the sanitary commission of Honolulu.

Ebersole, R. E., P. A. surgeon, relieved from duty at the marine hospital, San Francisco, and directed to proceed to Pensacola, Fla., and assume temporary command of the quarantine service there.

Roberts, Norman, P. A. surgeon, directed to proceed to Baltimore to arrange for service exhibit during "Health Week" to be conducted under the auspices of the Medical and Chirurgical Faculty of Baltimore, beginning Feb. 19, 1912.

Blount, B. B., A. A. surgeon, granted thirty days' leave of absence from Feb. 1, 1912.

Board of medical officers convened to meet at the marine hospital, Chicago, Jan. 29, 1912, for the examination of Passed Assistant Surgeons H. S. Mathewson and Taliafero Clark to determine their fitness for promotion to the grade of surgeon. Detail for the board: Surgeon R. M. Woodward, chairman; Surgeon J. O. Cobb; Passed Assistant Surgeon J. S. Boggess, recorder.

Board of medical officers convened to meet at Halifax, N. S., for the examination of alien immigrants. Detail for the board: Acting Assistant Surgeon T. W. P. Flinn, chairman.

Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

COMBINED OFFICE AND RESIDENCE

Jesse P. Simpson, M.D.
PALMER, ILL.

H. M. Ferguson of Morris, Ill. (The Journal, Oct. 21, 1911, p. 1386), inquires for plans for combined office and residence. This is a very practical question. The accompanying view and ground plan are submitted with the hope that they will call forth other useful suggestions or more perfect plans. In this case the residence had been previously constructed, and this appeared the most practical way to join an office to it.

Before putting this plan in action, I consulted an old practitioner, who had made a success of the practice of medicine in many ways, and he replied: "If I had it to do over again a thousand times, I would always build the house and office together."

The present arrangement has been in use for eight years, during which time much success has been attained in a surgical way. The nearest hospital is 12 miles away, and when I first built, the nearest one was 30 miles distant.

If building the whole structure new, I would make some slight alterations. It would be an advantage to have a broad hallway between the two units, i. e., extending along one side of the residence, with doors opening into various rooms, so that a wheeled litter could be readily taken from the operating-room to a bed, without traversing one or more rooms crowded with furniture. This would add much to the cost in building, but the housewife could always find this hall useful for something, especially if made of ample width. The office could then be set as far back as one might wish—and opening into this hallway—leaving the residence as the most prominent feature of the structure, and yet giving ready access from the operating-room to several ground-floor rooms of the residence.

House of a country physician with a wing for office and operating-room.

The position of our drug-room, or laboratory, is ideal, since having but one end exposed to the weather it never gets very cold there even in the severest weather. A window in the partition—adjoining the vestibule—and a glass door opening at the rear of vestibule afford light from both ends of drug-room.

The physician should not let his vanity prompt him to give a large space to the waiting-room at the expense of curtailing the operating-room, especially in country districts where the patients cannot be induced to come during a short number of office hours in the middle of the day.

THE OPERATING-ROOM

The four windows in the operating-room are extra large, and the lower sashes have the Florentine glass, so that no blinds are necessary even after nightfall.

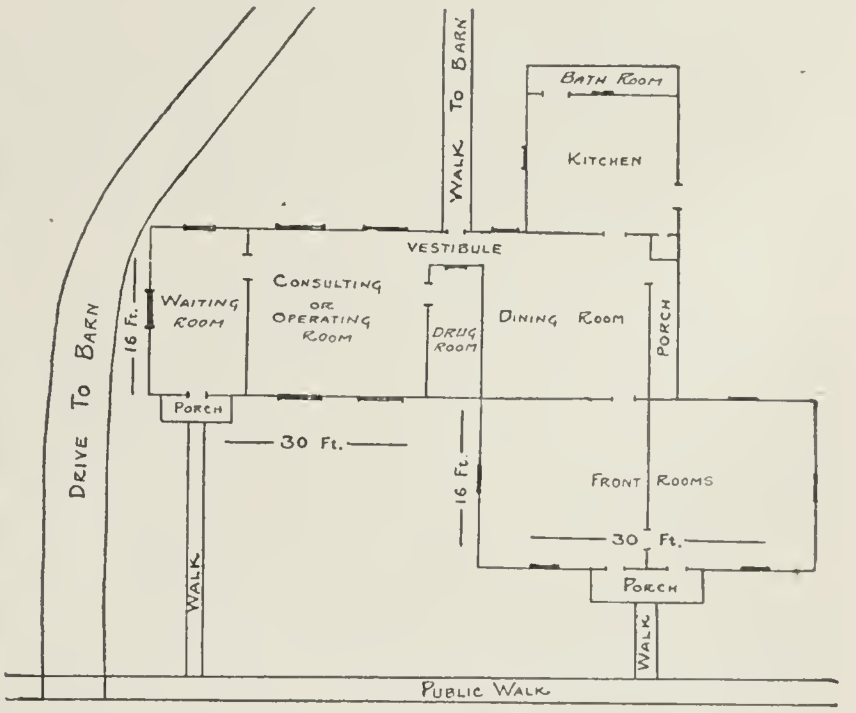
It would be some advantage if the operating-room were a little more isolated, so that the family and various callers would not find it so convenient as a thoroughfare. It could the more readily be kept in readiness for emergency surgery, and would be more easily prepared for the set operations.

Having storm windows in place all around, we have heated this room from stoves placed in the dining-room and waiting-room; and all being ready the intervening doors are closed and ether used as the anesthetic, without any danger from explosion of its vapor.

The driveway to the stables and carriage-house in the rear extends along the end of the office, and cripples or emergency patients are helped out of vehicles directly onto the office porch and conveyed into the operating-room with little exertion.

THE VERDICT OF EXPERIENCE

Dr. Joseph Mathews, in his excellent little book, "How to Succeed in the Practice of Medicine," advises against having the "office in the residence," arguing that it entails a lot of hardship on the wife. After eight years, we find that this is not a valid objection. The honest, self-respecting people with whom we usually deal in a farming community do not make themselves objectionable. Moreover, the country physician takes many meals away from home—many of them at midnight—during the course of the year, and it is invariably the best that these people have to offer, so that the occasional entertainment of them in our home is a genuine pleasure. Some of our best collections are made on these rare occasions.



Plan of combined house and office.

I tried the isolated office for four years, during which time no surgery of any magnitude was undertaken, barring the obstetric surgery that one is forced into in private houses.

It has been offered as an objection that under this combination plan those suffering from venereal disease will be deterred from calling on the physician for treatment. This has not proved true in our case. Even if there be any loss in this direction, it is more than compensated for by the amount of respectable gynecologic practice that has come to us. To the average woman, the ordeal of examination loses much of its terrors when the surgeon's wife is to act as attendant.

OPERATING EQUIPMENT

Under no other plan will the young practitioner develop a successful surgical technic if denied the conveniences of a well-appointed hospital. The advantages are a hundredfold. We use the ordinary antirusting wash-boilers; a faucet is soldered into one end. Filled with water from the cistern, and boiled for a half day or more on the kitchen range, then carried to a low shelf in the operating-room—behind the heating stove—and well covered to exclude dust, we have sterilized water on hand at all times for every purpose. One should not make up a simple eye lotion without sterile water. We buy gauze by the hundred yards, cut it up and sterilize it ourselves in the kitchen, after which it is dried out in the oven and placed in glass jars with cover fitting over outside. In packages containing six or a dozen pieces it is always convenient to get at when packing up the emergency or obstetric grip. Sterilized towels in packages of three or more are also kept on hand. With an elongated sterilizing kettle surgical instruments are readily boiled at any time, on an oil stove or a cob fire built in the large range.

THE PHYSICIAN'S WIFE AS AN ASSISTANT

Every physician's wife should be taught to give an anesthetic and to supervise the sterilization of gauze, gowns and surgical instruments, even if her courage is not of that quality so essential on the "firing line." In the early days we often sought the aid of a graduate nurse. At present we do all sorts of minor surgery, without calling in any outside aid.

We feel pretty secure in our technic. Our cases of injury from axes, mowing-machines and other farm implements get along without suppuration. We have never had tetanus develop, but actually saved a boy, 6 years old, who was brought to us eleven days after he had run a splinter in his foot, and after he had developed the convulsions. Besides the hundreds of this class of operations, we have done fifty-six operations of the major sort without a death or mishap.

We both enjoy the medical society meetings and the occasional visits to the surgical clinics in the large cities. On one such visit, a simple appendectomy was in progress. When the non-adherent appendix was brought up through the small incision, my wife whispered: "That was an easy one, wasn't it?" She had gone through, with me, the tedious ordeal of separating an agglutinated mass of bowel sufficiently often to appreciate this "easy one."

TIME ALLOWED FOR STUDY

When all one's literature, both medical and general, is located in one place and all the leisure hours, both night and day, are spent at that place, the conditions are ideal for much hard study. The companionship of one's family is worth much. Moreover, our four children have without effort imbibed the principles of asepsis that will be invaluable to them throughout a lifetime. It becomes "second nature" in time. One of them, when 4 years old, was being teased by an elderly aunt. At length the youngster exclaimed:. "If you don't let me alone, my papa will boil up his tools and cut your legs off."

In the small village it is not necessary for the establishment to be located "up on the square," in order to get business. Most country calls reach you by telephone. Our place is two blocks from "the square" and one block from the station house. It is at the end of a grassy commons and the railroad parallels our front 100 feet away. When people are badly hurt, they always find our operating-room. Several of our cases of emergency surgery have been from the railroad. One of the patients, with an arm and a hand cut off under the wheels, left our place with a smile on his face forty-eight hours later, and his recovery was uneventful.

THE ECONOMY OF THIS ARRANGEMENT

We have no duplication of telephone rents. The office slate, so frequently misleading, is never employed. Midnight office calls are quickly attended in shirt, trousers and house slippers without discomfort, any time in the year. The whole family and the hostler act the part of the office boy. And this concentration of energies is a great saver of time.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Sixth Month—Third Weekly Meeting

Splenomedullary Leukemia[1]

Symptoms: Insidious onset, early symptoms, hemorrhages, enlarging spleen, circulatory symptoms, nervous symptoms.[2] Occurrence in childhood.[3]

Blood Changes: Number of white cells. Ratio of reds. Myelocytes, eosinophils, "polymorphous blood." Number of red cells, nucleated forms.

Treatment: Roentgen ray.[4] Exposures (length and location). Immediate and remote results. Hygienic treatment. Internal treatment. Arsenic, physiologic and therapeutic actions. Bone marrow preparations.

Lymphatic Leukemia

Pathologic Anatomy: Glands usually involved, physical appearances, microscopic changes. Lymphoid structures usually involved. Changes in liver, leukemic nodules. Changes in kidneys. General distribution of leukemic nodules.

Diagnosis: Clinical history, arrangement of enlarged glands. Blood changes. Lymphocytes, other forms of whites. Reds, number, nucleated.

Treatment

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Connecticut: Regular, City Hall, New Haven, March 12-15. Sec., Dr. Charles A. Tuttle; Homeopathic, Grace Hospital, New Haven, March 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Grace, New Haven, March 12. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

Kansas: National Hotel, Topeka, February 13. Sec., Dr. H. A. Dykes, Lebanon.

Maine: City Council Rooms, Portland, March 12-13. Sec., Dr. Frank W. Searle, 776 Congress Street.

Massachusetts: State House, Boston, March 12-14. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Nebraska: State House, Lincoln, February 14-15. Sec., Dr. E. Arthur Carr, 141 S. 12th Street.

Wyoming: Riverton, March 13-15. Sec., Dr. Albert B. Tonkin.

National Confederation of State Boards

The following program has been announced for the meeting of the National Confederation of State Medical Examining and Licensing Boards, to be held in Chicago, Thursday, Feb. 29, 1912, at the Congress Hotel:

1. "What a National Federation of State Boards Can Do." By Dr. Albert B. Brown, secretary of the Louisiana State Board of Medical Examiners, New Orleans. The discussion will be opened by Dr. Charles A. Tuttle, secretary of the Connecticut State Board of Medical Examiners, New Haven.

2. "What Should be the Requirements for Membership in a National Federation of State Boards?" By Dr. John Milton Dodson, dean of Rush Medical College, Chicago. The discussion will be opened by Dr. Alexander Lambert, dean of Columbia University College of Physicians and Surgeons, New York City.

3. "Best Methods of Conducting State Licensing Examination." By Dr. George H. Matson, secretary of State Medical Board of Ohio, Columbus. The discussion will be opened by Dr. George M. Williamson, secretary of the North Dakota State Board of Medical Examiners, Grand Forks.

4. "Medical School Equipment and the State Board License Examination." By Dr. Frank Fairchild Wesbrook, dean of the University of Minnesota College of Medicine and Surgery, Minneapolis. The discussion will be opened by Dr. Beverly D. Harison, secretary of the Michigan State Board of Registration in Medicine, Detroit.

The afternoon session will be devoted to business, including reports of committees and the election of officers.

Ohio December Report

Dr. George H. Matson, secretary of the Ohio State Medical Board, reports the written and practical examination held at Columbus, Dec. 5-7, 1912. The number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. The total number of candidates examined was 20, of whom 17 passed and 3 failed. The following colleges were represented:

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[1] Warthin: International Clinics, 1909, vol. iv, p. 280.
[2] Woods: Penn. Medical Journal, April 10, 1910.
[3] Karsner: Univ. Penn. Med. Bulletin, 1909-10, vol. xii.

[4] Stengel and Pancoast: The Journal A. M. A., April 25, 1908.

PASSED

College	Year Grad.	Per Cent.
Johns Hopkins University	(1910) 83.1; (1911)	83.6
College of Physicians and Surgeons, Baltimore	(1909)	84.6
University of Michigan, Dept. of Med. and Surg.	(1909)	85.9
St. Louis University	(1911)	75.7
Cleveland Homeopathic Med. College	(1907) 84.2; (1910)	79.6
Western Reserve University	(1910)	85.2
Ohio-Miami Medical College	(1911)	82.6, 83.9
University of Pittsburgh	(1910) 80.9; (1911)	78, 81.3
Jefferson Medical College	(1911)	80, 82
Hahnemann Medical Coll. and Hosp., Philadelphia	(1908)	81
McGill University, Montreal, Quebec	(1910)	86.5

FAILED

College	Year Grad.	Per Cent.
Eclectic Medical College, Cincinnati	(1910) 65; (1911)	73.7
Starling-Ohio Medical College	(1911)	74.3

Minnesota January Report

Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners, reports the written, oral and practical examination held at Minneapolis, Jan. 2-5, 1912. The number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. The total number of candidates examined was 9, all of whom passed. Eleven reciprocal licenses were granted. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Rush Medical College	(1911)	82.2
Louisville and Hospital Medical College	(1908)	76
College of Physicians and Surgeons, Baltimore	(1903)	82.2
Hamline University	(1910)	83
University of Pennsylvania	(1910)	82
Hahnemann Medical College and Hospital, Philadelphia,	(1894) 78.8; (1902)	77.3.
Manitoba Medical College	(1907)	78.8
University of Toronto, Ontario	(1911)	82.7

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
George Washington University	(1908)	Dist. Colum.
Chicago College of Medicine and Surgery	(1909) (1910)	Illinois
Rush Medical College	(1907)	Illinois
University of Michigan, Dept. of Med. and Surg.	(1895)	Iowa
Hamline University	(1903)	N. Dakota
University of Nebraska	(1907)	N. Dakota
Hahnemann Med. Coll. and Hosp., Philadelphia	(1890)	Ohio
Medico-Chirurgical College of Philadelphia	(1900)	Maine
Wisconsin College of Physicians and Surgeons	(1910)	Wisconsin
Imperial Alexanders University of Finland	(1903)	Ohio

Ohio January Reciprocity Report

Dr. George H. Matson, secretary of the Ohio State Medical Board, reports that at the meeting held Jan. 10, 1912, fifteen candidates were licensed through reciprocity. The following colleges were represented:

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Jenner Medical College	(1906)	Illinois
Hahnemann Med. College and Hospital, Chicago	(1907)	Illinois
Bennett Medical College	(1897) Indiana; (1910)	Illinois
Chicago College of Medicine and Surgery	(1911, 2)	Illinois
National Medical University, Chicago	(1904)	Illinois
College of Physicians and Surgeons, Baltimore	(1910)	Maryland
Johns Hopkins University	(1910)	New York
University of Michigan, Department of Medicine and Surgery	(1894) Iowa; (1910)	Maryland
Cornell University Medical College	(1905)	New York
Columbia University, College of Phys. and Surgs.	(1908)	New York
Hahnemann Med. Coll. and Hospital, Philadelphia	(1882)	Kentucky
University of Palermo, Italy	(1908)	Maryland

Rhode Island January Report

Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the written and oral examination held at Providence, Jan. 4-5, 1912. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 80. The total number of candidates examined was 9, of whom 6 passed and 3 failed. The following colleges were represented:

PASSED

College	Grad. Year	Cent. Per
College of Physicians and Surgeons, Baltimore	(1911)	85.9
Harvard Medical School	(1910)	90.2
Dartmouth Medical School	(1900) 80; (1911)	89.4
Jefferson Medical College	(1910)	90.6
Laval University, Quebec	(1911)	80

FAILED

College	Grad. Year	Cent. Per
Georgetown University	(1910)	71.6
Tufts College Medical School	(1909)	73.6
University of Vermont	(1910)	76.1

Utah January Report

Dr. G. F. Harding, secretary of the Utah State Board of Medical Examiners, reports the written and oral examination held at Salt Lake City, Jan. 2-3, 1912. The number of subjects examined in was 19; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 3, all of whom passed. One candidate was licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Colorado	(1911)	82.7
Northwestern University Medical School	(1911)	78.7
Tokyo Medical College, Japan	(1905)	75.1

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Washington University, St. Louis	(1909)	Missouri

Book Notices

The Treatment of Fractures by Mobilization and Massage. By James B. Mennell, M.D., B.C., Late Resident Medical Officer of St. Thomas' Home. With an introduction by Dr. J. Lucas-Championnière, Chirurgien Honoraire de l'Hôtel Dieu. Cloth. Price, $4 net. Pp. 458, with 66 illustrations. New York: Macmillan Co., 1911.

Mennell does not claim to have originated the method of treatment advocated by him, but acknowledges that it is founded on the teachings of Lucas-Championnière of Paris. The manuscript was submitted to Lucas-Championnière, who has expressed his approval thereof in a ten-page introduction in French. The work is divided into two parts, the first dealing with the subject in a general way, the second with the treatment of particular fractures.

The author of this book is such an enthusiast and so carried away by the method advocated that there is great danger of one being misled by his statements unless there is great care in picking out the truth, of which there is much, from the sophistry, of which there is not a little. In the preface the following is found: "The most auspicious feature of this method of treatment is its simplicity: gentleness of touch is all that is required and thus there is no inherent obstacle in the way of its universal adoption. . . . Thus it will be seen that no special experience is called for when the treatment of fractures on the lines advocated is to be undertaken." It will take more evidence than Mennell adduces to convince the average surgeon that no special experience is necessary and that gentleness of touch is all that is required in order to treat fractures successfully. The terms mobilization and massage are perhaps not well chosen to connote what is really meant by their use. The author is very careful to define what he means by massage, and states distinctly and repeatedly that it is not what is ordinarily practiced by the professional masseur. In fact he looks on the professional masseur as eminently unsuited by training to give what he means by massage. By massage or glucokinesis, as it is termed, is meant the softest and most gentle rubbing or stroking imaginable. "The movements are little more than a caress, being so smooth and light that they almost resemble a mesmeric pass." In certain cases the touch is to be so light that preliminary passes are made "without the hand coming in contact with the limb."

Most specific rules are given how to perform the massage, but a rubbing which fades from "a little more than a caress" into "a mesmeric pass and finally into the pass of the hand over the limb without actually touching it at any point" must also pass into the realm of suggestion. It is even claimed that "massage applied to one extremity is capable of exerting a beneficial effect on morbid conditions existing on the opposite side of the body." The effect of such massage, it is claimed, is to produce complete anesthesia of the parts so that they may be manipulated without pain; but, Mennell says, "incidentally a supply of sweets is an invaluable auxiliary in the treatment of fractures in children." "The recovery of the circulation in children is so rapid that massage is never required for the treatment of a child as it is in the case of an adult."

The chapter on "The Setting of Fractures" contains a number of examples of curious reasoning. One is made to believe that the massage relieves the pain and muscular spasm so that the fracture practically reduces itself spontaneously. "But massage treatment enables us to go even further than this, for its effect does not cease with the reduction of the deformity; the beneficent effect remains and the deformity in many cases does not recur."

"As a last example of the power of massage to reduce deformities we may notice those fractures of the olecranon in which there is much separation of the fragments. Under the influence of massage the spasm is overcome and the fragment sinks back into apposition with the remainder of the bone."

Concerning the results of treating fractures of the olecranon in this way, he says: "Professor Lucas-Championnière states that bony union is the rule; it is unfortunately not within my experience at present if separation of the fragments has been great."

That deformity occurs in fractures is admitted but the deformity is not diminished by calling it "pseudo-deformity," a term which he applies to the deformity which is seen especially after fracture in the neighborhood of a joint, "the most favorable situation for a study of the phenomena being the region of the wrist after fracture through the lowest inch of the radius."

That the author's judgment occasionally rises above his theory is shown by such sentences as the following: "While fully accepting Professor Lucas-Championnière's statement that the necessity for the restoration of the shape of a fractured bone in such cases as those of Colles' fracture is as fallacious an idea as that of the necessity for fixation, there is no excuse for treating a fracture presenting any marked degree of deformity by mobilization and massage alone under the impression that the result to be attained, functional utility, justifies the neglect of deformity."

"Where there is great deformity which resists all attempts at reduction, even under an anesthetic combined with massage and where contra-indications are lacking, then the best result will be obtained by operation followed by mobilization and massage." "Where operative procedure is called for it is impossible that treatment by mobilization and massage alone can take its place with actual success."

Notwithstanding such sentences scattered through the book, Lane and his work are quite severely criticized. While Mennell has little to say about the use of splints and says that little in an indefinite way, it is plainly to be seen that they are used much more frequently than might be inferred. It is interesting to note, too, that the first contra-indication to the treatment of fractures by mobilization and massage which he gives is "mobility of fragments." Mobility of fragments, however, is usually present in most fractures of the long bones so that the first contra-indication is a contradiction of much of that which precedes.

It will be readily acknowledged that there is room for improvement in the methods of treating fractures. It is quite evident, too, that as a rule fractured limbs are kept too long in fixed dressings without having the parts moved and without the muscles being allowed to act. Mennell, in emphasizing these facts, is doing much good and if his advice in this respect were more frequently followed the period of recovery of most fractures would be materially shortened. The great trouble with the book, however, is that the author's enthusiasm frequently runs away with his good judgment, and unless those who read the book recognize this and are governed accordingly they may meet with many unsatisfactory results in the treatment of fractures.

The Mechanism of the Heart-Beat. With Especial Reference to Its Clinical Pathology. By Thomas Lewis, M.D., M.R.C.P., D.Sc., Lecturer in Cardiac Pathology, University College Hospital Medical School, London. Cloth. Price, $7 net. Pp. 295, with 214 illustrations. New York: Paul B. Hoeber, 1911.

The rapid advances in our knowledge of the clinical pathology of the heart have made it nearly impossible for the general reader to keep pace with the progress. He is disheartened in his attempts to understand the mechanism of the polygraph or of the string galvanometer and is bewildered as he tries to interpret their hieroglyphic tracings. To one desirous of gaining an insight into this recent knowledge, this book will be most welcome, for it is written by one whose thorough mastery of the clinical and experimental features enables him to write with authority and to select from a full mind what is proper for presentation and to omit the unsuitable. This we regard as one of the most praiseworthy characteristics of the book—that it presents the essentials and the facts concerning which there is little or no controversy and omits non-essential details and questions that are still in an unsettled state. The style is remarkably direct and simple; problems that are involved and intricate become clear and intelligible under the author's logical and lucid explanations. He is a firm believer in the value of the instrumental study of the heart as an aid to a proper understanding of its workings in health and in disease, but believes as well that the intelligent use of polygraphy and electrocardiography makes one a better clinician and diagnostician, able to administer one's remedies more rationally and to foretell more definitely the outcome of the disease. Those who are familiar with the writings of Dr. Lewis, e. g., his contributions to *Heart*, are not surprised that this work of compilation has been well done. But to call it a compilation is unjust, for it contains much that is Lewis' own original work and is imbued from beginning to end with an independence of opinion and of manner of expressing it, that can come only from one thoroughly conversant with his subject.

The mechanical features of the book are excellent; the paper is well suited to show to the best advantage the many fine polygrams and electrocardiograms. There is a good index and a table of definitions. James Mackenzie and William Einthoven are surely honored by having such a worthy monograph dedicated to them.

Miscellany

Chloroform Poisoning.—Mr. Howard Stiles, Edinburgh, Scotland, referring to the fact that the pioneer work on this subject had been credited to him, said that this was not justified by the facts, because the pioneer work was done by Leonard Guthrie of London, who at the time was both pathologist and anesthetician of the Paddington Green Children's Hospital. Guthrie's paper was entitled "Death after Chloroform Anesthesia in Children Suffering from a Peculiar Form of Fatty Liver." Continuing, Mr. Stiles said (Tr. Sect. on Obst. and Gynec. A. M. A., 1911): Within one year of my being appointed full surgeon to the Children's Hospital about twelve years ago, I came across a typical case which impressed me very much indeed; and I may say that once having seen a typical case of lethal chloroform poisoning and having seen the post-mortem, one will recognize it at once. The case was that of a little girl, 10 years of age, operated on for congenital hernia. The operation lasted for about twenty minutes. The patient had no vomiting in the afternoon; in the evening vomiting began, hemorrhagic and coffee-ground in character. The pulse began rapidly to run up to 150, to get small and soft. The mental condition was quite characteristic, but first there was an excitability amounting to delirium, with crying out as in a case of tubercular meningitis. This was followed by a lethargic condition and coma with death. There were distinct changes in the scanty urine. The kidneys were fatty, the liver almost the color of the table. I recollected having read Dr. Guthrie's paper and remembered enough of it to say to myself that here was a case of lethal chloroform poisoning.

I published reports of eight cases: all of the patients died in the Children's Hospital. They had been operated on, some of them for nevus, clubfoot, etc. When Dr. Guthrie read his paper, the surgeons did not seem to believe that the chloroform had anything to do with the condition. Some explained that death was due to phenol (carbolic acid) poisoning; others, to fat embolism, and others again to a septic condition. I found that in my own hospital only one other case had occurred, and we found such cases were more liable to occur in patients suffering from some bacteria toxemia, especially one originating in the abdominal cavity, particularly in cases of suppurative appendicitis and salpingitis. In explanation, Dr. Guthrie maintains that all of these patients have a fatty degeneration of the liver before the anesthetic is given. What makes me feel that that is not always the case is that I have seen the liver in such cases at the operation and it appeared to be perfectly healthy, and when the patient died of these symptoms we found the extreme fatty degeneration. We could easily produce the condition of fatty liver by prolonging the anesthesia. How chloroform acts I cannot say, except that it does cause fatty degeneration of the liver with destruction of the liver cells, and that this fatty degeneration is by no means confined to the liver. It involves the kidneys, the blood-vessels, stomach, meninges and brain. This goes far to explain the hemorrhage and cerebral symptoms.

The paper to which your chairman referred was read before the Society of Diseases of Children in London. Sir William Cheyne was present. He was familiar with Dr. Guthrie's work but did not seem to accept the explanation of these cases. We soon found that when children died of septic appendicitis we got all the conditions between the fatty degeneration—cloudy urine, swelling, etc.—and the condition which is characteristic of lethal chloroform poisoning. I am perfectly certain that the administration of chloroform is a very dangerous proceeding in cases of acute bacterial toxemia.

I am convinced that the reason American surgeons ten years ago were getting so much better results than we in Great Britain obtained was that they were using ether while we were using chloroform. As soon as I was convinced that this was the case I stopped using chloroform in all septic conditions. I began the first of January of a certain year and then compared my results with those previously obtained in suppurative appendicitis; they were incomparable. We do not expect to lose a patient with septic appendicitis now. That is the main point that I wish to bring out to you who are still using chloroform. Dr. Stillman of San Francisco told me that he had given up the use of chloroform five years ago and that since that time his results had been enormously better. He finds his results to be better since he began to substitute ether, although, until I pointed it out to him, he was not aware of any association between the anesthetic and the mortality.

In response to a question by Dr. William W. Grant, Denver, as to what evidence there was other than the clinical one of simple seeming cause and effect, that the chloroform was productive of this serious and fatal toxemia, Mr. Stiles continued: When our first case occurred, it was natural that I should look into the literature. In 1850 a case was reported and the work done was conclusive. Chloroform acts on the liver cells as does phosphorus poison, or whatever may produce acute yellow atrophy. We could exclude other conditions. We considered fat embolism, but the destruction of the liver was so complete that there was no difficulty in excluding that. What the exact explanation is, I am not prepared to say. There are a good many theories. The whole thing seems to depend on some error in the fat metabolism. One practical point is that we never should give chloroform to a child who is subject to bad bilious vomiting. Associated with this vomiting there is acetonuria, and in such fatal cases we have the same condition of liver as in lethal chloroform poisoning.

Small Sewage Disposal Plants.—Progress in sanitary matters has created a demand for effective plans for the disposal of sewage for small cities and towns and even for individual plants which shall not be too expensive. The *Manufacturers' Record*, Jan. 11, 1912, describes such a plant installed at the Maryland Agricultural College. It is made to dispose of the sewage of a population of 250 and a daily flow of 35,000 gallons of sewage is provided for. The plant consists of a clarification tank, 17 feet deep by 12 feet long at the top and 10 feet wide, built of reinforced concrete. At the entrance to this tank is a grit chamber which allows of the deposition of coarse grit before it enters the clarification tank. The clarification tank has a pyramidal bottom and a capacity equal to eight hours' flow. The sewage is distributed by falling on a cone located well down within the tank and the liquid portion rises to the top, thus sealing it. The sludge may be removed from the pyramidal bottom without disturbing the sewage above. A syphon chamber with automatic alternating syphons is provided to receive the effluent from this clarification tank. The final treatment consists in filtering the effluent from the settling tank through beds of sand and gravel. Four separate beds are provided for this plant, the total area amounting to one-fifth of an acre. The material is distributed by troughs traversing the beds. The bottom of the beds is carefully graded and underdrained, with parallel lines of three-inch tile, which collects and carries off the liquid as it passes through the filter. The tile also ventilates the beds. The clear effluent is then discharged into a stream, after having undergone a biologic change in the pores of the sand filter, caused by saprophytic bacteria. These bacteria destroy the undesirable bacteria in the effluent so that the putrescible organic matter is converted into stable nitrates. These filter beds are dosed automatically and intermittently once every three hours. The sludge from the clarification tank is simply an inorganic humus and may be disposed of without nuisance or danger on open farm lands. The estimated cost of this plant is $2,500. The expense of operating is small, only requiring one man for a few hours at considerable intervals of time.

Medicolegal

The Adulteration of Milk with Water

(City of St. Louis vs. Ameln (Mo.), 139 S. W. R. 429)

The Supreme Court of Missouri affirms a conviction of violating a city milk ordinance by the possession, with the intent to offer for sale and sell, of skimmed milk adulterated with water. The court says that it was contended that the mixture of water with skim milk must be "so as to lower and depreciate its strength and quality," the idea apparently being that the complaint was deficient in not setting forth some fixed standard by which to judge "strength and quality." Otherwise (so the argument ran) the standard might be an ideal one in the chemist's mind, or one prescribed by ordinance, or the condition of the milk prior to the addition of the water might be the standard; hence the complaint should throw light thereon, so that the defendant might know by which measuring rod or standard his act was to be measured; that course would provide a check to the testimony of the chemist. But the court will assume that science can detect the addition of water in milk, whether the dairymen's cows gave poor milk or rich milk, regardless, too, of any mere ideal standard in the chemist's mind, or of any ordinance standard.

It is nothing to the point to say that there is a large percentage of water in milk as it comes from the cow. That particular water has been so treated by the subtle and mysterious alchemy of Nature that presumably it holds in solution such delicately adjusted and blended proportions of fatty and nonfatty solids as make normal cow's milk (wholesome to all) a necessity to the young. Milk, an object of profound and vigilant concern to the modern lawmaker, has been always part and parcel of the daily life, the adages, and folklore, of mankind: and all the metaphors, etc., eschew the belittling idea of water in milk: the milk held in mind is good milk. Indeed the universal, primal and spontaneous mental conception we have of milk, in the first instance, is that it is unwatered.

The court thinks that the ordinance in question proceeds on the notion that, however much the cow waters her own milk in her humble and honest way (letting Nature take her course), the milkman has no right to designedly duplicate Nature's gift of water by a furtive gift of his own from the barnyard pump. It proceeds on the underlying theory that it is a fraud, a trick, and a veritable cheat—contrary to the common law, and hence of that phase of it known as the "square deal"—to sell water, when milk, not water, is the commodity dealt in. If one is not to get a stone who asks for bread, no more (under the spirit of the ordinance) is he to get water who asks for milk.

The court will take judicial notice of the laws of Nature, and one of them is: Water is bound to lower and depreciate the strength and quality of milk of any standard. "As weak as water" is a comparison summing up the whole brood of weaknesses; ergo, a standard is not an essential element in a charge of adulterating milk by adding water.

Milk is the food of foods. The felicity of the table hinges on milk. Nay, considered by and large, bar milk, and how long would the race itself last? We know, too, that cow's milk is a respectable and common substitute for mother's milk. To injure the young is to grind the seed-corn.

Liability for Malpractice, Permitting Phenol to Touch Cornea —Sufficiency of Evidence—Law of Negligence

(James vs. Robertson (Utah), 117 Pac. R. 1068)

The Supreme Court of Utah affirms a judgment in the plaintiff's favor for damages for malpractice alleged to have caused the loss of sight of an eye. The court says that the case was peculiar in that the injury complained of did not really arise out of any want of skill on the part of the defendant in performing the operation he did on the plaintiff's eyelid for the removal of a cyst, but the injury to the eye was caused by an act which did not necessarily require any more than the skill, knowledge and experience of any ordinarily prudent person. If the defendant permitted a solution of phenol (carbolic acid) to come into contact with the cornea of the plaintiff's eye, without any necessity therefor, and of such strength as would injure the eye, he might be found guilty of negligence. Whether some of the carbolic acid solution which the defendant admitted he used came into contact with the cornea of the plaintiff's eye or not was a question of fact which the jury could have deduced from the testimony of the plaintiff's witnesses, when considered in connection with the prevailing symptoms following the operation, and from the subsequent results which the experts said could and may have been produced by the admission of the solution into the eye.

These salient, and, as the court thinks, controlling facts were not seriously questioned. The plaintiff, at a time when she was in at least fair health, and when her eye was in good condition, had a slight operation performed on the eyelid. The operation did not, and was not intended to, affect the interior portions of the eye. After the operation the defendant applied some liquid to the wound which he said was a weak solution of carbolic acid, in doing which he burned the plaintiff's face in three places, and about 15 or 20 minutes thereafter the plaintiff, on her way home, stopped in at a neighbor's because of great pain in her eye. Her eye was then much inflamed, and the pain continued and increased. That evening or night her husband examined the eye and found a blister in it, as though the eye was burned. The eye kept getting worse, until about fourteen days after the operation, when the defendant requested her to go to an eye specialist, who discovered that she was afflicted with a corneal ulcer, which ultimately caused the loss of her eyesight. About every one of the experts called by the defendant conceded that such an ulcer might, and probably would, be caused by a solution of carbolic acid, if the solution were permitted to remain in contact with the cornea for a considerable length of time. It was also conceded by all that a carbolic acid solution, if strong enough, would produce many, if not all, the symptoms described by the plaintiff and her witnesses. True, all of the experts also said that there were many causes, other than carbolic acid, that might bring about corneal ulcers, but there was no testimony that the court could find that any one or more of such causes were actively present and operating in the plaintiff's case. It seemed to the court that the conclusion was almost unavoidable that there was at least some substantial evidence in support of the jury's findings for the plaintiff.

The law was properly stated by a charge to the jury, in substance, that, before they could find for the plaintiff, they must be satisfied by a preponderance of all the evidence that some acid or other liquid, of sufficient strength to cause a lesion of the corneal tissues of the plaintiff's eye, was permitted by the defendant, while operating on the eyelid of the plaintiff's eye, to drop or in some way escape into her eye, and that such acid or liquid did cause such a lesion and the resulting injury; that the jury must also further find, by a preponderance of all the evidence, that the defendant was negligent in permitting the acid or liquid to drop or escape into the plaintiff's eye.

The doctrine, that when a plaintiff produces evidence consistent both with a hypothesis of the defendant's being negligent and one of his not being negligent it tends to establish neither, did not apply to this case because it applies only when the plaintiff's evidence, when considered alone has such an effect, or when the jury finds the evidence equally balanced. It does not apply when all of the evidence produced by both sides, some of which is in dispute, is capable of such construction, because there is no law which binds a jury to believe any of the defendant's evidence which conflicts with that of the plaintiff.

In a case in which the question is whether the defendant was guilty of negligence or not, the plaintiff need merely show a state of facts from which the jury may logically infer negligence; and if the jury believe the plaintiff's evidence from which the inference of negligence may be deduced it may be, and ordinarily is, sufficient to sustain a finding of negligence; and this is so, even if the defendant disputes all of the plaintiff's evidence, or produces evidence from which the jury might find that the injury complained of was due to a cause or causes for which the defendant was not responsible.

The law is not that a plaintiff must fail in case the injury of which he complains might have been caused—that is, that there was a possibility that it was caused—by some cause or causes for which the defendant was not responsible, but he must fail only when it is just as probable from the evidence adduced by the plaintiff, or in case the evidence is equally balanced, that the injury was produced by some cause for which the defendant was not responsible, as it is that it was produced by a cause for which he was. The mere fact that there is a possibility that the injury complained of was produced by some other cause than that claimed is not enough.

In view of the conflicting inferences that could be deduced from the opinions of the experts, the jury had a right to disregard the opinion expressed by the experts that the particular solution did not cause the injury to the eye.

Again, it is true that, in order to authorize a finding that one who is following a profession or calling requiring special skill, knowledge and experience is guilty of negligence or unskilfulness, it is necessary to furnish some proof from some source possessing the required skill, knowledge and experience that the acts complained of did not measure up to the standard of skill, knowledge and experience required in the particular calling or profession. But that principle could not be applied to its full extent in this case because the defendant did not seek to justify, but denied, the act attributed to him.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Journal of Missouri State Medical Association, St. Louis

January, VIII, No. 7, pp. 267-300

1 Small-Pox Quarantine in Practice and Its Failure. G. Dock, St. Louis.
2 Adhesions Presenting Surgical Complication of Pregnancy. G. A. Beedle, Kansas City.
3 Surgical Treatment of Paralysis Following Anterior Poliomyelitis. N. Allison, St. Louis.
4 Cutaneous Blastomycosis; Report of Three Cases. W. Frick, Kansas City.
5 *Operability of Uterine Cancer. F. J. Taussig, St. Louis.
6 Autoserotherapy in Two Cases of Subacute Cerebrospinal Meningitis, with Cure. O. H. Brown, St. Louis.
7 *Treatment of Gastroptosis. H. W. Soper, St. Louis.
8 Tuberculin as a Therapeutic Agent. J. C. Lyter, Moberly, Mo.

5. **Operability of Uterine Cancer.**—Of the eighteen patients subjected by Taussig to a radical abdominal operation, seven died as a result of the operation. Five succumbed within the first four days after operation; one died two weeks afterward; and in one patient death resulted from extensive suppuration

of the pelvic connective tissue four weeks after the laparotomy. This operative mortality of over 28 per cent. would, he says, under ordinary circumstances, be most appalling. If we remember, however, that Wertheim's primary mortality in his first series of twenty-nine cases was 42 per cent., and that Reuben Peterson had a primary mortality of 48 per cent. in his first fourteen cases, these figures are correspondingly not so bad. Dividing these eighteen cases into three groups, the early ones, the advanced ones and the far advanced ones, further light is thrown on this operative mortality. The early cases in which the disease did not extend beyond the uterus numbered three. All recovered from the operation and are at present free of recurrence. The advanced cases in which the disease had extended to the parametrium and vagina but did not yet occlude the ureters or deeply invade the bladder wall numbered seven. Of these five recovered and two died. The far advanced cases showed deeper involvement of the bladder wall or occlusion of one ureter, or extensive infiltration of the vagina and paravaginal tissues. They numbered eight, and five of these patients died. Of the three who recovered from the operation, two died of a recurrence within one year, and Taussig says he should be much surprised if the third will not likewise terminate fatally. He states emphatically that practically every case of cancer of the uterine body can be saved by operation unless there be gross carelessness on the part of the patient or the attending physician.

7. **Treatment of Gastroptosis.**—A modification of Rose's adhesive plaster bandage has given Soper much satisfaction, particularly in thin subjects whose abdomens are so depressed that a serious obstacle is presented to the adjustment of a proper support to the displaced viscera. The modification consists in the use of narrow (2-inch) strips. The pubic hair is thus avoided, and much less surface is covered than by Rose's bandage. The patient is therefore more comfortable and enjoys more freedom of movement. The method of applying the bandage is as follows: The patient sits on a couch, the adhesive strip is fastened to the dorsal vertebræ and follows the right lower rib margins; the patient now lies down, the lower abdominal contents are pushed upward with the operator's left hand while the bandage is carried across the abdomen and attached to the left side at Poupart's ligament. The patient again sits up and a second strip is applied to the other side in exactly the same way as the first one. Finally a third strip is attached across from one superior iliac spine to the other, the patient lying down. The bandage can be worn comfortably for two weeks. Bathing is not interfered with. It is easily removed by gasoline and benzine, or by oil of wintergreen. The bandage may be reapplied immediately, or in the event that irritation of the skin occurs, an interval of several days may elapse before replacing it. Special exercises of the abdominal muscles, accompanied by proper breathing, must be at once instituted. The diet should be as nutritious as possible, but in no class of cases is more individualization required. The food should be adapted to the patient's digestive powers.

Long Island Medical Journal, Brooklyn

December, V, No. 12, pp. 475-520

9 Chronic Catarrhal Deafness: Its Relation to Nasal Obstruction and Accessory Sinus Diseases. C. E. Scofield, Brooklyn.
10 Sporotrichosis. G. H. Turrell, Smithtown Branch, N. Y.
11 Surgery of Large Intestine. J. B. Bogart, Brooklyn.
12 Vaccine Therapy in Surgery. A. T. Bristow, Brooklyn.
13 Transplantation of Vas Deferens for Sterility in Men. G. M. Muren, New York.

Illinois Medical Journal, Springfield

January, XXI, No. 1, pp. 1-122

14 *Personal Experiences of Nephroptosis. W. Billington, Birmingham, England.
15 *Nephroptosis, Movable or Dropped Kidney. C. W. Suckling, Birmingham, England.
16 *Treatment of Puerperal Infection. L. W. Littig, Davenport, Iowa.
17 Treatment of Foreign Bodies in Esophagus. E. F. Ingals, Chicago.
18 Some Esophageal Cases. S. A. Friedberg, Chicago.
19 Some Diagnostic Signs and Symptoms of Brain Tumor. D. O. Hecht, Chicago.
20 *Subcutaneous Extirpation of Cervical Glands. J. Frank, Chicago.
21 Supravaginal Hysterectomy with Preservation of Function of Menstruation. C. H. Parkes, Chicago.
22 American Railway Relief Funds. W. H. Allport, Chicago.

14 and 15. Abstracted in The Journal Jan. 20, 1912, p. 227.

16. **Treatment of Puerperal Infection.**—The treatment of saprophytic intoxication is formulated by Littig as follows: (1) Meet the indications of local conditions in the perineum and in the vagina; (2) if the uterus be enlarged and the cervix open irrigate and cleanse with the gloved finger; (3) if the uterus be contracted but the cervix open, irrigate; (4) if the uterus be contracted and the cervix closed, do not irrigate; (5) fresh air, support, elimination.

20. **Subcutaneous Extirpation of Cervical Glands.**—Frank does not recommend it for all cases of enlarged glands of the neck. For instance, suppurating glands with fistulæ or those that are undergoing an acute inflammation are not suitable cases for this sort of an operation. He does not advocate this method in preference to the open method for all cases. But he does recommend Dollinger's method of operating so as not to leave a visible scar in cases of enlarged glands of tuberculous origin which do not respond to any form of medical treatment, and cases erroneously diagnosed as tuberculous when they are not.

New Mexico Medical Journal, Las Cruces

December, VII, No. 3, pp. 67-106

23 Racial Question of Procreation in Tuberculous. F. T. B. Fest, Las Vegas.
24 Diagnostic Use of Tuberculin in Pulmonary Tuberculosis. G. E. Bushnell, Bayard, N. M.
25 Immunity in Tuberculosis by Inoculation of Living Tubercle Bacilli. G. B. Webb, Colorado Springs, Colo.
26 Auto-Inoculation in Pulmonary Tuberculosis. J. F. McConnell, Colorado Springs, Colo.
27 Blood-Pressure in Tuberculosis at High Altitude. L. S. Peters and E. S. Bullock, Silver City.
28 Public Measures in Prophylaxis of Tuberculosis. T. W. Colbert, Albuquerque.
29 Mixed Infection in Pulmonary Tuberculosis. R. B. Homan, El Paso.

Pennsylvania Medical Journal, Athens

January, XV, No. 4, pp. 255-338

30 Estimation of Vital Resistance of Patient with Reference to Possibility of Recovery. J. C. Bloodgood, Baltimore.
31 Influence of Various Anesthetics in Determining Mortality. G. M. Laws, Philadelphia.
32 *How Long Shall Patients Be Kept in Bed After Operation? R. T. Miller, Pittsburgh.
33 Prevention and Treatment of Complications in Gastro-Intestinal Surgery. D. Guthrie, Sayre.
34 Minor Postoperative Sequelæ. G. P. Müller, Philadelphia.
35 What Can Be Done to Preserve Strength of Surgical Patients During Stay in Bed? J. M. Baldy, Philadelphia.
36 Vein-to-Vein Transfusion for Anemia Due to Hemorrhage Caused by Disease of or Injury to Intra-Abdominal Organs. G. M. Dorrance and N. Ginsborg, Philadelphia.
37 Heart Stimulation in Treatment of Lobar Pneumonia. J. I. Roe, Wilkes-Barre.
38 *Value of Bacterins in Pneumonia. W. E. Robertson and G. M. Illman, Philadelphia.
39 Influence of Eustachian Tube in Purulent Otitis. M. D. Ritchie, Pittsburgh.

32. **How Long Shall Patients Be Kept in Bed After Operation?**—Miller regards it as being probable that enthusiasm for early rising after operation has warped better judgment; too little has been said in defense of conservatism along these lines. It does not seem rational to him to demand added effort of an already heavily burdened patient. He emphasizes that when we ourselves are tired, we rest; when medical patients evidence fatigue, we insist on rest and quiet; in the treatment of exhaustion, injury or febrile conditions, we enforce, first of all, the rule of rest; we are therein frankly recognizing a law of nature. We cannot make so critical a group as postoperative cases exempt from this law without incurring great risk. Rest is an essential element in postoperative care; the duration of its enforcement must be decided for each case as an individual, and not as a representative of this or that group, and in this decision there is frequently need for nice judgment. We cannot reduce it to a rule of thumb.

38. **Bacterins in Pneumonia.**—In some instances strikingly prompt and beneficent results follow the use of bacterins, but since these results are not uniform, the authors believe that something is lacking in the employment of dead cultures as at present practiced. They urge that care should be taken in their preparation, as it is probable that their biologic properties may be destroyed by the degree of heat used to kill them. A temperature not over 56 would be advisable, or 5

per cent. phenol in the proportion of ½ per cent. may be employed. Nephritis, when preexisting, is of grave prognostic import. Bacterins apparently do not exercise any influence, pro or con, on the renal condition. In the authors' series, the mortality was notably less in the cases given bacterins.

Medical Record, New York

January 27, LXXXI, No. 4, pp. 151-200

40 Sexual Disorders in Male Clinically Considered. E. Fuller, New York.
41 Latent Hypernephroma with Solitary Metastasis in Spine. A. E. Garrow and C. B. Keenan, Montreal.
42 *Pernicious Anemia Causing Spinal Cord Changes and Mental State Resembling Paresis. C. D. Camp, Ann Arbor, Mich.
43 Roentgenoscopy in Obscure Conditions of Colon. F. C. Yeomans, New York.
44 Cardiovascular Disease in Its Relation to Lesions of Abdominal Viscera. J. D. Dunham, Columbus, Ohio.
45 Pediatric Memoranda. H. B. Sheffield, New York.
46 Chronic Posterior Urethritis, Vesiculitis and Epididymitis in Men Beyond Middle Life. M. R. Parker, Chicago.
47 Abscess of Nasal Septum. I. W. Voorhees, New York.

42. **Pernicious Anemia.**—The examination in Camp's case pointed to lesions in both the posterior and lateral columns of the spinal cord; the former shown by the ataxia, Rombergism, sensory changes, and lost Achilles reflexes, and the latter by the spasticity and the positive Babinski reflex. The positive Babinski and spasticity would preclude the diagnosis of uncomplicated tabes, as would also the absence of any change in the pupillary reflexes, and the absence of any characteristic crises, lightning pains, and bladder disturbance. If a tabo-paralysis were thought of, Camp says one would still have to account for the absence of the Argyll-Robertson pupil and the negative Wassermann reaction. The negative findings in the cerebrospinal fluid were almost conclusively against the diagnosis of paresis or any syphilitic or parasyphilitic disease of the brain or spinal cord. There was no history obtainable of any toxic factor, such as lead or alcohol, as a cause of the spinal cord changes. The thoracic and abdominal organs were normal. The blood-pressure was 120. The examination of the urine showed no abnormal constituents. The blood examination showed red blood cells 2,900,000 per cmm., leukocytes 7,300, hemoglobin 80 per cent. The differential leukocyte count showed polynuclear 42 per cent., large lymphocytes 17 per cent., small lymphocytes 12 per cent., eosinophils 6 per cent., mast cells 2, transitionals 3, degenerate type 18 per cent.

Journal of Cutaneous Diseases, New York

January, XXX, No. 1, pp. 1-52

48 *Blue Atrophy of Skin from Cocain Injections. W. S. Gottheil, New York.
49 Lupus Erythematosus. A. Ravogli, Cincinnati.
50 *Value of Lymph-Node Examination in Diagnosis of Syphilis. D. Friedlander, San Francisco.

48. **Blue Atrophy of Skin from Cocain Injections.**—Gottheil refers to the occurrence of atrophy with pigmentation, occasional and limited pigmentations without other change in the skin being sometimes seen after various forms of hypodermic medication. He has noticed them in several instances after the insoluble mercurial, hypodermic medication. It has been supposed that particles of steel from the needles might have become detached and entered the punctures, but this does not explain the rarity of the pigmentation as compared with the great frequency of the hypodermic morphin habit. Scores of habituates are seen every year, yet the pigmentation is a noticeable rarity. Another explanation is the introduction of particles of lamp-black into the puncture; this would only be likely to occur when sterilization by flaming was employed and none of the patients mentioned above did that. Some trials made by Gottheil's assistant seem to throw some light on the pigmentation herein recorded, though it leaves the atrophic changes unexplained. Morphin solutions allowed to remain in the lumen of the ordinary hypodermic needle over night, either dried up or came out as a clear drop in the morning. Cocain solutions, on the other hand, if any remained in the metallic channel next day, showed a distinct bluish tint. Gottheil suggests that this may be due to the action of the hydrochlorate on the metal on prolonged contact. It does not explain, however, either the atrophy or the blue pigmentation that in rare instances follows the morphin or the mercurial injections.

50. **Lymph-Node Examination.**—There is a universal glandular enlargement in syphilis, but the enlargement of certain syphilitic glands is more characteristic than others and they rank in the following order: Friedlander says that the proportion of enlarged glands decreases in direct ratio with the age of the infection. The bilateral glandular enlargements are of more significance than the unilateral. While the examination of the glands cannot be depended on, alone, for a diagnosis of syphilis, the enlargement of certain glands, particularly when bilateral, is of indubitable significance and the value of the gland examination is far more pronounced in the early stages of the disease than later.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

January, XIV, No. 1, pp. 1-64

51 Intra-Orbital Lesions Secondary to Disease of Accessory Sinuses of Nose. J. W. Walters, Lynchburg, Va.
52 Business Methods of Medical Profession. E. G. Moore, Elm City, N. C.
52 Season's Experience with Typhoid. F. H. Smith, Abingdon, Va.
54 Plea for Closer Association of Clinician and Pathologist. J. Grice, Portsmouth, Va.

Albany Medical Annals, N. Y.

January, XXXIII, No. 1, pp. 1-64

55 Psychotherapy in Organic Disease. J. J. Walsh, New York.
56 Modern Problems of Infant Feeding. H. L. K. Shaw, Albany.

Boston Medical and Surgical Journal

January 25, CLXVI, No. 4, pp. 115-154

57 Freud's Psycho-Analytic Method and Its Evolution. J. J. Putnam, Boston.
58 *Aneurysm of Thoracic Aorta Treated by Wiring. H. A. Christian, Boston.
59 Anaphylaxis in Its Relation to Pediatric Practice. G. R. Pisek and M. C. Pease, New York.

58. **Treatment of Aneurysm of Thoracic Aorta.**—Christian reports a case of thoracic aneurysm which seems to illustrate what may be expected from treating aortic aneurysms by the introduction of coils of silver wire, through which are passed for a limited time electric currents. This case appeared ideally suited for such treatment because the aneurysm was still small when detected; there were no evidences of other arterial disease, and the heart showed no evidences of organic lesion, and was not enlarged. The case appeared to be definitely one of aneurysm situated above the aortic valves since they apparently close without interruption. The aneurysm extended mostly to the right, either from the arch of the aorta or the first part of the innominate artery. A clear history of syphilis gave an etiologic cause. There was no evidence of pressure on the laryngeal or sympathetic nerves, or on the esophagus or trachea. The patient had constantly taken iodids so that a further treatment of iodid seemed unlikely to be of benefit. Nitrites were not indicated, since his blood-pressure was normal. Roentgen-ray examination confirmed the diagnosis of aneurysm, apparently involving the arch of the aorta. The aneurysm being exposed, a shallacked needle was inserted directly into the most prominent portion of the aneurysm. Eleven feet of silver wire were inserted and a current of ten milliamperes, faradic current, used for fifty minutes. At the end of this time the wire was cut off flush with the surface and the needle withdrawn. The patient returned to work and led an active life, apparently taking very few precautions to lessen the strain and stress that might be supposed to be of a nature to cause an enlargement of the aneurysmal sac. Symptomatic cure lasted six and one-half months. Then he fell, straining the arm and thorax, in May, 1908. This was followed by recurrence of symptoms and apparent enlargement of aneurysm. Aneurysm wired second time, June 30, 1908. Temporary improvement, followed shortly by exacerbation of symptoms and evidence of enlargement of aneurysm. Rupture of aneurysm, and death of patient, Aug. 27, 1908.

Vermont Medical Monthly, Burlington

January, XCIII, No. 1, pp. 1-26

60 Spinal Anesthesia. J. M. Allen, St. Johnsbury.
61 Wayward Girl. F. W. Sears, Syracuse, N. Y.
62 Surgical Treatment of Gall-Bladder Disease. A. Davidson, St. Albans.
63 Colon Bacillus Infection of Urinary Tract in Infants and Children. C. K. Johnson, Middlesex.

New York Medical Journal

January 20, XCV, No. 3, pp. 105-156

64 Dr. Edward G. Janeway. S. A. Knopf, New York.
65 Relation of Medicine to Law. J. H. Gleason, Manchester, N. H.
66 Two Unusual Cases of Uterine Myomata. A. Stein, New York.
67 *New Operation for Fixation of Kidney. F. M. Bell, Ottawa, Canada.
68 Diagnosis and Treatment of Congenital Pyloric Obstruction. H. Lowenburg, Philadelphia.
69 Hysterical Rabies. T. A. Williams, Washington, D. C.
70 *Indications for Prostatectomy and Advantages of Suprapubic Method. J. A. Gardner, Buffalo.
71 Plea for Establishment of Department for Conservation of Health in Hospitals and Dispensaries. M. J. Schoenberg, New York.
72 Kraurosis Vulvæ. C. F. Kivlin, Troy, N. Y.
73 Urine in Its Pathologic Relations to Gout. S. R. Klein, Valhalla, N. Y.
74 Movable Cecum. C. A. Roeder, Grand Island, Neb.

January 27, XCV, No. 4, pp. 158-208

75 Modern Conception of Medicine. R. C. Cabot, Boston.
76 *Gastric Symptoms in Biliary Disease. H. Lilienthal, New York.
77 Criminality and Morphinism. T. D. Crothers, Hartford, Conn.
78 Where Shall the Line Be Drawn Between Medicine and Surgery in Borderline Cases? J. E. Moore, Minneapolis.
79 Further Advances in Therapeutic Use of Bile Tracts. L. L. McArthur, Chicago.
80 Nauheim Treatment of Heart Disease; Essentials, Indications and Contraindications. H. Schoonmaker, Clifton Springs, N. Y.
81 Traumatic Dislocation of Both Hips. A. E. Chace, Tarrytown, N. Y.
82 *Arneth's Nucleo-Analytic Method as Applied to Eosinophils. J. F. Hultgen, Chicago.
83 Three Cases of Harelip and Cleft Palate in One Family. A. T. Hewes, Lynn, Mass.
84 Case of Belladonna Poisoning in Child Seven Years of Age. R. E. Coughlin, New York.

67. **New Operation for Fixation of Kidney.**—In the procedure devised by Bell an incision 3 inches in length is made 2 inches external to the spinous processes of the lumbar vertebræ, vertically downward from the lower border of the twelfth rib, through the skin and fascia; the fibers of the outer portion of the erector spinæ are bluntly separated and the quadratus lumborum is incised. The transversalis fascia is incised carefully about 1 inch from its spinous attachment and the divided edges are caught with artery forceps. The kidney is then enucleated in the usual manner and the perirenal fat is excised posteriorly, internally and externally, but not inferiorly. It is important that the fat for at least half the depth of the kidney be removed. Two sutures, after the manner of Brödel, are now placed at either pole of the kidney at the internal and external borders, the needle being left on each. For the present these are not tied.

Two parallel incisions, 1½ inch in length and 1 inch apart, are now made longitudinally through the renal capsule and the intervening capsule is elevated from the cortex by blunt dissection. The kidney is now returned to its fossa and is held in position by means of gentle traction made by an assistant on the untied sutures. A strip of the transversalis fascia corresponding in width to the length of the elevated portion of the capsule, is now cut and passed as a strap beneath it and is sutured with chromicized catgut to the corresponding portion of the spinal attachment of the fascia. The kidney, now suspended by a strap of fascia, is further reinforced by passing the Brödel's sutures through the quadratus lumborum in the usual manner and tying them over the muscle. The wound is closed in the orthodox manner. The patient is kept in bed three weeks, until adhesions have formed between the fascia and the capsule and cortex of the kidney.

70. **Prostatectomy.**—The suprapubic operation is held by Gardner to be the ideal conservative one, because it is anatomically correct; the offending part is easier of access by this route; the obstruction is completely removed; control of the urine is regained with no dribbling; and the ejaculatory ducts are presumably not injured.

76. **Biliary Disease.**—Lilienthal calls attention to the importance of considering the probability of biliary surgical disease in all cases of chronic indigestion, the kind that persists for years in spite of skilful medical treatment. He urges that surgery be called in as a legitimate measure for relief a little earlier than is the custom with the great mass of the profession, and not merely as a last resort to record the failure of pure medicine.

82. **Arneth's Nucleoanalytic Method.**—Hultgen summarizes his views as follows:

1. The eosinophils show no progressive development from monomorphism to polymorphism, except in leukemic conditions.

2. The five classes of eosinophil nuclei occur constantly with remarkable uniformity under the most varied circumstances.

3. We may accept class C, containing a distinctly bilobed, or bipartite, nucleus as the normal eosinophil, as the one occurring constantly and with regular predominance in all persons, well or unwell.

4. Arneth's neutrophil picture is applicable to the eosinophils, but it merely indicates a constant percentage composition of the eosinophil contingent of the leukocytes.

5. Arneth's eosinophil blood-picture exists, but it is only a statistical fact and not of any practical biologic significance.

6. Ehrlich's theory that the adult eosinophil is derived from a prototypic eosinophilic myelocyte is not supported by my investigations. Commonly accepted criteria as to the youth of any given leukocyte must be amended.

7. The morphologic varieties of eosinophils depend on primordial, genetic causes. They are not a product of development.

8. Since the morphology of the nucleus bears little or no relation to the origin, size, age or function of these eosinophilic leukocytes, the nucleo-analytical method of Arneth lacks a biologic foundation, and is, therefore, not applicable to these cells.

Surgery, Gynecology and Obstetrics, Chicago

January, XIV, No. 1, pp. 1-114

85 *Arteriovenous Anastomosis in Treatment of Gangrene of Extremities. A. E. Halstead and R. T. Vaughan, Chicago.
86 *Fifty Fatal Cases of Puerperal Infection. H. M. Stowe, Chicago.
87 *Puerperal Infection. T. J. Watkins, Chicago.
88 *Hodgkin's Disease and Sarcoma of Cervical Glands. J. M. Blackford, Rochester, Minn.
89 Acute Edema of Cervix in Pregnancy; Report of a Case. C. E. Paddock, Chicago.
90 Cardiac Changes Secondary to Uterine Myomata. P. S. Doane, Chicago.
91 Richter's Hernia. C. S. White, Washington, D. C.
92 Obstetric Surgery at Preston Retreat. E. P. Barnard, Philadelphia.
93 *Suprapubic Prostatectomy, with Method for Control of Postoperative Hemorrhage. L. Freeman, Denver.
94 Cesarean Section. E. M. Prince, Birmingham, Ala.
95 Treatment of Harelip. T. W. Brophy, Chicago.
96 Esophagoscopy and Bronchoscopy. T. Hubbard, Toledo, Ohio.
97 *Repair of Fractures with Steel Splints. E. H. Beckman, Rochester, Minn.
98 Simple Photographic Apparatus for Immediate Record of Fresh and Fixed Macroscopic and Microscopic Sections. W. C. MacCarty, Rochester, Minn.
99 Surgical Knife on Safety-Razor Principle. F. H. Lahey, Boston.
100 Modification of Skene's Female Urethroscope. E. Garceau, Boston.
101 *Operation for Relief of Wrist-Drop and Allied Conditions. T. G. Davis and T. G. Finley, Los Angeles.
102 Use of Sphygmomanometer During Surgical Operations. H. K. Thoms, New London, Conn.
103 Excision of Internal Jugular Vein. J. W. Long, Greensboro, N. C.
104 Injuries to Elbow in Childhood, Studied in Relation to Development of Joint. W. S. Lawrence, Memphis, Tenn.

85. Abstracted in THE JOURNAL August 5, 1912, p. 505.

86. **Fifty Cases of Puerperal Infection.**—Stowe reports the occurrence of fifty fatal cases of puerperal sepsis in one hospital within twenty-nine months. Twenty-nine women in this series were hopelessly sick and fourteen seriously infected on their admission. More than one-half of the women had been sick less than ten days and they were hopeless from septicemia and general peritonitis. Of the remainder, all except seven were admitted when any chance to save them seemed lost. One case of embolism occurring in the hospital and two cases of postpartum hemorrhage before admission turned the scale against the patient. During their stay in the hospital, all patients were placed on an energetic stimulating treatment consisting of strychnin, digalen, alcohol and judicious feeding. Access to sun baths was possible in only a limited degree. Salines per rectum and by hypodermoclysis, epinephrin (adrenalin), antistreptococcic serum and collargol were used in several cases. In twenty-two cases, the women died within forty-eight hours after admission; eight within eight hours. Nine women presented clear signs of general and three of local peritonitis at the time of operation. In twelve cases, operation was followed by an immediate change for the worse and undoubtedly hastened the patient's death. In two cases, the patient collapsed from the anesthetic, while in two others the operation was unduly prolonged, lasting sixty-five and 125 minutes, respectively. Both these latter cases were complicated by peritonitis.

Attention is called to three general fundamentals which have a decided influence in governing the treatment of puerperal sepsis. 1. All local forms of infection are self-limited.

They tend to spontaneous recovery and require no intrauterine therapy except in the presence of hemorrhage. The great majority of septic cases are of this character and under proper treatment all should recover. The treatment is, decidedly, watchful expectancy. 2. By the employment of many common methods of treatment, a local or simple type of sepsis may be converted into a virulent and fatal condition. The curet, the septic fingers and the intrauterine douche are directly responsible for many deaths. 3. Our methods of recognizing septicemia in the early stages are uncertain. Before we are able to diagnose the condition, the invading process has reached a stage not amenable to local treatment and the patient frequently succumbs to the intensity of the toxemia.

Stowe has seen many cases of sapremic abortion with foul discharge and fever treated expectantly with excellent results. A sapremia associated with good drainage and uterine retraction is not to be feared and these conditions are secured by Fowler's position and ergot. Forced instrumental dilatation of the cervix in septic abortion is productive of great harm. It tears the tissues and creates new foci for infection. If it is desirable to dilate, packing is by far the best treatment. If the septic process has extended to the parametrium or peritoneum, a curettement of the uterus by the steel curet is a calamity. The instrument has no place in puerperal sepsis. If the infection has spread to the parametrium or peritoneum, therefore, it is best to leave the uterus alone whether empty or not. As a general principle, attempts to remove retained membranes from the uterus are often attended with more danger than their retention. Uterine irrigations are useless and dangerous. Collections of pus situated high up in the pelvis are best left alone until weeks or months after the acute process has terminated. In many cases, a non-operative form of treatment until definite localization has been determined will give as good results as any other. The author has experimented with the intravenous injection of the bichlorid of mercury in eleven undoubted cases of septicemia and lost only five patients. In the cases that recovered, the beneficial effects of the mercury were noticeable. In the others, no change was observed. The general treatment in all cases is of the greatest importance and consists of building up the depressed resistance of the mother.

87. **Puerperal Infection.**—The number of cases treated by Watkins in the last two years has been seventeen. The treatment consisted chiefly in the use of measures to increase the body resistance and thus hasten "immunity." The remedies employed have been much the same as used in cases of tuberculosis to increase the physiologic resistance. The treatment consisted chiefly in: 1. Raising the head of the bed to promote drainage. 2. Putting an ice-bag on the abdomen. 3. Giving a large amount of nutritious, easily digested food. 4. Administrating at least 2 quarts of fluids daily and otherwise forcing elimination. 5. Keeping the patients out of doors a part of each day when possible and giving sun baths. 6. Seeing that pain was relieved and that six to eight hours of sleep was obtained daily. The uterus was not disturbed except for hemorrhage or when a retained fetus, placenta, or decidua was known to be present. When present they were removed without the use of an anesthetic and without producing much traumatism. When the cervix was not well dilated the uterus, cervix and vagina were packed with sterile gauze to promote dilatation, to cause separation of the placenta or decidua and to stimulate spontaneous expulsion.

88. **Hodgkin's Disease and Sarcoma of Cervical Glands.**—It is maintained by Blackford that Hodgkin's disease, lymphosarcoma and tuberculosis, present three different pathologic pictures and run three different clinical courses, i. e., are probably three distinct entities, although early clinical differential diagnosis between chronic adenitis, tuberculosis, Hodgkin's disease and lymphosarcoma is practically impossible. While the advisability of radical surgical treatment of sarcoma or Hodgkin's disease may be questioned, yet in any case of doubt one or more glands should be excised and submitted to a competent pathologist. The prognosis is very grave in both Hodgkin's disease and sarcoma of cervical glands.

93. **Suprapubic Prostatectomy.**—Freeman packs the bleeding cavity with a long strip iodoform gauze, or gauze soaked in some styptic material. The end last inserted is retained in the grasp of a pair of large clamp forceps, preferably with a square, blunt end. The handles of these forceps project through the hole in the bladder and for some distance beyond the abdominal wound. Properly graduated pressure on the gauze packing by means of these forceps will control the hemorrhage. This pressure is readily obtained by passing an ordinary rubber bandage around the patient's body beneath the pelvis and over the notch between the locked handles of the instrument. Gauze pads are now adjusted about the handles in such a way as to incline them at any desired angle, thus regulating the direction of the pressure, which should not be greater than necessary, and the whole is held in place by adhesive strips and an ordinary bandage.

97. **Repair of Fractures With Steel Splints.**—The results obtained at Rochester with the use of the steel splint, Beckman says, have been uniformly better in all classes of cases than by any other method of open operation. Infection has taken place in a few instances, but has not been of a serious nature, although in a few cases it was necessary to remove the plate and screws at a later operation. But even in these cases they have found that the plate has held long enough to insure union. If the plate is close to the skin, the chances for its remaining permanently seem to be lessened. It is possible to plate even in infected cases and get union, but in these cases one must expect the plate to be finally removed and the wound should be provided with ample drainage. In no instance, up to the present time, have they failed to get union after plating a bone and the patients are much more comfortable after this method of fixation in fractures than any other method they have tried. The freedom from pain is often surprising.

101. **Relief of Wrist-Drop and Allied Conditions.**—The authors removed the synovial membrane and cartilage from the articular surface of the radius, the bases of the third and fourth metacarpal bones and from between the bones of the carpus involved in this operation. The radius was drilled from its posterior or upper surface obliquely downward into the articular space, both on the outer and ulnar side; the scaphoid, os magnum, semilunar and unciform bones were drilled in like manner, the third and fourth metacarpal bones being drilled transversely. Removal of bone from the more or less convex surface of the carpal bones by gouge and sharp curet was necessary, that they might pass a No. 20 bronze wire continuously through the outer drilling of the third and fourth metacarpal bones, the unciform and semilunar bones and the remaining perforation in the radius. The hand was then placed on a splint for support, in a position of exaggerated dorsal extension, slightly beyond what they desired to obtain. The wound was cleansed with hot water, the drilled bones adjusted, the wire drawn tightly, the ends being twisted over the lower end of the radius, bringing the denuded surfaces of the bones in close apposition, with the hope of obtaining union of bones. Callus and bone formed between the denuded surfaces, giving permanent support. The patient can rotate the forearm to a considerable extent; supination, however, is lessened by the bad position and other conditions at the point of injury above the elbow joint. He can approximate the thumb, index and little finger, has very good flexion of hand and fingers, with excellent grasping, holding and carrying functions. The authors claim that not only will this operation relieve traumatic wrist-drop, but those due to toxemias and cortical lesions; at least it will relieve the deformity.

American Journal of Surgery, New York

January, XXVI, No. 1, pp. 1-64

105 Gastrojejunostomy. W. J. Mayo, Rochester, Minn.
106 Colonic Intoxication. J. F. Binnie, Kansas City, Mo.
107 Surgical Aspects of Exophthalmic Goiter. G. W. Crile, Cleveland.
108 Practical Points in Surgical Treatment of Exophthalmic Goiter. A. J. Ochsner, Chicago.
109 Artificial Tendons and Ligaments of Silk in Surgical Treatment of Paralyses. N. Allison, St. Louis.
110 Operative Treatment of Fractures Based on Operation of Eighty Patients. W. Bartlett, St. Louis.

111 Nephropexy. J. H. Carstens, Detroit.
112 Treatment of Prostatic Obstruction. E. O. Smith, Cincinnati.
113 Treatment of Abscesses and Necrotic Foci Resulting from Injections of Salvarsan. A. Ravogli, Cincinnati.
114 Treatment of Foreign Bodies in Esophagus. E. F. Ingals, Chicago.
115 Drainage of Acute Pleural Empyema in Children. S. W. Kelley, Cleveland.
116 Arthritis Deformans. L. W. Ely, Denver.
117 Adenoma of Liver. H. Tuholski, St. Louis.
118 Acute Angulation and Flexure of Sigmoid; Causative Factor in Epilepsy, with Special Reference to Treatment. W. H. Axtell, Bellingham, Wash.
119 Uterine Cancer; Its Early Recognition by General Practitioner. J. C. Murphy, St. Louis.
120 Control of Bleeding in Brain Operations. J. R. Eastman, Indianapolis, Ind.

Ophthalmic Record, Chicago

January, XXI, No. 1, pp. 1-56

121 Six Diopter Meniscus Trial Lenses, Including Cylinders, Spheres, Prisms, Tints, Neutral-Kryptoks, Toro-Sphero-Cylinders, New Ring and Cross-Cylinder Device for Holding Them. J. N. Rhoads, Philadelphia.
122 *New Method of Making Film Preparations to Demonstrate Presence of Gonococcus. H. McKee, Montreal.
123 *Convenient Eye Bandage. Z. C. Layson, Hinton, W. Va.
124 Aid to Localization of Foreign Bodies in Eye. H. Gifford, Omaha.
125 Management of Non-Closure of Cataract-Operation Wounds. H. Gifford, Omaha.

122. **Film Preparations for Gonococcus.**—While searching for the trachoma bodies in the male urethra McKee examined a patient who was thought to be about cured of his gonorrhea. When a film was prepared so that the epithelial cells could be examined, masses of organisms identical in morphology with the gonococcus were found within them. Many of the cells had the cytoplasm completely filled. Two cases of ophthalmia neonatorum in the usual way gave negative results. In one cell only there were inclusions which from the clinical appearance of the conjunctiva McKee thought were gonococci. Films were then prepared after the method used in trachoma cases, so that the epithelial cells could be examined. With an ear curet the palpebral conjunctiiva was gently stroked and the material spread carefully over a glass slide. It was dried in the air, and fixed in 80 per cent. alcohol for ten minutes and then stained with Giemsa solution, 1 in 20 parts of distilled water, for twenty minutes. In each of these cases in which, by examining the pus, the results were negative, the epithelial cells were found crowded with biscuit-shaped diplococci. Hemoglobin agar, inoculated with discharge containing epithelial cells, gave a profuse growth of the gonococcus. The usefulness of this method of preparation has been verified in pneumococcus and diplobacillary conjunctivitis, although in the latter it is extremely rare for the old method to give negative results. Giemsa's new method of staining has also been found useful in these cases. The prepared slide is dried in the air and put in a petri dish and covered with staining fluid, which consists of equal parts of Giemsa stain and pure methyl alcohol, for thirty seconds. Enough distilled water is now poured in to cover the specimen, 10 to 15 c.c., which is agitated until a homogenous mixture is obtained. After three minutes the specimen is removed. McKee feels sure that this method of preparing films, showing the epithelial cells, will demonstrate the presence of the gonococcus in many cases, which by the old method would have been negative.

123. **Convenient Eye Bandage.**—The bandage used by Layson can readily be made from a piece of 2½ or 3-inch gauze roller bandage. Cut a strip sufficiently long to tie around the patient's head and split this at each end, leaving about 6 or 7 inches unsplit. Two tails are thus made on each end of strip. The two which are to be applied on the side of the closed eye should be slightly longer than on the side of the eye which is to be left open. To apply the bandage, place the unsplit part over affected eye and pass the two longer tails one above and one below the ear. Carry the other end of the bandage over the forehead above the unaffected eye to a point above the temple. At this point have the upper tail to cross over the lower one and then pass back under the occipital proturberance to be tied securely with the lower tail of the opposite side. The two remaining tails are then tied at a point well above the occipital protuberance. The cross prevents the bandage slipping up too far on the side of the eye left open.

Southern California Practitioner, Los Angeles

January, XXVII, No. 1, pp. 1-44

126 Hydrophobia; Report of Case. C. Francis, Los Angeles.
127 Prevention of Abortive Sequelæ. W. D. Boggs, Pasadena.
128 Value of Health Department in Los Angeles City Schools. A. W. Moore, Los Angeles.
129 Iowa Method of Room Disinfection. G. H. Sumner, Waterloo, Iowa.
130 Death in Mines of America: Reasons for a Federal Commission. J. R. Haynes, Los Angeles.

Southern Medical Journal, Nashville

January, IV, No. 12, pp. 863-932

131 Rural Sanitation. A. W. Freeman, Richmond, Va.
132 Panama Canal. H. M. Folkes, Biloxi, Miss.
133 Paralysis. J. W. Stevens, Nashville, Tenn.
134 *Maritime Quarantine Measures Adopted Against Introduction of Cholera, with Special Reference to Detection of Cholera Carriers During Summer of 1911. R. H. Von Ezdorf, Mobile, Ala.
135 Salvarsan; Its Administration 420 Times. E. G. Ballenger, Atlanta, Ga.
136 General Treatment of Syphilis. A. F. Toole and W. F. Scott, Birmingham, Ark.
137 Syphilis and the Eye. M. Feingold, New Orleans.
138 Eye Lesions and Salvarsan; Report of Cases. J. C. O'Gwynn, Mobile, Ala.
139 Faucial Tonsil; Anatomic Reasons for Its Capacity for Evil; Some Indications for Its Removal. W. G. Harrison, Birmingham, Ala.
140 *Surgical Treatment of Exophthalmic Goiter. G. Torrance, Birmingham, Ala.
141 New Prescription. O. Dowling, Shreveport, La.
142 Diphtheria. W. W. Harper, Selma, Ala.

134. **Maritime Quarantine Measures.**—Von Ezdorf emphasizes the fact that a bacteriologic standard rather than the clinical standard heretofore followed in maritime quarantine, is practicable and must be followed in dealing with cholera-infected vessels or persons, particularly of the steerage class, coming from cholera-infected countries where the disease prevails in epidemic form. He reviews the measures taken in New York City in 1911 to control the cholera situation.

140. **Surgical Treatment of Exophthalmic Goiter.**—The surgical treatment of exophthalmic goiter is endorsed. Torrance's personal experience is limited to a few cases operated on in the early stages, without mortality, with marked improvement, following operation.

Journal of Indiana State Medical Association, Fort Wayne

January, V, No. 1, pp. 1-58

143 Progress in Surgery During 1911. W. D. Gatch, Indianapolis.
144 Progress of Ophthalmology and Oto-Laryngology During 1911. G. F. Keiper, Lafayette.
145 Progress in Preventive Medicine for 1911. J. N. Hurty, Indianapolis.
146 Progress in Pathology and Bacteriology During 1911. J. P. Simonds, Indianapolis.
147 Efficiency of Medical Organizations. W. F. Howat, Hammond.

New York State Journal of Medicine, New York

January, XII, No. 1, pp. 1-54

148 *Indebtedness of Posterity to Pioneer Surgeon of Mississippi Valley. J. D. Bryant, New York.
149 *Roentgen-Ray Localization of Foreign Bodies. J. E. Blake, Brooklyn.
150 Splanchnoptosis and Its Relief. A. T. Little, Buffalo.
151 Uses of Thermo-Cautery and Radium as Palliative Measures in Uterine Cancer. W. B. Chase, Brooklyn.
152 Treatment of Surgical Tuberculosis. J. A. Macleod, Buffalo.
153 Treatment of Surgical Tuberculosis with Tuberculin. N. K. Macleod, Buffalo.
154 Use of Normal Serum in Hemorrhage. E. B. Probasco, Glens Falls.
155 Nasal Diphtheria. C. F. Burrows, Syracuse.
156 Etiology of Arteriosclerosis. H. L. Winter, Cornwall.
157 Psychology in Schools. L. Coville, Ithaca.
158 Tuberculosis of Chorioid After Six Weeks' Treatment with Tuberculin. L. W. Crigler, New York.

148. Abstracted in THE JOURNAL Nov. 11, 1911, p. 1635.

149. **Roentgen-Ray Localization of Foreign Bodies.**—Blake's method is based on the physical law that light travels in a straight line and on the geometrical proposition that the corresponding sides of similar triangles are proportional to each other.

Lancet-Clinic, Cincinnati

January 13, CVII, No. 2, pp. 27-50

159 Mechanical Treatment of Intestinal Disease. R. K. Smith, Boston.
160 Accessory Sinuses of Nose. F. U. Swing, Cincinnati.
161 Steam Treatment of Acute Gonorrheal Conjunctivitis. J. H. Williams, Cincinnati.

January 20, CVII, No. 3, pp. 51-76

162 Cancer. F. Gaertner, Pittsburgh.
163 Surgery of Pericardium. B. M. Ricketts, Cincinnati.
164 Ancient Physicians and House Doctors. T. C. Minor, Cincinnati.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

January 13, I, pp. 75-138

1 *Relationship of Tuberculosis to Accident and Injury. W. C. Bosanquet.
2 *Sensory Disturbances from Cerebral Lesions. H. Head and G. Holmes.
3 *Rupture of Uterus. G. Blacker.
4 *Incidence of Mediterranean Fever in Malta and Its Relation to Size of Goat Population. J. W. H. Eyre.
5 Electric Metallic Colloids and Their Therapeutic Applications. B. G. Dihamel.
6 Treatment of Gonorrheal Conjunctivitis in Adult. J. S. Hosford and G. B. James.
7 Psychotherapy and General Medicine. W. P. S. Branson.

1. **Relationship of Tuberculosis to Accident and Injury.**—This subject is discussed by Bosanquet from the viewpoint generally accepted as correct, (1) that an accident or other injury may be the means by which tubercle bacilli are introduced into a person; or (2) that the injury may cause a weakening of natural resistance to the bacillus and thus permit it to establish itself when it would not otherwise have done so, or may lead to dissemination of the bacilli, thus giving rise either to a new focus of tuberculosis or to extension of one already existing.

2. **Sensory Disturbances from Cerebral Lesions.**—In this, the second paper of the series, Head and Holmes discuss the sensory disturbances associated with certain lesions of the optic thalamus. It is obvious that if all afferent impulses undergo a relay in the optic thalamus, a lesion at a point where they enter this organ may interrupt them before they have undergone regrouping; they may be cut off before they have undergone the thalamic junction and the loss of sensation would then correspond to that produced by a lesion of the midbrain, although the disease might lie in the optic thalamus. On the other hand, sensory impulses may reach the optic thalamus undisturbed and undergo characteristic changes in grouping; but the fibers which conduct them from the thalamus to the cortex may be interrupted by the lesion. Finally, since lesions of the optic thalamus are usually of vascular origin and tend to disturb anatomic areas rather than functional paths, they not infrequently interfere both with the impulses which enter the thalamus and with those which pass away from this organ to the cortex.

3. **Rupture of Uterus.**—Of the series of eight cases reported by Blacker, in two the tear was incomplete and in six complete. Of the former, one patient in whom the shock alone was treated, the condition remaining unrecognized, died, while the second recovered after plugging. Of the six cases of complete tears three patients died and three recovered. Of the fatal cases two patients were treated, while in the three successful cases the patients were all operated on, one by vaginal suture and two by hysterectomy. The total mortality was 50 per cent. The series of cases is too small to allow of any deductions being drawn, but it illustrated the frequency of this complication of labor—viz., 1 in 4,222 confinements—in an extern maternity department among the poor of London, and the cases are fair types of the different varieties of rupture of the uterus. Summing up the treatment of these cases as regards conservative treatment or laparotomy, Blacker says that while in cases of incomplete rupture gauze plugging or vaginal drainage may prove a useful method, in all cases of complete rupture the treatment most likely to give the best results will prove to be abdominal section, followed by the removal of the damaged uterus and the provision of efficient drainage for the peritoneal cavity.

4. **Mediterranean Fever in Malta.**—Eyre emphasizes that coincident with the adoption in 1906 of the recommendation of the Mediterranean Fever Commission that the use of milk from the Maltese goat should be prohibited, a striking diminution occurred in the case-incidence of Mediterranean fever on the naval and military forces stationed at Malta. He believes that the removal of infected goats and the consequent reduction are significant.

British Medical Journal, London

January 13, I, pp. 57-112

8 Evidences of Auricular Fibrillation Treated Historically. T. Lewis.
9 Effects on Heart of Soluble Digitoxin, Isolated Glucosid of Digitalis Group. B. Moore.
10 *Case of Cardiac Failure Treated by Cane Sugar. H. Dingle.
11 *Case of Obscure Fever with Pronounced Nervous Symptoms. J. M. Clarke and G. Scott-Williamson.
12 Use of Color Tests in Medical and Surgical Practice. W. M. Beaumont.
13 Relation of Corneal and Absolute Astigmatism. J. Rowan.
14 Administration of Oxygen. L. Hill.

10. **Treatment of Cardiac Failure.**—The case of cardiac failure treated by Dingle with cane sugar shows how remarkably an apparently hopeless case was benefited by its use. The patient, aged 28, suffered from a failing heart for about nine months due to his damaging his mitral valve by overexertion. From the time he first came under Dingle's care he was treated with all the various cardiac drugs, in variable doses, with absolute rest and suitable diet. He at times showed signs of improvement, but it was never lasting, and he went from bad to worse. He was tapped twice. Finally he was given 5 ounces of sugar a day. Only twice since he commenced the sugar has he taken any cardiac drugs and then only for a few days. He has never again required tapping. Dingle attributes his remarkably improved condition solely to the cane sugar.

11. **Obscure Fever with Pronounced Nervous Symptoms.**—This was a case of continued fever of obscure origin, running a course of a little over three weeks, with marked symptoms of disturbance of the nervous and also of the urinary systems. It appears to have been due to a leptothrix bacillus previously described as a pathogenic organism by Ritchie and McDonald, in cases met with during an epidemic of cerebrospinal meningitis. These cases were all fatal. The blood-count was worthy of special note. There was no leukopenia, the leukocytes being 8,000, but there was a relative increase of lymphocytes, the numbers per cubic centimeter being: Polymorphonuclears 3,760, small lymphocytes 2,320, large lymphocytes 1,280, transitionals 560, myelocytes 80. Eosinophils were absent in the count. The case is also another example of the value of lumbar puncture in a case of febrile illness with marked nervous phenomena. The discovery of the bacillus in the cerebrospinal fluid led in this instance directly to the elucidation of the cause of what was at the time a very obscure illness, and at that period so severe that it seemed likely to prove fatal.

Clinical Journal, London

January 3, XXXIX, pp. 193-208

15 Enlarged Cervical Lymph-Nodes. W. H. White.
16 Deaths of English Kings. J. Rae.

January 10, XXXIX, pp. 209-224

17 Mild and Latent Cases of Congenital Heart Disease. A. J. Jex-Blake.
18 Deaths of English Kings. J. Rae.

Medical Press and Circular, London

December 27, XCII, pp. 673-698

19 Femoral Hernia. W. H. Battle.
20 Treatment of Malignant Tumors by Secondary Roentgenization. F. Hernaman-Johnson.
21 Uterine Fibrosis and Allied Conditions. J. N. Stark.
22 Scopolamin in Normal Labor. A. J. Wallace.

January 3, XCIII, pp. 1-26

23 Practical Notes on Eczemas. L. Brocq.
24 Prostate, Prostatism and Prostatectomy. J. H. Nicoll.
25 Psychology of Salvarsan A. V. Elder.

January 10, XCIII, pp. 27-52

26 Pleurisy with Effusion. R. W. Philip.
27 Thrombosis in Lymph Vessels in Septic and Carcinomatous Diseases. E. M. Corner.
28 *Immediate and Ultimate Results of Gastro-Enterostomy for Gastric and Duodenal Ulcer. L. A. Bidwell.
29 Unity in Medical Profession. J. E. Lane.

28. **Gastro-Enterostomy for Gastric and Duodenal Ulcer.**—Bidwell emphasizes that the operative treatment of gastric and duodenal ulcer has a lower mortality than treatment by medical means, as even in a series of unselected and complicated cases it is about 7 per cent. Operation effects a complete cure in over 70 per cent. of all cases, and in about 15 per cent. there is a varying amount of improvement and only about 5 per cent. are failures. When we consider the brilliant results of the successful cases, the small proportion of real failures and compare this with the results of medical treatment, he

says we need not hesitate to recommend operation in every case in which a duodenal ulcer has been clearly diagnosed, or a gastric ulcer has not been cured by medical means.

Australian Medical Journal, Melbourne

November 25, I, pp. 201-210

30 Eclampsia. R. H. Morrison.
31 Accidents of Football. W. Moore.
32 Treatment of Stammering. G. Leary.
33 Digestion in Stomach. S. W. Patterson.

December 2, I, pp. 211-220

34 Treatment of the Tuberculous in Private Practice. C. Bage.
35 Osmotic Pressure. J. L. Jona.

December 9, I, pp. 221-230

36 Radium in Dermatology. H. Lawrence.
37 Pulmonary Edema. P. G. Dane.
38 Iritis in Rheumatoid Arthritis. J. M. Baxter.
39 Volvulus of Small Intestine. N. McKenzie and J. Smith.

Practitioner, London

January, LXXXVIII, pp. 1-216

40 *Morbid Diatheses, with Special Reference to Arthritic, or So-Called Rheumatic Habit of Body. Sir D. Duckworth.
41 *General Treatment of Acute Rheumatism. I. B. Yeo and A. G. Phear.
42 *Treatment of Purulent Affections of Large Joints by Active and Passive Hyperemia. Bier and W. Baetzner.
43 *Diagnosis and Treatment of Rheumatoid Arthritis and Other Forms of Infective Arthritis. A. P. Luff.
44 *Gonorrheal Rheumatism. W. Murrell.
45 *Cardiac Manifestations of Acute Rheumatism. L. Smith.
46 *Torticollis or Wry-Neck. A. H. Tubby.
47 *Drugs in Rheumatic Conditions. R. Stockman.
48 Cutaneous Affections in Rheumatic Conditions. J. Galloway.
49 Muscular Atrophy in Rheumatism. P. Stewart.
50 Rheumatism in Children. A. M. Gossage.
51 Diagnosis Between Rheumatism and Gout. A. W. Sikes.
52 Cerebral Rheumatism. C. Coombs.
53 *Relation of Diseases of Mouth to Rheumatism. K. Goadby.
54 *Diet in Rheumatic Affections. L. J. Llewellyn.
55 Treatment of Rheumatism by Electricity. N. S. Finzi.
56 Roentgen-Rays in Treatment of Rheumatoid Arthritis. C. Williams.
57 Treatment of Sciatica by Means of Intraneural Injections of Saline Solution. A. G. Hay.
58 Radium Water and Radio-Oxygen Therapy in Rheumatism. W. Armstrong.
59 Treatment of Rheumatism at English Spas. L. Calthrop.
60 Treatment of Rheumatism (and Certain Forms of Arthritis) at Foreign Spas. R. F. Fox.
61 Treatment of Rheumatism by Injection of Magnesium Sulphate. A. B. Jackson.
62 Thyroid Extract in Rheumatoid Arthritis. W. J. Midelton.
63 History of Present-Day Accepted Etiology of Acute Rheumatism. A. Mantle.

40. **Morbid Diatheses.**—Several distinct morbid diatheses are recognized by Duckworth. First, the arthritic, or, as it is sometimes, but not appropriately, termed the rheumatic diathesis; second, the strumous or scrofulous diathesis; third, the bilious; and fourth, the nervous. Subjects of the arthritic diathesis present several peculiarities. In early years there is often no appearance of any delicacy. The general development is satisfactory. Some defects may be noted in the vascular system, such as dilatation of the facial capillaries, with languid circulation in small vessels, leading to cold extremities and tendency to chilblains; and sometimes we meet with patches of erythema or dry eczema. Pains in various joints and in the lower limbs, regarded as "growing pains," are frequently to be noted. Sore throat with recurrent tonsillitis is specially common, and the fauces are believed, with good reason, to be a site of lodgment of the specific germs of rheumatic infection. Arthritis more or less acute is apt to occur, sometimes with pyrexia or in other instances without any febrile movement. There is a special liability to receive and encourage the development of the specific toxin (due to a diplococcal microbe) of rheumatism. Up to the age of 35 there may be one or more attacks of rheumatic fever. Other varieties of arthritis occur in these susceptible individuals from tender to advanced ages, dependent in many cases on toxic infections from without (exogenous), or from within, as in the case of gout (endogenous metabolic toxins). In instances of chronic septicemia, there is a greater tendency in persons of this habit to suffer from arthritis than is the case in others. Many of the manifestations of rheumatism are abarticular and declare themselves in various textures and hence we meet with several forms of erythema, with nodules and purpura. Carditis in all its forms, meningitis, cerebral and spinal, and chorea come into this category. In the case of chorea (cerebral rheumatism) we are in the presence of blended rheumatic and nervous habits. The lymphatic and glandular systems appear to be singularly immune from rheumatic influences. So much is this the case that in any well-marked young rheumatic subject, the occurrence of sensitive, irritable or swollen glands should suggest a strumous strain blended in the constitution.

41. **Treatment of Acute Rheumatism.**—The chief indications in the treatment of acute articular rheumatism, according to Yeo and Phear are as follows: (1) To endeavor to cut short the course of the attack and thereby to lessen the danger period during which there is the risk of cardiac complications. (2) To relieve the joint pains and other distressing symptoms. (3) To meet any complication which may arise, and specially to be ready with the promptest treatment in the event of hyperpyrexia. (4) To guard against the danger of relapse by prolonging treatment beyond the period of symptoms and by special supervision during convalescence. The treatment includes rest in bed, cathartics, fluid diet, alkalies and salicylates.

42. **Treatment of Purulent Affections of Large Joints.**—All forms of pyemic affections of the joints, whether a traumatic suppuration, a collateral inflammation, or a metastatic suppuration of the joint, the authors claim furnish most favorable ground for treatment by hyperemia. Of the bacterial forms, the gonorrheal affection of the joints claims chief interest, because in the treatment of these hyperemia has achieved its most famous therapeutic triumphs, above all in the acute phlegmonous variety. This is specially characterized by intense pain, and exhibits the gonorrheal metastasis in by far the most abundant and most malignant form. Passive hyperemia is for such cases greatly superior to all other remedies. By virtue of the increase of the inflammatory curative powers a quick, certain and finally complete cure is obtained in the shortest time with full possession of the functions of the joint. Passive movements, carried out as early as possible, quickly allay the reflex muscular contractures, combat atrophy and prevent adhesions in the joint; in short, they are the requisites for preserving the functions of the joint. Gonorrheal joint-affections of long standing also soon lose their painfulness by hyperemia, and, if not already damaged beyond repair, can be cured with restoration of function.

43. **Treatment of Rheumatoid Arthritis.**—The term "rheumatoid arthritis" is objected to by Luff, as suggesting a causal connection with rheumatism. He prefers the name "arthritis deformans." He says that every effort should be made to discover the primary source of infection, and, if found, to remove it; this especially applies to those cases which are secondary to pyorrhea alveolaris. The mouth, tonsils and nasopharynx should be carefully examined; otitis media should be treated if present; the lungs examined for the presence of bronchiectasis; the intestinal tract should receive attention, especially as regards dysentery and colitis; the genito-urinary organs must be carefully investigated; and any source of infection, such as an open sinus, should receive suitable treatment. In most cases of infective arthritis an attempt should be made, when possible, to discover the responsible organism, and, if found, to employ an autogenous vaccine. The drugs that Luff has found most useful in the treatment of rheumatoid arthritis are guaiacol and potassium iodid. The most convenient form of administering the guaiacol is the carbonate in cachets. At first from 5 to 10 grains of the carbonate of guaiacol should be given three times a day, and the dose should be increased by 1 to 2 grains each week until from 15 to 20 grains are being taken in each dose. It is essential that this treatment should be continued for at least twelve months. The beneficial effects of the guaiacol are increased by administering at the same time a mixture containing 10 grains of potassium iodid in each dose; the depressing effect of the iodid should be counteracted by its combination with tonics.

44. **Gonorrheal Arthritis.**—The only effective method of treating gonococcic arthritis in Murrell's opinion is by vaccine therapy using an autovaccine. In some cases he has used large doses, even up to 500.000.000, every three or four days. It is said that the dose for the urethritis should be 75.000.000, for the iritis 250.000.000, and for the arthritis 500.000.000, but Murrell does not endorse the action of the medical man

who gave an initial dose of 825,000,000. He agrees with Hartwell, who finds that autogenous vaccines are valuable in all stages of gonococcic arthritis except when ankylosis has occurred. He cites a case of gonococcic arthritis in which heterovaccines and autovaccines carried out for a long period and with the most careful attention to detail failed to effect an improvement. A surgeon was requisitioned, who by dilation of the urethra under an anesthetic removed the focus of infection, and allowed the antidotal treatment to exert its influence.

45. **Cardiac Manifestations of Acute Rheumatism.**—Two propositions are put by Smith. (1) Can we prevent heart trouble in acute rheumatism? Unfortunately, No. (2) If it occur, can treatment do anything to curtail or prevent serious or permanent trouble? Undoubtedly, Yes. He says that heart trouble is not to be regarded as a complication in rheumatism; it is part of the attack. It has been maintained that the heart is implicated in every case, usually as a myocarditis. Be this as it may, there can be no doubt that in many cases the inflammation of muscle or valve is temporary, and the structure recovers without damage. Analogy suggests and experience supports such a view. Many hearts are affected, some get well. Rest, salicylates, counterirritation, simple "resistance exercises," relief of pain, and a course of iron and arsenic usually comprise the treatment.

46. **Torticollis.**—Stiff neck, with temporary inability to move the head is regarded by Tubby as occurring in local conditions, such as acute and chronic rheumatism. If the affection be acute and some pyrexia be present, a purgative should be given, succeeded by appropriate doses of salicylate of soda or by 5 grains of acetylsalicylic acid every six hours. An ointment containing menthol-methyl salicylic acid may be rubbed in and the part kept covered. When the acute tenderness is lessening, gentle manual massage for a few minutes twice a day is useful, or the mechanical form of massage, by vibratory movement, is very soothing. In the more chronic forms the internal administration of iodid of potassium and the local application of linimentum belladonæ cum chloroformo, with frequently repeated massage are called for. If the affection is obstinate, radiant heat may be employed and the best form is that derived from an electric lamp of 1 to 500 volts. Care, however, must be taken in its use, as the skin is easily scorched.

47. **Drugs in Rheumatic Conditions.**—Salicylic acid, Stockman says, is undoubtedly the most powerful antirheumatic drug known to us, and the action of all salicyl compounds depends on the extent of their conversion into it in the body. Of these compounds salicin, acetylsalicylic acid, salol and methyl salicylate are of most clinical importance. Salicin has a bitter taste, and is much less nauseous than sodium salicylate, and can be conveniently given dissolved in hot water in which it is fairly soluble. It only yields 43 per cent. of its weight of salicylic acid, and hence the amount required is at least double that of sodium salicylate, 20 to 30 grains every hour or two hours until 1 ounce has been given and then in smaller doses according to the circumstances. Acetylsalicylic acid is very active and has a marked analgesic effect. It cannot be prescribed with alkalis which decompose it, and hence it is apt to bring on nausea and vomiting if given continuously. Methyl salicylate is also very apt to irritate the gastric mucous membrane, but in 10- to 20-minim doses up to 60 or 90 minims per day, given in emulsion, or on sugar, or in milk, it acts powerfully, and externally applied it is unrivaled for its analgesic action in rheumatic conditions. Salol and salicylate of quinin are antirheumatics only to the extent of their salicylic acid content, which is roughly about one-half in each case; their value in acute conditions is therefore small. Sodium benzoate has the same specific effect as the salicylate, but exerts a less powerful and decided influence. On the other hand it is practically nonpoisonous and has no disturbing side-effects. It can be given in 20-grain doses every two or three hours with satisfactory results in cases of uncomplicated rheumatic fever, but its practical usefulness is merely as a substitute for the more powerful salicylate when the latter cannot be tolerated.

53. **Diseases of Mouth and Rheumatism.** — Goadby's researches have been directed to determining the special mouth organism causally associated with various arthritic symptoms; mouth disease or oral sepsis, to use a generalized term, were so frequently complicated with chronic arthritic changes that the clinical association appeared undoubted. Typical cases were, therefore, selected and the bacteria isolated from the oral secretions and tested on animals for virulence, by intravenous, subcutaneous and intraperitoneal injections. In some cases the animals died from generalized infection; in others pus formation and local abscesses were produced, but no rheumatic symptoms appeared. Considerable difficulty was at first experienced in devising a suitable culture medium, as well as a proper standard of alkalinity for the growth of all mouth organisms. Finally, this obstacle was overcome and the majority of the bacteria obtained in pure culture. A series was then tested against the blood of the patients and those organisms regularly showing alteration in the opsonic index were selected. Inoculations were made with these into the joints (knee) and into the peri-articular tissue of rabbits. One type of organism produced chronic swelling of the synovia and membranes, while in a few instances, definite bony changes followed. The organism obtained from the majority of the mouth lesions in arthritic cases and which produced these changes in the joints of inoculated animals is a streptobacillus, which Goadby has provisionally termed the *Streptobacillus malae*. It resembles in its morphology, but not in its cultural characters, the streptobacillus described by Ducrey as the cause of soft chancre. In many ways the organism resembles a streptococcus, but is easily differentiated from the streptococci by its morphology and cultural characteristics. Goadby is convinced that diseases of the gums account for a certain, perhaps a very large, number of cases of arthritis, namely, those of apparently bacterial origin with no obvious infective focus. Lambert states that in 172 cases of rheumatoid arthritis where special enquiry was made for an infective focus, 141 of the patients (76 per cent.) had badly decayed teeth or the teeth had dropped out.

54. **Diet in Rheumatic Affections.**—Obesity is regarded by Llewellyn as the direct complication of osteo-arthritis, and to neglect its treatment is to court failure. On the other hand, the prevention or timely reduction of excessive corpulence enhances the sense of well-being, improves often markedly the walking powers, diminishes articular pain, and, in Llewellyn's opinion, should form the groundwork of our therapeutic efforts to control or arrest the march of the underlying morbid process.

Annales de l'Institut Pasteur, Paris

December, XXV, No. 12, pp. 865-959

64 *Experimental Research on Vaccination Against Typhoid. (Des vaccinations antityphiques.) E. Metchnikoff and A. Besredka.
65 Enhancing Resisting Power of Trypanosomes. (De la préparation de races de trypanosomes résistantes au sérum de cynocéphales et au sérum humain.) A. Lebœuf.
66 Absorption of Diphtheria and Tetanus Toxin by Nerve Substance and Resulting Phenomena. (Etude biologique et chimique de l'adsorption des toxines diphtérique et tétanique par la substance nerveuse et des phénomènes corrélatifs.) G. Laroche and A. Grigaut.
67 Bacteriologic Study of Pleuropneumonia. (De l'étiologie de la péripneumonie.) E. J. Martzinovski.
68 Hemolytic Power of Streptococci. (Du pouvoir hémolytique des streptocoques.) F. Jupille.
69 Influence of Iron on Growth of Molds. (Influence du fer sur la culture de quelques moisissures.) B. Sauton.

64. **Experimental Research on Vaccination Against Typhoid.**—Vaccines made with killed bacilli failed to protect the chimpanzee against typhoid infection in the research reported by Metchnikoff and Besredka. They found further that the typhoid bacilli voided by a chronic bacillus carrier were pathogenic for the laboratory animals but not for the chimpanzee, and these avirulent bacilli were unable to protect the chimpanzee against typhoid from ingestion later of virulent typhoid bacilli. On the other hand, a single attack of true typhoid always rendered the chimpanzee immune to new infection. Vaccination with living microbes is the only way, they assert, to confer solid immunity. They found that the paratyphoid bacillus B was able to vaccinate against typhoid on condition that it was administered in a very large dose, entailing an intense febrile reaction.

Annales des Maladies des Org. Génito-Urinaires, Paris

December 1, XXIX, No. 23, pp. 2113-2208

70 Phosphaturia and Oxaluria. J. Teissler.
71 *Immediate and Remote Results of Prostatectomy for Hypertrophy of the Prostate. R. Proust, E. Zuckerkandl and H. H. Young.

71. **Remote Results of Prostatectomy.**—Proust insists that the ultimate outcome of prostatectomy was incomparably better when the Freyer technic was applied, and that the perineal technic should be used only when the transvesical route is contra-indicated. He admits that postoperative stricture is extremely rare after the perineal operation, while with the Freyer technic there is liable to be a kind of valve formation impeding urination unless care is taken to prevent this.

Zuckerkandl also advocates the superiority of the suprapubic operation over the perineal, notwithstanding its higher mortality. The sexual functions are seldom impaired by the suprapubic operation, he says, while impotence has followed the perineal operation in a few isolated cases. He bases his conclusions on ninety-four personal cases; the mortality with the perineal technic was 9.5 per cent. and with the suprapubic, 18.7 per cent. The health was seriously undermined, besides, in a number of cases by fistulas and incontinence of urine after the perineal operation.

Young, on the other hand, lauds the conservative perineal technic, both for the immediate and remote results, and reports eighty-five Bottini, forty-five suprapubic, and the rest perineal operations in 450 cases of hypertrophied prostate requiring operative relief.

Archives de Médecine des Enfants, Paris

January, XV, No. 1, pp. 1-80

72 *Infantilism. M. de Biehler.
73 Ancient Work on the Diseases of the Newly Born. (Un livre sur les maladies des nouveau-nés écrit vers 1472.) E. Apert.
74 *Acute Osteomyelitis in Infants. (Osteomyélite aigue du maxillaire supérieur chez le nourrisson.) R. Français.
75 *Chronic Invagination of the Intestine in Boy of 4 Mistaken for Dysentery. J. Comby.

72. **Infantilism.**—The boy of 12 in the typical case reported had rachitis, anemia, tuberculosis and a valvular defect; his dèvelopment was scarcely that of a child of 6 and de Biehler analyzes the case as a striking example of what she calls *insuffisance pluriglandulaire*, several of the ductless glands being evidently insufficient.

74. **Osteomyelitis in Infants.**—Français reports three cases of acute osteomyelitis of the upper jaw in infants under five months old. In eighteen cases cited from the literature the age was also under nine months. The moment the lesion is diagnosed, it should be treated at once by opening an outlet for the pus, etc. As the infection occurs by way of the germs of the teeth, the lesion should be attacked through the mouth, curetting through the mouth and cleansing the cavity, draining with a wick of gauze. The development of the teeth later depends on the promptness and thoroughness of the operation; two of his little patients soon recovered but the third was only a few days old and weakly, and the osteomyelitis was so extensive that the child succumbed not long after the operation.

75. **Invagination of the Intestine Mistaken for Dysentery.**—The child of four had diarrhea, melena, pain and vomiting for three weeks; then peritonitis developed, fatal in a week. Treatment had been on the diagnosis of dysentery, with serotherapy, etc., but necropsy revealed invagination of the colon although during life the palpation findings had been negative.

Journal de Chirurgie, Paris

November, VII, No. 5, pp. 509-652

76 *Mobilization of Skin Over Large Areas to Repair Gaps Elsewhere. (La mobilisation tégumentaire par décollements très étendus et ses applications à la chirurgie réparatrice.) H. Morestin.

76. **Mobilization of the Skin to Repair Gaps Elsewhere.**—Morestin states that it is possible to detach the skin and mobilize it over extensive areas, permitting almost incredible mobilization of great extents of the skin without impairing its vitality in the least. His attention was attracted to this possibility by observing the unimpaired vitality of the skin after trauma inducing extensive effusion of blood and serous fluid under the skin, lifting it up over large areas and thus separating it from its attachment to the tissues below. The vessels passing into the skin must have been all broken off, and yet when the effusion was drained away the skin settled back into place and the circulation continued unhampered. The same occurs when the surgeon separates the skin for a distance of 10, 20 or 30 cm. around a wound; he need not hesitate to loosen up the skin by cutting with bistoury or scissors all the cellular connections uniting the derma to the superficial aponeuroses, keeping as close as possible to the outer layer of the superficial fascia. If there is much fat, the separation can be made through the adipose tissue. The derma itself must be carefully guarded from injury, keeping always the same distance from its lower surface in snipping its attachments. There is usually very little bleeding; he packs the space with sponges as he goes along; ligation of a vein is only exceptionally required. When the derma has thus been loosened up all around, the skin is a floating, stretchable and adaptable substance that can be drawn up to cover almost any defect without much traction. The skin adapts itself to its new bed and heals in place with a completeness and rapidity unknown elsewhere. Morestin reports a number of cases with illustrations to show the ease and simplicity with which the skin was thus loosened up from high in the neck and down on the arm to the iliac fossa below and over on the back or other mamma at the sides, after excision of a mammary cancer. The trace of the operation left was only a straight linear scar running from just below the other mamma to just beyond the axilla. In another case a large cancer on the cheek was removed with no trace of disfigurement except a straight linear scar under the chin with a horseshoe scar enclosing one cheek.

Lyon Médical, Lyons

December 31, CXVII, No. 53, pp. 1473-1536

77 Pathologic Anatomy of the Nervous System. Its Rôle and Its Limits in the Study of Nervous Disease. IV. (L'anatomie pathologique élementaire du système nerveux.) L. Bériel.

Revue de Gynécologie, Paris

December, XVII, No. 6, pp. 497-600

78 *Abscess in the Liver During or Closely Following Pregnancy. (Les grands abcès du foie pendant la grossesse et les suites de couches.) G. Chavannaz and E. Loubat.
79 Colitis with Perforation of Sigmoid Flexure; Three Cases; Recovery. (Des sigmoidites perforantes.) V. Pauchet.
80 Case of Diffuse Cancer of the Stomach. (Linite plastique généralisée.) E. Chambard.

78. **Abscess of the Liver in Connection With Pregnancy.**—Chavannaz and Loubat report a case in detail, the large solitary abscess developing in a woman of 32 who had been delivered of a dead seven-months fetus over three months before the operation on the liver. She had had severe eclampsia at the time and there had been signs of some trouble in the liver during the three months, but digestion had been normal and there was no jaundice or radiating pain. The liver region protruded and considerable collateral venous circulation was evident. The operation released over a quart and a half of thick brownish pus, the cavity in the liver was merely swabbed dry and drained, and rapid recovery followed. Four other cases are reported from the literature; in each the abscess occurred during the pregnancy or at term; three of the women died soon after, but two of the infants survived. The abscess was a single large one in all but one of the five cases. Both of the women survived in the two cases in which an operation was done. The main point in such cases is to bear in mind the possibility of an abscess of the liver when confronted with puzzling symptoms during or soon after a pregnancy. In the five cases reported the diagnosis was presumptive in one case, confirmed by the operation; in another case the diagnosis had been positive, but in the three other cases pleurisy or pleuropneumonia had been diagnosed.

Archiv für Gynäkologie, Berlin

XCV, No. 2, pp. 349-550. Last indexed Dec. 16, 1911, p. 2031

81 Functioning of the Ovaries. (Zur Physiologie und Pathologie der Ovarialfunktion.) L. Adler.
82 Young Human Embryo. (Ein junges menschliches Ei.) R. Todyo.
83 Importance of Creatin for the Metabolism of the Uterus. (Bedeutung des Kreatins für den Stoffwechsel des Uterus.) W. Rübsamen and R. Gusikoff.
84 *Estimation of Losses of Blood in Obstetrics and Gynecology. (Praktische Ergebnisse einer klinischen Methode zur quantitativen Bestimmung von Blutverlusten in der Geburtshilfe und Gynäkologie.) W. Rübsamen and G. Charlipp.

85 Cause of Rupture of Pregnant Tube. (Ursache der Ruptur gravider Tuben. Pathologisch-anatomische Studie mittelst plastischer Rekonstruktion nach Born.) M. Kiutsi.

84. **Estimation of Obstetric and Gynecologic Losses of Blood.**—Rübsamen and Charlipp have been estimating the amount of blood lost at normal and pathologic deliveries. The means by which they estimate the amount is to collect all the cloths, aprons, sponges, compresses, etc. soiled with blood, and the placenta, and rinse them until all the blood has soaked out into a given amount of water. The hemoglobin content of the rinsing water is then determined with Sahli's hemometer and compared with the hemoglobin content of the patient's blood recorded before and after. They give a simple formula to calculate the c.c. of blood lost by comparing the hemoglobin content in this way, and commend the method as very convenient and exact enough for practical purposes. They tabulate the findings in nineteen obstetric and ten pelvic operative cases. With a normal birth, the blood lost ranged from 246 to 772 c.c. with an average of 438 c.c.; with perineal tears the amount rose by 150 c.c. With placenta prævia the total after entering the clinic was 1,445 c.c. in one case. In another the total loss of blood was 1,158 c.c., of which 350 c.c. was in the placenta. In a case of Cesarean section, the bleeding was not regarded as excessive, but estimated by this exact method it was found that the woman had lost 1,530 c.c.; 571 c.c. was lost by one patient during curetting, amputation of the portio and ventral fixation; 346 c.c. with a supravaginal amputation, and 308 c.c. with a Schauta-Wertheim operation. The lesson taught by the research reported is the danger to which women are exposed from the loss of such large amounts of blood during delivery. A childbirth, they remark, is evidently a process just at the borderline between the physiologic and the pathologic.

The following is their formula: A = the average between the hemoglobin content of the woman's blood taken before and after the loss of blood; B = the amount of rinsing water containing the blood lost; C = the hemoglobin content of 20 cubic millimeters of the rinsing water, and X = the unknown amount of the blood lost. As with increasing dilution the hemoglobin content in a given quantity grows smaller, then X is to B as C to A

$$X : B = C : A$$

Transposing this, we have

$$X = \frac{B \times C}{A}$$

If A equals the half of 71 + 69 (the woman's hemoglobin proportion before and after the loss of blood), and B equals 1,000 c.c., then we get the equation

$$X : 1{,}000 = 7 : 70$$

$$\text{Hence } X = \frac{1{,}000 \times 7}{70} = \frac{7{,}000}{70} = 100 \text{ c.c.}$$

Berliner klinische Wochenschrift

January 8, XLIX, No. 2, pp. 49-96

86 *Pyogenic Infection of the Kidneys. (Die pyogene Niereninfektion.) A. Tietze.

87 Dosage of Roentgen Rays. (Zur Methodik der qualitativen Strahlenmessung in der Röntgentherapie.) H. Meyer and H. Ritter.

88 *Conglutination Fixation of Complement Test. (Konglutinationsreaction nach Karvonen.) H. Hecht.

89 Safranin in Treatment of Experimental Trypanosomiasis. (Zur medikamentösen Behandlung der künstlichen Trypanosomeninfektion, Tryp. Brucei.) L. Brieger and M. Krause.

90 Rectal Temperature During Hydrotherapy. (Temperaturmessungen im Darm mit dem Fieberregistrierapparat von Siemens u. Halske bei verschiedenen hydrotherapeutischen Maassnahmen.) Schemel and Eichler.

91 Experimental Inoculation with Poliomyelitis in Vaccine Pustule. (Experimentelle Untersuchungen über Poliomyelitis.) O. Thomsen.

92 *Auscultation at the Mouth. (Oralauscultation.) K. Takata.

93 Cancer of the Sympathetic Nervous System. (Das Ganglioma embryonale sympathicum.) L. Pick. Commenced in No. 1.

94 Duodenum Tube. (Duodenalsonde.) P. Lazarus.

95 *Extraction of Intercostal Nerves in Treatment of Tabetic Gastric Crises. (Nervenextraktion bei gastrischen Krisen.) F. Franke.

96 Advantages of Puncture in Treatment of Tuberculous Peritonitis. (Zur Therapie der Peritonitis tuberculosa.) M. Klotz.

97 *Prophylaxis of Scarlet Fever and Diphtheria Among School Children. (Zur gegenwärtigen Scharlach- und Diphtherieepidemie in Gross-Berlin.) M. Westenhoeffer.

98 Necropsy Findings in the Poisoning Cases at the Berlin Municipal Shelter. (Die anatomischen Befunde bei den Vergifteten des Berliner Asyls für Obdachlose.) P. Fraenckel.

86. **Pyogenic Infection of the Kidney.**—Tietze discusses the various modes of infection, citing a number of typical cases. In two cases the kidney affection was secondary to gangrenous appendicitis and a number of small abscesses were found in the kidney parenchyma; there was no pain and the bladder urine showed no signs of blood or pus and no urine dribbled from the exposed kidney. In three other cases of febrile pyelonephritis there was pain only in one and then in the form of colics. The urine was apparently normal in all for a long time and only gradually did one kidney become enlarged. The diagnosis in such cases is peculiarly difficult, but differentiation is the more important, he remarks, as a pyelitis generally heals under internal treatment, copious drinking, reclining on the other side, and rinsing out the kidney pelvis through the ureter catheter. The outcome is entirely different with an affection of the kidney parenchyma; spontaneous recovery is possible but exceptional; he reports a case of the kind. A kidney with miliary abscesses requires operative interference after failure of the ordinary medical measures. Nephrotomy is generally sufficient; only when the entire kidney is found studded with abscesses is its removal indicated. In three such cases recently he merely incised the kidney at first but was compelled to remove it later. Two of the patients recovered; the infection was blood-borne in one case and of the ascending type in the other. In the third case the infection was evidently secondary to furunculosis, and both kidneys were evidently involved so that the patient still suffered after removal of one, dying finally from the effects of an abscess in the liver. This case teaches anew the necessity for ascertaining the condition of the second kidney before removing one. Blood-borne infection, Tietze adds, is peculiarly liable to involve both kidneys, although one may be more seriously affected than the other. Ascending infection may also involve both kidneys but as it generally is ushered in by some local process, kinking of the ureter, stenosis, etc., especially during a pregnancy, involvement of one kidney alone is more common.

88. **Conglutination Fixation of Complement Test.**—Hecht has been testing Karvonen's conglutination reaction (described in The Journal, Dec. 16, 1911, p. 2032). He states that for reasons which he enumerates the method is not applicable for general practice although the reaction is interesting from several points of view.

92. **Auscultation at the Mouth.**—Takata holds the stethoscope just in front of the patient's partly opened mouth and auscults as the patient breathes deeply and slowly. He asserts that the findings in this way are peculiarly instructive, while the patient does not have to undress or exert himself, and can auscult himself in this way, even without the stethoscope.

95. **Operative Treatment of Gastric Crises.**—Franke states that the patient operated on in 1910 by his method is still free from recurrence, and two other patients since have benefited in the same way. The method, he says, is much simpler and easier than section of the posterior spinal nerve-roots for relief of tabetic crises, while the results to date have been equally good or superior to those from rhizotomy. The intercostal nerves are very slowly and gradually pulled or twisted out at the point where the posterior spinal roots emerge. Leriche of Lyons has informed him that in experiments on dogs the intervertebral ganglia were thus extracted, with the nerves, which explains the permanent results attained. He also has thus permanently cured two patients with tabetic gastric crises. Franke says that his first communication on the subject, before the annual meeting of the German Surgical Association in 1910, did not attract the attention which he thinks his method deserves.

97. **Prophylaxis of Diphtheria and Scarlet Fever.**—Westenhoeffer describes the measures which he introduced into a school at Santiago, Chili, to prevent and stamp out transmissible diseases among the school children. The measures require the cooperation of the medical school inspector and the sanitary police, and two years of practical experience have confirmed the practical advantages and the success of the method. It aims to educate the parents and obtain their cooperation; there are nine printed blanks of different colors, for certificates of vaccination, release from quarantine, etc. More power is conferred on the medical school inspector by the method than he has yet obtained elsewhere. An official letter accompanies the article stating the fine results attained and the satisfaction of the authorities with the working out of the system.

Deutsches Archiv für klinische Medizin, Leipsic

CIV, Nos. 5-6, pp. 405-620. Last indexed Dec. 23, 1911, p. 2112

99 Metabolic and Other Findings in a Case of Colon-Chyle Duct Fistula. (Abgang von reinem Chylus mit dem Kot infolge Colon-Chylusfistel.) E. Mayerle.
100 *Alimentary Excess of Sugar in the Blood. (Ueber alimentäre Hyperglykämie.) H. Tachau.
101 Glycosuria from Abnormal Permeability of Kidney for Sugar. (Beitrag zum Studium des Nierendiabetes.) H. Tachau.
102 *Aneurysm of Abdominal Aorta. (Beiträge zur Kenntnis des Bauchaortenaneurysmas.) H. F. M. Weitz.
103 *Improved Technic for Research on the Chemistry of the Stomach. (Zur Frage des Chemismus des Magens. Ein neues Probefrühstuck.) S. Mintz.
104 Action of Digitalis. (Ueber Digitaliswirkung.) E. Edens.
105 The Jugular Pulse. (Ueber die S-Welle im Jugularpuls.) E. Edens and B. Wartemsleben.
106 Titration of Gastric Juice. (Bemerkung über Titration von Magensaften.) A. Dorner.
107 Roentgenoscopy of Peristalsis of the Stomach. (Röntgenuntersuchungen über Form und Rhythmus der Magenperistaltik beim Menschen.) A. Schicker.
108 *Nucleus Test for Pancreas Functioning. (Beitrag zur Kernverdauung und eine Vereinfachung der Schmidt'schen Kernprobe zur Erkennung von Pankreasachylie.) T. Kashiwado. (Praktische Verwertbarkeit der Kernprobe für die Diagnose von Pankreaserkrankungen.) A. Schmidt.

100. **Renal Diabetes.**—Tachau reports in detail a case in which the diagnosis wavered between mild diabetes or glycosuria the result of abnormal permeability of the kidneys for sugar. The metabolic findings seemed to indicate the latter, the intermediate metabolism of sugar being apparently normal. The course of the case through years is the only means of finally deciding the question.

102. **Aneurysm of Abdominal Aorta.**—Weitz reports six cases, all with a history of syphilitic infection from one to thirty-six years before. In two cases there was a continuous feeling of oppression in the stomach with occasional violent pains suggesting lead colic or tabetic crises, occurring on effort or spontaneously at night. The aneurysm was always found in the upper part of the aorta. In three cases rupture of the aneurysm proved fatal; one patient succumbed to progressive weakness. Another patient is still living, after nine months of symptoms. The sixth patient first exhibited symptoms nine years ago but they subsided under thorough specific treatment kept up for six years and the patient seems apparently cured; such a favorable course is exceptional. The treatment in this case was absolute bed rest, restricting the intake of both food and fluids (a *Durst- und Hungerkur*), injection of 50 c.c. of a 10 per cent. solution of gelatin every fifth day, and vigorous mercury and potassium iodid medication. He advises continuing the specific treatment until the Wassermann reaction is permanently negative. In other cases of aneurysm, the patients showing permanent improvement were always those in whom the Wassermann reaction had become negative.

103. **A New Test Breakfast.**—Mintz proposes bouillon as an unusually satisfactory substance for a test breakfast, as it is homogeneous, stimulates the glands of the stomach to their maximal functioning, independently of psychic factors, while it permits exact estimation of the absolute quantities and concentration of the gastric juice secreted. He uses the Liebig extract of beef, dissolving 100 gm. in 500 c.c. of boiling distilled water, filtering and sterilizing. This is the stock. For the test he dilutes 5 c.c. of the stock with 100 c.c. water. Just before using he dilutes further with hot water to a total of 475 c.c. and adds 2 gm. of salt. The patient drinks 450 c.c. of the broth thus prepared, 25 c.c. being kept for control. He enumerates a number of advantages presented by this technic and the peculiarly instructive findings with it. Among other things it shows that irruption of bile into the stomach content may occur as an automatic means of counteracting an excess of acid in the stomach content.

108. **The Nucleus Test.**—Kashiwado has simplified and rendered more sensitive Schmidt's nucleus test by using isolated and stained nuclei from the cells of calves' thymus tissue for the test. He reports extensive experimental and clinical research with it. His statements are corroborated by Schmidt who adds the details of thirty-two cases of affections of the pancreas in which the test gave instructive findings. The test gives a positive reaction in diseases of the pancreas with organic changes destroying the entire secretory function. Unless this is entirely lost, the findings are generally negative. With functional disturbances the findings may be transiently positive.

Deutsche medizinische Wochenschrift, Berlin

January 4, XXXVIII, No. 1, pp. 1-48

109 Coronary Arteries and Musculature of Bronchi React Parallel to Toxic Influences. (Ueber toxische Reaktionen der Koronararterien und Bronchien.) J. Pal.
110 *Roentgenotherapy of Leukemia. (Beiträge zur Behandlung der Leukämie mit Röntgenstrahlen.) J. Biermann.
111 *Protection of Skin in Roentgenotherapy by Inducing Anemia with Epinephrin. (Weitere Mitteilungen zur Verwendung der Adrenalinanämie als Hautschutz in der Röntgen- und Radiumtherapie.) K. Reicher and E. Lenz.
112 Bronchoscopic Diagnosis of Syphilis of the Lower Air Passages. (Ueber bronchoskopisch diagnostizierte Tracheobronchial- und Lungensyphilis.) A. Denker.
113 *Immunization Against Trypanosomiasis. (Ein neues Immunisierungsverfahren gegen Trypanosomen-Krankheiten.) C. Schilling.
114 Intravenous Serotherapy Against the Pneumococcus. (Ueber die intravenöse Anwendung des Pneumokokkenserums.) L. Beltz.
115 The "Granula" Tuberculosis Virus. (Zur Frage des granulären Tuberkulosevirus.) R. Bittrolff and K. Momose.
116 *Industrial Skin Diseases. (Ueber die gewerblichen Erkrankungen der Haut.) K. Herxheimer.
117 Causes of Reaction to Salvarsan. (Ueber die Ursachen der Reaktionserscheinungen nach Salvarsaninjektion.) J. Almkvist.
118 Extremely Adhesive Salve. (Unguenta adhaesiva.) W. H. Dreuw.

110. **Roentgenotherapy of Leukemia.**—Biermann gives the details of five cases of leukemia in which roentgenotherapy was applied at the university medical clinic at Heidelberg. In one case the benefit was striking and permanent, the patient, a woman of 37, being still in good health eighteen months afterward; the spleen is of normal size, and the number of leukocytes about 12,500, with no erythroblasts. When treatment was commenced the leukocytes numbered 450,000. Biermann's experience has convinced him that gradual and not very high dosage of the rays is better than trying to accomplish too much in a brief period. The myeloid form responds best to roentgenotherapy, and he declares that physicians should not wait for the leukemia to become severe before instituting treatment with the Roentgen rays. General practitioners should be on the watch for cases suspicious of leukemia, especially when there is a history of tenacious disturbances, sometimes for years, such as a feeling of oppression and tension in the abdomen, occasional vomiting, constipation, lassitude, pains in the sacral region and "rheumatic" pains in the limbs, for all of which no other satisfactory explanation can be discovered. By heeding these symptoms it may prove possible to apply roentgenotherapy in a stage in which it will have actual curative value or at least promote long survival in comparative health.

111. **Electric Epinephrin Preparation of Field for Roentgenotherapy.**—Reicher and Lenz send the epinephrin into the tissues by electric cataphoresis, and state that by this means it is possible to expel the blood from the part for half an hour and so effectually that approximately twice the ordinary dosage of the Roentgen rays can be applied without irritation. The anemic skin absorbs less of the rays and they are able to exert a greater influence on the deeper tissues.

113. **Immunization Against Trypanosomiasis.**—Schilling reports that it is possible to obtain outside of the body an antigen capable of conferring immunity to trypanosome affections, as he has found in his experiments with tartar emetic. Potassium bitartrate can also be used for the purpose. He bleeds infected rats into bouillon containing 2 per cent. sodium citrate, then centrifugates and adds to the pipetted supernatant fluid equal parts of a 1 per 700 bouillon solution of tartarus stibiatus, and centrifugates again. The sediment is used for the inoculations, suspended in a little bouillon. The tartar emetic kills all trypanosomes, even in a 1 per 2,000 solution, in the course of two hours; the shape of the trypanosomes does not seem to be much altered but the nucleus seems to be loosened up. Schilling heralds as an advance full of promise this principle of killing the germs *in vitro* by a chemical agent which leaves the antigen unimpaired in its full efficiency.

116. **Industrial Skin Diseases.**—Herxheimer reviews a broad field in this article, listing seventy-four different industrial means by which chronic eczema is acquired. He emphasizes

the fact that a single injurious agent may induce a number of different affections in different individuals. The predisposition afforded for cancer is also discussed, as well as industrial acne, rosacea, vaccinia in milkers, local infectious processes, such as furuncles in cement workers, ulcerations from glass dust or sand, or ulceration in the nose in workers on chromium salts. In prophylaxis of the eczema he advocates salves and roentgenotherapy, working in gloves or after application of elastic collodion. Tar preparations should be avoided, he says, and frequent washing of the hands; it is better to keep them dry as possible.

Deutsche Zeitschrift für Chirurgie, Leipsic

CXIII, Nos. 1-2, pp. 1-196. Last indexed January 20, p. 232

119 *Pathogenesis of Solitary Cysts in the Bones. (Zur Kenntnis der Pathogénese der solitären Knochencyste.) Fujii.
120 *Pathologic Importance of Rigid Upper Aperture of Thorax. (Zur Lehre von den sogen. Freundschen primären Thoraxanomalien.) M. Sumita.

119. **Cysts in Bones.**—Fujii reports a case in which the cyst had evidently developed in the right fibula on the basis of a giant-celled sarcoma. The patient was a letter carrier of 41. In a second case extravasation of blood inside of a healthy bone led to production of the cyst. This patient was a boy of 11, with other signs of hemophilia. Fujii discusses the various explanations that have been proposed, and tabulates eighteen cases of solitary bone cyst on record in which the entire specimen could be inspected, and twenty-four others in which only a part was examined. On the basis of these forty-seven cases he discusses the symptomatology, macroscopic findings and the classification of such lesions.

120. **Abnormal Rigidity of Upper Chest Walls.**—Sumita discusses the histology at various ages of the normal costal cartilages and of their junction with the ribs, and then reviews the pathology, and the pathogenic importance of abnormal rigidity and progressive degeneration of these parts. The whole study was undertaken to decide the practical importance of Freund's chondrotomy to remedy abnormal conditions in the lung beneath. The article fills 147 pages and a bibliography of 125 articles is appended. The final conclusions restrict materially the indications for Freund's operation for apical tuberculous processes. At the same time this operation is extolled as of extremely beneficial importance for emphysema of the lung. It relieves the subjective symptoms and wards off complications on the part of the heart. The benefit is not, as Freund assumes, from removal of the cause, but the patient benefits by the partial immobilizing effect on the lung.

Monatsschrift für Kinderheilkunde, Leipsic

X, No. 9, pp. 439-498

121 Retention of Chlorids with Exudative Cutaneous Disease. (Chlorretention bei exsudativen Prozessen der Haut.) V. Menschikoff.
122 The Heart Sounds in Infants. (Herztöne kranken und gesunder Säuglinge.) W. Schlieps.
123 *Means for Artificial Respiration for Children. (Eine Methode der künstlichen Atmung bei Kindern.) Ssokolow.
124 Salt Fever. (Zur Theorie des Kochsalzfiebers.) M. Katzenellenbogen.
125 Arthritic Diathesis in Children and Uric Acid Excretion. ("Arthritismus" im Kindesalter und Harnsäure-Ausscheidung.) A. Uffenheimer.
126 Reactive New-Growth in Cirrhosis of the Liver. (Zur Frage der reaktiven Neubildungsvorgänge bei Lebercirrhose.) A. Czerny.

123. **Means for Artificially Inducing Respiration in Infants and Young Children.**—Ssokolow places the child on a table with the head hanging down over the edge. Then he lifts up the head, bending it down on the sternum, at the same time as he draws up the legs until the knees touch the region of the sternum. Repeating these movements rhythmically he has been able thus to resuscitate apparently asphyxiated infants and children with never a failure. He explains the mechanical principle involved as that the traction on the chest muscles pulls on the sternum and scapulæ as the head drops backward —this is the phase of inspiration, while expiration is induced as the head is doubled forward on the chest and the abdomen squeezed by the child's knees. Other important factors are the traction on the tongue and larynx and the flux and reflux of blood into the brain, acting on the respiration center both directly and by reflex action. He has found the method particularly useful in asphyxia during or after a tracheotomy operation. Two illustrations show the technic further; he adds that it is harmless for the child; there is no need for letting the child get chilled while it is being applied; it is not fatiguing for the physician, while it has the advantage over the Schultze method of the reflex action from traction on the tongue and larynx. Another advantage is that the head does not have to be held in the hand all the time.

Münchener medizinische Wochenschrift

January 2, LIX, No. 1, pp. 1-64

127 *Operative or Roentgen-Ray Castration? (Operationkastration oder Röntgenkastration.) O. v. Herff.
128 Prophylaxis of Wound Infection. (Zur Frage der Wundinfektion.) W. Zangemeister.
129 Tendovaginitis in the Wrist. (Ueber das Wesen und die Behandlung der stenosierenden Tendovaginitis am Processus styloideus radii.) de Quervain.
130 Gall-Stones in Non-Infected Gall-Bladder. (Der Gallenstein in keimfreier Gallenblase.) B. Riedel.
131 Diagnosis of Diffuse Brain Disease by Puncture. (Histologische Diagnose diffuser Hirnerkrankungen durch Hirnpunktion.) H. Willige and F. Landsberger.
132 Experimental Research on Internal Secretion of the Breasts. (Versuche mit "Mamminum Poehl" betreffend die Funktion der Brustdrüse als innerlich sezernierendes Organ.) L. Adler.
133 Experimental Research on Toxicity of Salvarsan. (Die Toxizität des Salvarsans bei intravenöser Einverleibung nach Versuchen am Hund und Kaninchen.) M. Kochmann. (Experimentelle Untersuchungen zur Frage nach der neurotoxischen Wirkung des Salvarsans.) K. Beck.
134 Local Application of Salvarsan. (Ueber die lokale Salvarsanbehandlung mit bes. Berücksichtigung der Spirochätenerkrankungen im Bereiche der Mundhöhle.) J. Zilz.
135 Neurorecurrences After Salvarsan. (Eigene Erfahrungen über Abortivkuren mit Kalomel und Salvarsan, sowie über Neurorezidive.) H. Müller.
136 *Respiration Symptom of Aneurysm of the Aorta. R. v. Hoesslin.
137 Treatment of Flat-Foot and of Talipes. (Plattfuss and Klumpfuss.) O. Thilo.
138 Roentgen-Ray Stereoscopy of Stomach and Intestines. (Die Röntgenstereoskopie des Magens und des Darmes.) J. T. Case (Battle Creek, Mich.).
139 Recurrence After Gall-Stone Operations. (Dauererfolge und Rezidive nach Gallensteinoperationen.) L. Arnsperger.

127. **Treatment of Uterine Myoma by Castration.**—Herff does not regard it as established by any means that castration is an effectual mode of treating myomas. He has recently removed a 7-pound myoma from a woman of 72, most of its growth being quite recent. If castration is to be done, he presents arguments in favor of the operative technic, as it is more certain, less tedious, and spares the patients the possible dangers from the use of the *x*-rays.

136. **Respiration Sign of Aneurysm of the Aorta.**—A patient with considerable dyspnea from compression of the trachea by the aneurysm, breathed with a single strained inspiration but expiration proceeded in a series of jerks. This is explained by von Hoesslin as due to the diastolic emptying of the aneurysm with each heart beat, the jerks being synchronous with the pulse, the blood-wave as it passed along each time lowering the pressure within the aneurysm. This jerky diastolic expiration kept up for a few days until death, in the case reported. It is analogous to the staccato respiration described by Hensen, only this occurs during inspiration, and synchronous with the systole.

Therapie der Gegenwart, Berlin

January, LIII, No. 1, pp. 1-48

140 *Extension in Treatment of Arthritis. (Behandlung akuter und subakuter Gelenkentzündungen mittels Extension.) H. Hochhaus.
141 *Otosclerosis. (Ueber die sogen. "Otosklerose.") B. Heine.

140. **Extension in Treatment of Arthritis.**—Hochhaus applies extension according to the Bardenheuer adhesive plaster technic, for acute or subacute arthritis that does not show prompt improvement under the ordinary measures. He has found it a great help in obstinate gonorrheal joint affections, and reports excellent results in ten of his fifteen cases of this kind, satisfactory results in three, while in two other cases passive hyperemia seemed to accomplish more. The stage of swelling and pain seemed in all the cases to have been abbreviated by this extension treatment. In a typical case in a young woman the right knee was the seat of a peculiarly obstinate severe gonorrheal process, and the pain and swelling subsided to a marked extent after immobilization on a splint and extension. The complete rest for the joint is one factor in the cure but

more important is the separation of the joint surfaces; this removes the irritation from friction between them and promotes absorption of the effusion.

141. **Otosclerosis.**—Heine discusses otosclerosis from various standpoints, concluding that as local and internal treatment are both generally powerless to arrest the course of the deafness beyond mitigating symptoms as they arise, the main task is to improve the general condition. A change of air and scene may aid in improving the general condition and this in turn may react on the hearing, while a tendency to constipation, to anemia, chlorosis or neurasthenia may have an unfavorable influence on the process. A dry climate is preferable, of course. The physician's most important task is to combat the patient's depression as he feels his hearing growing less and less, and for this purpose Heine advises training the patient early to read the lips of persons speaking to him, not waiting for this training until the hearing is entirely lost. It is an immense gain if a slightly deaf person is able to supplement his deficient hearing by reading the lips of the speaker, while it is a far more difficult matter for the very deaf to learn the art. Children and women learn to read the lips most readily. Another important point is to watch with extra vigilance over the permeability of the nasal passages; the slightest interference with free breathing through the nose may have a very unfavorable influence on the hearing.

Virchows Archiv, Berlin

December, CCVI, No. 3, pp. 321-474

142 Irruption of Miliary Tubercles Into the Vessels in the Lung. (Einbruch miliärer Tuberkel in die Lungengefässe.) F. Boyman. Commenced in No. 2.
143 Epithelial Giant Cells in the Kidney. (Epitheliale Riesenzellen in der Niere.) W. Wittich.
144 Rare Anatomic Form of Mitral Stenosis. M. Busch.
145 Morbid Findings in Umbilical Cord in Syphilis. (Alterationen des Nabelstranges bei Syphilis.) M. Dominici.
146 Tendency to Snout Formation with Cyclops Deformity. (Rüsselbildung bei Zyklopie.) H. Josephy.
147 Epithelial Goiter. (Weitere Mitteilungen über die epitheliale Struma.) T. Langhans.
148 Primary Parenchymatous Carcinoma of the Liver. (Hepatoma.) K. Yamagiwa.
149 Metastatic Cancer in Central Nervous System. (Zwei Fälle von Metastasenbildung bösartiger Geschwülste in der Leptomeninx.) H. Löhe.
150 *Dry Preservation of Pathologic Specimens. (Zur Frage der Konservierung pathologisch-anatomischer Präparate.) G. Schorr.

150. **Dry Preservation of Anatomic Specimens.**—Schorr fixes the specimens in the Kaiserling formaldehyd mixture, then restores the color of the blood with alcohol, then soaks the specimen for two weeks in a mixture of glycerin, alcohol and sodium chlorate, and then mounts the specimen on a white plate or other dish on which a sheet of glass is cemented to make an air-tight chamber. This method of preparation is simple, cheap, and the specimens are readily handed round for inspection, being much better adapted for this purpose, he declares, than specimens mounted in a fluid, the anatomic details showing up remarkably well. He gives the exact details for the entire process which he says fills the demand for inexpensive dry specimens in nearly the natural colors.

Wiener klinische Wochenschrift

January 4, XXV, No. 1, pp. 1-66

151 *Access to Hypophysis. (Modifikation der Schlofferschen Operation von Tumoren der Hypophyse.) O. Chiari.
152 The Constitution and Glands with an Internal Secretion. (Konstitution und Blutdrüsen.) F. Chvostek.
153 Treatment of Strabismus. (Operative Behandlung des Schielens.) F. Dimmer.
154 *Brain Tumors. (Meine Operationsresultate bei Hirntumoren.) A. von Eiselsberg.
155 Goethe's Doctrine of Colors. (Versuch aus Goethes Farbenlehre und seine Erklärung.) S. Exner.
156 Etiology of Skin Diseases. (Hautkrankheiten.) F. Finger.
157 Asepsis—Antisepsis. A. Fraenkel.
158 Sensory Innervation of the Intestines and Bladder. (Sensible Innervation von Darm und Harnblase.) A. Fröhlich and H. H. Meyer.
159 *Hematuria with Appendicitis. A. von Frisch.
160 Photophobia. (Ueber Lichtscheu.) E. Fuchs.
161 Firearm Wound of the Esophagus. (Fall von Schussverletzung des Oesophagus im Brustteile) J. Hochenegg.
168 Behavior of Transplanted Carcinoma in Mice Rendered Anemic. (Verhalten transplantierter Karzinome in künstlich anämischen Mäusen.) G. Joannovics.
163 Fever Hallucinations from Forensic Standpoint. (Fieberphantasien eines Pneumonikers als Anlass irriger Angaben über stattgehabte Misshandlungen.) A. Kolisko.
164 Unusual Constituents of Mineral Waters. (Ueber die "seltenen Bestandteile" der Heilquellen.) E. Ludwig.
165 Unusual Forms of Acute Leukemia. (Leukosarkomatose und Myeloblastenleukämie.) R. Paltauf.
166 Pediatric Clinic at Vienna. (Die neue Wiener Universitäts-Kinderklinik.) C. von Pirquet.
167 Furunculosis. (Furunkel, Furunkulose und deren Behandlung.) G. Riehl.
168 Should Retained Scraps of the Placenta Be Detached? (Sollen Plazentarreste gelöst werden?) F. Schauta.
169 Bacterial Toxins in Treatment of General Paralysis. (Ueber Behandlung der progressiven Paralyse mit Bakterientoxinen.) Wagner von Jauregg.
170 *Chronic Pancreatitis with Chronic Alcoholism. A. Weichselbaum.
171 *Operations for Recurrence After Hysterectomy for Cancer. (Ueber Rezidivoperationen nach der Exstirpation der karzinomatösen Gebärmutter.) E. Wertheim.

151. **Access to the Hypophysis.**—Chiari reports two cases in which he obtained access to the hypophysis tumor through an incision running from the inner edge of the orbit along the outer margin of the nasal bone down to the maxillary process. The nostril is swabbed with cocain and epinephrin beforehand. The eyeball is easily drawn outward and then the outer wall of the sphenoidal sinus is resected; through this gap the rear part of the nasal septum and the sphenoidal septum is resected, which exposes the hypophysis. The scar resulting is small with the minimum of disfigurement while only a comparatively insignificant part of the framework supporting the nose is removed; the distance from the skin to the sphenoid bone is much shorter than by any other technic, and the operation is completed at a single sitting while the danger of infection of the skull is no greater than by any other extranasal or intranasal method. In the two cases reported, he was impressed with the smooth healing of the parts inside the nose without much scab production. One of his patients is apparently entirely cured and the functional outcome was good in both.

154. **Brain Tumors.**—In this special number of the *Wochenschrift*, commemorating its twenty-fifth anniversary, Eiselsberg reviews his experience with brain tumors, a field still unexplored, he remarks, when the weekly was founded. He has had 100 cases of the kind, and a palliative operation was done in 10 cases while the skull was opened in all the others. In the 43 cases of tumor in the cerebrum it was correctly located in 32 and in 11 of the 22 cerebellum tumors; in 12 cases the tumor was in the cerebello-pontine angle, and in 13 in the hypophysis. Excluding the latter group and the palliative cases, 32 of the remaining 77 patients succumbed to the effects of the operation, operative shock (22), infection (6), pneumonia (3), or embolism (1). In 16 other cases the patients died from early recurrence or the effects of prolapse of brain tissue. This leaves only 29 survivors and 4 of these have been lost track of. Of the remaining 25 patients, 12 survived in good health for a few months to five years after removal of the tumor in the cerebrum, a glioma, endothelioma, angioma or melanosarcoma (1 each of the latter); 4 after removal of a pontine angle tumor, 1 of a cerebellum tumor and 8 patients whose tumors were not removed but the parts were released from pressure by trephining. This latter group includes 2 cerebellum tumors, one of the patients being still free from disturbances eight years after the operation. Paralysis occasionally followed the operation on the brain, affecting one side or one limb, but it subsided later, and in some cases permanently vanished. He remarks that his experience does not compare very favorably with that reported from other clinics, possibly, he adds, because he has reported every case without discrimination or exception. He describes his technic, emphasizing the advantages of preparing the patients for the operation with a course of hexamethylenamin, operating under induced local anemia, eventually introducing small "buried" tampons, operating at two sittings, refraining from drainage or tamponing, and closing the defect in the dura by carefully fitting in a flap of fascia.

159. **Hematuria with Appendicitis.**—Frisch reports from the literature thirteen cases of hematuria with appendicitis; adhesions between the appendix and the ureter were responsible in six cases; in three the inflammatory process had involved the kidney, and in two a toxic nephritis was evidently responsible; in two other cases no explanation for the hematuria could be discovered. In two other cases on record the hematuria was traced to pressure on the kidney or its vessels from

accumulations of feces in the cecum region. Frisch then reports from his own experience a case of hematuria with appendicitis in which the hematuria occurred each time following the attack of colic set up by the appendix, and it subsided each time afterward, the urine becoming promptly normal again, until after the next attack of colic in the appendix region. The appendix was not adherent and there was no stagnation of feces to cause pressure on the kidney. This rapid return to normal each time, he thinks, excludes a toxic process. The urine findings also indicated merely the presence of blood in otherwise normal urine.

170. **Chronic Pancreatitis with Alcoholism.**—Weichselbaum found evidences of chronic pancreatitis constantly in twenty-seven male cadavers with a history of severe chronic alcoholism including fifteen men who had died during delirium tremens; all were free from cirrhosis of the liver. The changes in the pancreas were in the nature of intralobular induration but it was never so severe as when there was concomitant cirrhosis of the liver. The presence of the liver cirrhosis may indicate a severer degree of alcohol poisoning, and it is possible that toxic influences from the liver affection may aid in the injury of the pancreas. The clinical symptoms of the chronic pancreatitis with alcoholism are never so severe as with pancreatitis in which the outlet is obstructed, the digestion of fat and albumin not being materially impaired, but the frequent involvement of the islands of Langerhans is liable to entail symptoms of diabetes.

171. **Operation for Recurrence After Vaginal Hysterectomy for Cancer.**—In the two cases reported by Wertheim the recurrence was on the left side, close to the wall of the pelvis, in the form of a small lump with fibrous adhesions connecting it to the end of the vagina. The cystoscope revealed abnormal functioning of the left ureter, and the catheter could be introduced into the ureter only for a short distance. The women were in good general health and the lumps were fairly movable. Such recurrences generally develop around the ureter, and the first step is to sever the ureter just above, as it is impossible to free it from the cancerous mass without disseminating cancer cells. In his cases it was also necessary to resect a segment of the bladder and implant the stump of the ureter in the bladder above. The bladder was partially paralyzed for a time thereafter and the ureter did not behave quite normally, but the women are otherwise in good health. The ureter walls are peculiarly resistant to cancerous invasion, and in these cases were free from cancer although embedded in the malignant lesion. Wertheim remarks that the more radical the primary operation for cancer, the less favorable the outlook for operative treatment of a following recurrence. When recurrence follows it is generally inoperable from the first symptoms.

Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

LXIX, No. 2, pp. 301-552. Last indexed Dec. 2, 1911, p. 1877

172 Improved Technic for Sterilization of the Hands: 10 Per Cent. Carbon Dichlorid—Tincture of Soap. (Ein neuer Seifenspiritus mit hoher Desinfektionskraft.) P. Hussy.
173 The Smooth Muscle in the Ovary. (Ueber die glatte Muskulatur des Eierstockes und deren Verhalten während der Schwangerschaft und bei Myom des Uterus.) J. Wallart.
174 Menstrual Changes in Vessels in Uterine Mucosa. (Gefässveränderungen in der Uterusschleimhaut zur Zeit der Menstruation.) R. Keller.
175 Changes in Total Volume of Blood During Pregnancy and Puerperium. (Ueber Veränderungen der Blutmenge in Schwangerschaft, Geburt und Wochenbett.) H. Fries.
176 The Wassermann Reaction in Obstetrics. (Die Wassermann-Neisser-Brucksche Reaktion in der Geburtshilfe.) F. Heimann and R. Stern.
177 Cysts in Uterine Cervix. (Cystenbildung in der Cervix Uteri.) M. E. Schubert.
178 Experimental Research on Sterilization of the Hands. (Experimentelle Versuche über Händedesinfektion mit Aceton-Alkohol.) A Häberle.
179 Uterus Tissue for Plastic Operation for Vesicocervical Fistulas. (Die metroplastische Operationsmethode der Blasencervixfisteln.) O. Küstner.
180 *Tuberculosis Plus Cancer in Female Genitals. (Ueber das gleichzeitige Vorkommen von Karzinom und Tuberkulose an den weiblichen Genitalien, insbes. Tube und Uterus.) O. von Franqué.
181 Operative Treatment of Carcinoma of the Uterine Cervix. (Zur operativen Behandlung des Carcinoma colli uteri.) M. Hofmeier.
182 Perforation of Uterus During Curetting. (Ueber Perforation des Uterus beim Curettement.) A. Schultze.

180. **Tuberculosis plus Cancer in Genital Organs.**—In none of the sixteen cases on record is it positive that the cancer preceded the tuberculosis, while in nine cases the pre-existence of the tuberculosis is known. In only one case did the cancer develop in a tuberculous process; in seven cases the two were closely adjacent, and in five some distance apart. In a personal case reported in detail a carcinoma developed in a Fallopian tube on the floor of an old tuberculous lesion, the first case of the kind on record, Franqué believes. The patient was a woman of 38. In a second case the woman, now 40, had had an operation for tuberculous peritonitis seventeen years before, and had been under treatment for tuberculosis of the internal genital organs for some years. When the uterus was removed, the mucosa and glandular epithelium were found in malignant degeneration. In both his cases the carcinoma had evidently developed from several centers, as also in a case of diffuse cancer of the vagina on the basis of old leukoplakia. These old lesions, tuberculous and others, afford a predisposition to cancer which the women might have escaped if their genital organs had been sound. No inherited predisposition was apparent in either of his cases, and he does not think that the presence of a myoma in one case had any special etiologic significance. The experiences related afford another argument in favor of operative treatment of genital tuberculosis.

Zeitschrift für klinische Medizin, Berlin

LXXIV, Nos. 1-2, pp. 1-177. Last indexed Dec. 16, 1911, p. 2035

183 Mixed Leukemia. (Ueber hochgradige akute generalisierte Lymphdrüsenwucherungen mikrolymphozytärer Natur bei chronischer myeloider Leukämie.) E. Frank and S. Isaac.
184 Case of Heart Block from Transverse Dissociation. (Fall von transversale Dissoziation.) D. Pletnew.
185 *Bile Pigment in Blood. (Ueber den Nachweis von Gallenfarbstoff im Blutserum und dessen klinische Bedeutung.) O. Scheel.
186 *Findings in Rheumatic Muscles. (Der Untersuchungsbefund am rheumatisch erkrankten Muskel.) A. Müller.
187 Dependence of Changes in Albumin in Food on Digestive Functioning of the Stomach. (Die Eiweissdissimilationskurve in ihrer Abhängigkeit von der Verdauungsfunktion des Magens.) H. Benedict and N. Roth.
188 Enlarged Spleen with Cirrhosis of the Liver. (Ueber den sogenannten Morbus Banti.) A. Neuberg.
189 *Tetany of the Vegetative Nervous System. (Klinische Studien über Tetanie mit Berücksichtigung des vegetativen Nervensystems.) W. Falta and F. Kahn.

185. **Bile in the Blood.**—Scheel gives a diagram to show the proportionate content of the blood serum in bile pigment in health and in various diseases. He used the Hayem and Gilbert tests for the purpose, applying them to fifty-two patients and sixty healthy persons. The normal range is from 20/20 to 14/20; from this to 6/20 is merely latent cholemia, and above this to 1/20 is actual jaundice. The time before the reaction appears is also instructive. In Bright's disease without stasis, in secondary anemia and in malaria, and with a compensated heart defect, the findings are within normal range.

186. **Rheumatic Muscles.**—Müller's research has shown that the rheumatic injury affects the muscles so that they are unable to relax properly after contracting. The essential feature of a rheumatic muscle therefore is not the lumps in it, but the excessive tonicity from inability of the muscle to relax.

189. **Tetany of the Viscera.**—Falta and Kahn's previous communication on this subject was commented on editorially in The Journal, Dec. 30, 1911, page 2143. They present evidence to prove that tetany is a much more extensive process than has hitherto been recognized, that it affects the sympathetic and autonomic nervous systems as well as the nerves under control of the will. The essence of tetany is a hyperexcitability of the ganglion cell; it responds with undue readiness to slight excitation, and passes the stimulus along throughout the entire nerve. The periperal nerves are the ones most generally affected, but during the acute phase of tetany the autonomic system is liable to be involved and the intermediate metabolism of albumin is liable to be disturbed. In many cases symptoms of hyperfunctioning of the thyroid become evident during or following close on the acute stage

of tetany. They suggest for a working hypothesis the assumption that the parathyroid hormone in normal conditions serves as a restraining influence on the excitability of the ganglion cells, possibly by promoting the assimilation of calcium. With parathyroid insufficiency, any morbid influences, as from auto-intoxication or stagnation in the gastro-intestinal tract, the ganglion cells become oversensitive. They give a detailed study of twenty-one cases and results of experiments on dogs, with tabulation of the metabolic findings in five cases—the phenomena observed all fitting in well with the above hypothesis.

Zeitschrift für Urologie, Berlin

December, V, No. 12, pp. 961-1096

190 *Case of Gonococcus Sepsis with Recovery. (Fall von allgemeiner Gonokokkeninfektion.) B. N. Cholzow.

191 Nephrectomy with Evacuation of Urine from Remaining Kidney Through Stump of Ureter. (Nephrektomie mit nachfolgender Entleerung des Urins der gesunden Niere durch den Ureterstumpf der Operationswunde.) J. P. Haberern.

190. **Gonococcus Sepsis.**—Cholzow knows of only eight cases of gonococcus septicemia on record in the last ten years, although the cases of gonopyemia, as he calls it, can be counted by the hundreds. In the case reported, the diagnosis was made by bacteriologic examination of the blood after a few days of chill and high fever, pains in the perineal region and anuria for a day or so, and swelling and tenderness in both wrists and right maxillary articulation. The patient was a druggist of 36, and there was a history of syphilis contracted in infancy and gonorrhea at 30. An abscess was found in the prostate and evacuated, and the strength was kept up with saline infusion and an antigonococcus vaccine was injected subcutaneously. Five injections of the vaccine were made before final recovery the fourth week.

Zentralblatt für Chirurgie, Leipsic

January 6, XXXIX, No. 1, pp. 1-40

192 Access to the Hypophysis and Sinus Cavernosus by Suprahyoid Pharyngotomy. (Ein neuer Weg für Eingriffe an der Hypophyse und am Sinus cavernosus.) C. Biehl.

193 Drainage After Intrathoracal Hemorrhage. W. Meyer (New York).

194 Broad Flap from Bladder Utilized to Close Gap in Lower Ureter. (Ureterplastik.) J. E. Schmidt.

195 Chemotherapy of Mouse Tumors. (Ueber experimentell erzeugte Wachstumshemmungen an Mäusetumoren.) E. E. Goldmann.

Zentralblatt für Gynäkologie, Leipsic

January 6, XXXVI, No. 1, pp. 1-32

196 *Intracranial Hemorrhage in the Newly Born. (Ueber die Genese intrakranieller Blutungen bei Neugeborenen.) L. Seitz.

197 *Anaerobic Streptococci in the Vagina in Health. (Vorkommen anaeroben Streptokokken in der Vagina gesunder Frauen und Kinder.) A. Rosowsky.

198 *Intra Partum Modifying the Shape of the Skull of the Child by Moving the Mother's Pelvis. (Das künstliche Modelieren des Kindsschädels durch Bewegungen des weiblichen Beckens.) H. Sellheim.

199 *Improved Technic for Making Vagina from Loop of Ileum. (Bildung einer künstlichen Vagina.) W. Stoeckel.

200 Pituitary Extract as Oxytocic. (Pituitrinwirkung in 50 geburtshilflichen Fällen.) O. Fischer.

196. **Intracranial Hemorrhage in the Newly Born.**—Seitz has encountered several cases of intracranial hemorrhage for which laceration of the tentorium was evidently responsible, to which occurrence Beneke has recently called attention. But he describes a number of other cases in which the hemorrhage occurred at other points and the tentorium was intact or could not be incriminated in the bleeding. The findings are peculiarly instructive when the skull is frozen. When there are a number of minute extravasations of blood around the medulla oblongata, there may be no symptoms for several days and then sudden cyanosis and dyspnea develop and the child succumbs in a few days at most. The cases of tardy asphyxia in newly-born infants are generally referable to these minute hemorrhages when no other cause is apparent. Still more important for the occurrence of the hemorrhages is venous congestion; Paul found retinal hemorrhage in 50 per cent. of the infants born from a contracted pelvis: in 40 per cent. of the prematurely born, and in 20 per cent. with normal delivery and a medium-sized child, among 200 newly-born infants he examined in 1900. Others have reported similar findings, and traces of hemorrhage in other organs, the liver, adrenals and serous membranes are common in children born asphyxiated. On the other hand, Seitz warns, laceration of the tentorium does not inevitably imply hemorrhage.

197. **Anærobic Streptococci in the Vagina in Health.**—Rosowsky found anærobic streptococci common in the vaginas of healthy women and girls. They evidently lead a saprophytic existence there until conditions develop which permit them to exert virulent action.

198. **Shaping from Without the Skull of the Fetus.**—Sellheim states that the pelvic inlet spreads when the woman is placed with the hips at the edge of a table during labor, the legs hanging down. This permits the entrance of the child's skull into the inlet and if the woman is then laid on her back or she partly sits up, pressure is exerted on the fetal skull, modeling it in such a way as to adapt it better for passage through the birth channel. Continued, repeated changing of the mother's position in this way—*Uebergehen von der Hängelage zur Rückenlage oder Steissrückenlage*—will, unless the disproportion is too great between the diameter of the passage and of the child's head, result in adapting its shape so that it can pass readily outward.

199. **Artificial Vagina.**—Stoeckel did not obtain satisfactory results in a case in which he made an artificial vagina out of flaps twisted around from the peritoneum. The passage gradually grew together as the grafts shriveled and contracted. He was much more successful in another case in which he cut out a segment of the ileum, leaving its mesentery intact and uniting the stumps of the intestine above it. A silk thread was passed around the center of the resected segment of bowel, and with this thread the center was drawn out in a V to the external opening of the passage made for the new vagina, where it was sutured, the two ends closed above but left separate. The tip of the V was sutured to the skin, and then cut across, leaving an artificial vagina with a septum down the middle. This gradually shriveled away, leaving the vagina spacious and with no danger of contracting. Before dismissing the patient, however, he warned her most insistently that the nature of the walls of the new vagina was such that she must strictly avoid any disinfectant irrigation, refraining in particular from solutions of mercuric chlorid, lysol or phenol, as serious danger might result from them. She was also given a written admonition to inform her physician of the operation in case she came into a surgeon's hands again, and urge him to communicate with the clinic where the operation was done. Before attempting the operation, Stoeckel had injected camphorated oil as a preventive of peritonitis, and was much pleased with the benefit therefrom. Although the peritoneum was much soiled with colon bacilli during the resection of the bowel, and the superficial suture suppurated a little, there was no trace of peritonitis. He states that in the eight similar cases of the kind on record, there was no evidence of a tendency to thrombosis of the mesenteric vessels. On the whole, he thinks this "small intestine vagina" by far the best technic to date.

Zentralblatt für innere Medizin, Leipsic

January 6, XXXIII, No. 1, pp. 1-28

201 *Sterilization of Intestines by Insufflation of Oxygen Into the Duodenum. (Darmdesinfektion durch Sauerstoffinsufflation in das Duodenum.) A. Schmidt.

201. **Sterilization of the Intestines by Insufflation of Oxygen.**—Schmidt introduces the oxygen through a duodenal tube, sending a current of oxygen slowly through the tube after it has once passed the pylorus. The oxygen does not seem to pass the ileocecal valve, unless introduced under considerable pressure. He thus introduces from two to four liters of oxygen. An hour or so afterward the gas passes out through the anus. The therapeutic effect is surprisingly good. Pathologic fermentation is arrested so that the stool is speedily freed from granulose-containing microbes. The insufflation has to be repeated twice a day at first as the effect is not lasting until the intestinal flora has become transformed under the influence of the oxygen, which soon occurs. He is testing this new method of treatment on a large scale, as he thinks it has a promising future in the treatment of intestinal affections. [Schmidt has assumed editorial charge of the

Zentralblatt für innere Medizin, as Unverricht now retires after serving as editor for eighteen years.]

Gazzetta degli Ospedali e delle Cliniche, Milan

January 2, XXXIII, No. 1, pp. 1-8

202 Efficacy of Serotherapy in Malta Fever; Three Cases. (La siero-terapia della febbre mediterranea. Nuovi risultati positivi.) A. Balduzzi.

January 4, No. 2, pp. 9-16

203 Bacteriologic Research on Psoriasis. (Contributo alla natura bacteriologica della psoriasi.) F. G. Carlentini.

Policlinico, Rome

January 7, XIX, No. 2, pp. 41-76

204 Pathology of Rebellious Diarrhea. (La patologia di alcune diarree ostinate.) P. Alessandrini.

Surgical Section, No. 12, pp. 529-572

205 *Vein Anesthesia. (Dell' anestesia regionale endovasale.) F. Nassetti. Commenced in No. 11.
206 *Alcohol Injections for Trifacial Neuralgia. (Contributo alla cura della nevralgia grave del trigemino.) F. Vivenza.

Medical Section, No. 12, pp. 525-568

207 Influence of First Products of Digestion on the Functioning of the Nervous and Muscular Systems. (Influenza dei primi prodotti della digestione sulla funzionalita neuromuscolare in rapporto ai diversi tipi di alimentazione e alla diverse condizioni di funzionalita gastrica.) C. Boeri and G. Iafolla.
208 No Apparent Influence on Metabolic Findings from Presence of Anguillula Intestinalis. (Studio dell' anguillulosi intestinale.) E. Giani and T. Impo.
209 *Effects of Fruit Juices on the Metabolism. (Contributo allo studio degli effetti che esercitano alcuni succhi vegetali sul ricambio materiale.) T. Laurenti.

205. **Vein Anesthesia.**—Nassetti injected various anesthetics in different concentrations and examined the histologic effect on the blood-vessels and tissues and the action on inflammatory processes and on the germs involved. The technic was that introduced by Bier for vein anesthesia. No symptoms of intoxication were noticed in the experiments on animals, not even when the ordinarily fatal dose was injected; no acute intoxication followed when the constricting band was removed. There does not seem to be any danger of embolism from the air that enters the vessels in the region of the dammed circulation. The injected fluid does not diffuse regularly when the circulation is dammed over the middle part of the limb; the best results are obtained when the entire limb is thus anesthetized or the hands or feet alone. For this, however, he found it better to inject the anesthetic into an artery. In general the vein technic is more practical. He thinks that the method is destined to prove very useful in cases contraindicating general anesthesia, although the technic is comparatively complicated. It was described in The Journal May 1, 1909, p. 1466.

206. **Treatment of Severe Trifacial Neuralgia.**—Vivenza's patient was a woman of 66 who had epileptiform neuralgia of the trigeminus, recurring after resection of the second and third divisions and again after gasserectomy, but the neuralgia was finally conquered by deep injection of alcohol. The removal of the Gasserian ganglion was followed by transient delirium and disturbances in the right eye which persisted permanently, slight exophthalmos, no reaction of the pupil to light, and vision almost entirely lost from atrophy of the retina. These changes were found unmodified when the neuralgia recurred two years afterwards. The cornea was apparently intact. He thinks there is no doubt that these trophic disturbances in the eyeball were the result of the destruction of the Gasserian ganglion.

209. **Influence of Fruit Juices on the Metabolism.**—Laurenti did not find that the fruit juices had any special influence on the amount of urine or its specific gravity, or on the total ammonia output, except a slight influence in these respects from lemon juice, but he found that the total excretion of nitrogen was increased in nearly every instance, while the excretion of uric acid was considerably increased in every case, both at the time of the experiments and later. This influence on the part of the fruit juices did not seem to be directly proportional to their acidity.

Ugeskrift for Læger, Copenhagen

January 4, LXXIV, No. 1, pp. 1-48

210 Indiscriminate Sale of Firearms Should Be Prohibited. (Vaadeskud.) H. Maag.

Revista de Medicina y Cirugia, Havana

January 10, XVII, No. 1, pp. 1-34

211 Color Test for Indican in the Urine. (Nuevo indigotimetro.) L. Plasencia.
212 Isolation and House-to-House Inspection in Prophylaxis of Yellow Fever and Cholera. (Inspeccion de febriles noinmunes a la fiebre amarilla. Inspeccion domiciliaria de pasajeros del Mediterraneo.) A. Cueto.
213 City Mud. (Moderna Lutecia.) L. M. Cowley.
214 The Sugar-Bowl in Restaurants. (El azucar en los cafés y la higiene.) F. Plazaola.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Nervous and Mental Diseases. Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Policlinic, and Peter Bassoe, M.D., Assistant Professor of Nervous and Mental Diseases, Rush Medical College. The Practical Medicine Series. Cloth. Price, $1.25. Pp. 245. Chicago: The Year-Book Publishers, 180 North Dearborn Street, 1911.

Herzmissbildungen. Ein Atlas angeborener Herzfehler in Querschnitten mit besonderer Berücksichtigung des Atrioventrikularsystems. Von J. G. Mönckeberg, A. O. Professor an der Universität Giessen. Paper. Price, 30 marks. 114 illustrations. Jena: Gustav Fischer, 1912.

Skin and Venereal Diseases and Miscellaneous Topics. Edited by W. L. Baum, M.D., and Harold N. Moyer, M.D. The Practical Medicine Series. Cloth. Price. $1.25. Pp. 239. Chicago: The Year-Book Publishers, 180 North Dearborn Street, 1911.

Municipal Advance: Extracts from the Papers on Various Municipal Services, read at the First International Municipal Congress and Exposition, Chicago, September, 1911. Paper. Chicago Association of Commerce, 22 West Jackson Boulevard.

Microscopy and the Microscopic Examination of Drugs. By Charles E. Gabel, B.S., Ph.D., Microscopic Food and Drug Analyst, Iowa State Dairy and Food Commission. Cloth. Price, $1. Pp. 114. Des Moines, Iowa: C. E. Gabel, 1912.

Transactions of the American Surgical Association. Edited by Archibald MacLaren, M.D. Volume 29. Cloth. Pp. 496. Philadelphia: William J. Dornan, 701 Arch Street, 1911.

Transactions of the Thirty-Third Annual Meeting of the American Laryngological Association. Cloth. Pp. 315. New York: Published by the Association, 1911.

Exercise and Health. By Dr. Woods Hutchinson. Outing Handbooks. Cloth. Price, $0.70. Pp. 156. New York: Outing Publishing Company, 1911.

The Rockefeller Institute for Medical Research. History, Organization and Equipment. Paper. 1911. New York, 66th and Avenue A.

We and Our Children. By Woods Hutchinson, A.M., M.D. Cloth. Price, $1.20. Pp. 371. New York: Doubleday, Page & Co., 1911.

The Mating of the Unfit—A Study in Eugenics. By W. J. Conklin, A.M., M.D., Dayton, Ohio. Paper. Pp. 22.

New Patents

Patents of Interest to Physicians

1,004,369	Syringe. Antonino Ciolfi, Cincinnati.
1,004,460	Therapeutic lamp. Myron W. Newton, Battle Creek, Mich.
1,004,192	Cooling device for treating fever cases. John T. Phelan, Marshall, Mo.
1,004,300	Massage apparatus. Frank Pope, Kankakee, Ill.
1,004,303	Tablet-making machine. Carl M. Rost, Dresden, Germany.
1,004,482	Artificial hand. Jouel Shakelford and T. Alexander, Ashland, Ky.
1,004,209	Mixing agitator. Burt E. Shattuck, Boston.
1,004,103	Medical syringe. John P. Tacey, Detroit.
1,004,499	Extract of ergot. Rudolf Tambach, Ludwigshafen-on-the-Rhine, Germany.
1,005,024	Massage implement. Alvah A. Griner, Chicago.
1,005,035	Tachometer. Max Hoeft, Berlin, Germany.
1,005,043	Truss. James R. Knox, Richmond, Va.
1,004,899	Crutch. Parsons W. Buchanan, Missoula, Mont.
1,005,076-7	Bacterial product. Warner Schultz, Charlottenburg, Germany.
1,005,137	Medicament and producing the same. Albert D. Barr, Batesville, Ark.
1,005,254	Artificial limb. William H. Manning, Malden, Mass.
1,005,319	Electric massage vibrator. Charles C. Ruprecht, Cleveland.
1,005,356	Syringe. Judson R. Swift, New York.
1,006,341	Medical applicator. Ralph W. Ammons, Los Angeles.
1,006,052	Surgical instrument. James A. Boffin, Chicago.
1,005,816	Portable breathing apparatus. Alexander B. Drager, Lubeck, Germany.
1,005,978	Truss. William Jones, Denver.
1,006,115	Physician's account-book. Leroy Metzgar, Fremont, Ohio.
1,006,415	Electric garment. Arthur C. Stubling and F. C. Gibson, Portland, Ore.

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THE RÔLE OF ANIMAL EXPERIMENTATION IN THE DISCOVERIES LEADING TO OUR PRESENT KNOWLEDGE OF THE ETIOLOGY, PREVENTION AND CURE OF DIPHTHERIA*

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The disease which is now called diphtheria is believed to have been prevalent in Europe for a long time. We have reason to think that it occurred at first chiefly in epidemics. The great increase of population and travel during the past one hundred years with its necessary mingling of infected and non-infected persons has aided its dissemination, so that it is endemic in many countries.

THE IDENTITY OF "CROUP" AND LARYNGEAL DIPHTHERIA

It is very important when studying deaths from diphtheria to remember that physicians did not formerly recognize, as we now do, that various forms of ulcerated throat and croup are forms of a single disease. In fact they did not realize this until Bretonneau in 1826 appreciated the fact and gave the disease, however manifested, the name of diphtheria. Bretonneau's statements were soon accepted by many in France, but were not so quickly adopted in the rest of Europe and in America. As late as 1855, he was compelled to reassert his reasons for his conviction, that membranous croup and membranous pharyngitis were both forms of diphtheria, and that either form was capable of communicating the other. He adduced in proof of these statements the details of small epidemics in which in the same family, or group of families, different persons presented every form of the disease. He also showed how nurses caring for cases of "croup" frequently contracted the pharyngeal form of the disease. Bretonneau and those who agreed with him gradually convinced the majority of physicians and so we find such names as inflammation of the throat, sprue, etc., gradually disappearing as they were recognized as forms of diphtheria. The designation "croup" has remained much longer because it designated briefly a form of diphtheria which because of its location in the larynx had special symptoms and required special treatment. This gradual inclusion of all forms of the disease under the name diphtheria has led to confusion among some who do not believe in the value of antitoxin for, failing to note the change in the reporting, they have believed that deaths from diphtheria instead of being greatly diminished have remained nearly constant.

The following extracts from the mortality tables of the Department of Health of the City of New York show interestingly how the name diphtheria has supplanted other names for special varieties of the disease.

GRADUAL SUBSTITUTION IN DEATH CERTIFICATES BY PHYSICIANS OF NEW YORK CITY OF THE NAME DIPHTHERIA FOR EARLIER SPECIAL DESIGNATIONS

Year	Inflammation of Throat	Sprue	Angina	Croup	Diphtheria
1856	50	49	14	550	....
1858	70	56	11	478	5*
1860	132	15	37	599	422
1862	68	27	2	685	594
1864	18	4	37	754	781
1865	..	4	5	449	534
1875	..	..	..	758	2,329
1895	..	..	..	342	1,634

* First use of name diphtheria.

As already stated, laryngeal diphtheria has continued to be reported by some as croup, but, as the years have passed, more and more have designated the disease rather than its location, so that the proportion of cases reported as diphtheria has grown ever greater.

Thus in 1860 there were reported in New York City 599 deaths from croup and 422 from diphtheria or an approximate ratio of 1.4 : 1; in 1875 there were reported 758 cases of croup and 2,329 of diphtheria, or a ratio of 0.3 : 1; in 1895 there were reported 342 cases of croup and 1,634 of diphtheria or a ratio of 0.2 : 1.

Exactly the same changes have been taking place in nomenclature everywhere; thus the registrar general's report for England and Wales, 1898, says, "With regard to the changes which have taken place from time to time in the nomenclature of diphtheria, it is important to bear in mind the following points:

> Diphtheria as a distinct affection had scarcely been recognized in England previous to 1855, in which year this disease was first separated from scarlet fever in the national records of the causes of death. As to the unity of diphtheria and croup it states: "The diphtheria epidemic of 1863 was accompanied by parallel movements in the mortality ascribed to croup." After giving more reasons the report continues: "These facts taken in conjunction certainly warrant the assumption that by far the greater number of deaths hitherto attributed to croup have been caused by laryngeal diphtheria."

This gradual recognition of the true nature of croup came about with the clearer understanding of the disease. With our present knowledge we now know that when Francis Home gave the name croup to a certain disease which attacked the larynx and altered the voice, he described by that name true laryngeal diphtheria. Home's accounts of his autopsies make this very clear.

The correctness of the view stated by the registrar general's report, that fatal croup is laryngeal diphtheria, seems so evident that it is difficult to believe that those who affirm they are different diseases, are really sincere.

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* This paper is one of the series prepared for and reprinted by the Bureau on Defense of Medical Research of the Council on Health and Public Instruction of the American Medical Association for circulation among the public. Twenty-two of these pamphlets are now ready, taking up the relation of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, plague, rabies, surgery, internal secretions, circulation of the blood, tropical diseases, syphilis, obstetrics, etc. A price-list will be sent on application.

It would only be necessary for persons having such a belief to look up the cases reported as deaths from diphtheria and they would find that more than 75 per cent. of all such deaths were due to laryngeal diphtheria and that they presented the identical symptoms described by Home in his work published in 1765, entitled "An Enquiry into the Nature, Cause and Cure of Croup." At least, if they believe that croup is not diphtheria, they should eliminate all deaths from diphtheria statistics which are due to croup.

The importance of realizing that the vast majority of cases of croup are diphtheria is, in the first place, that they may be treated as such, and in the second place, that we may rightly judge the benefit derived from antitoxin treatment as shown in the lessened mortality in cases of croup. It would be as reasonable to assert that cases previously designated meningitis had ceased to exist, because with better knowledge we were able to place them under inflammations due to the tubercle bacillus or to the meningococcus, as to state that croup seldom occurred because it was now usually reported as laryngeal diphtheria.

THE MEANS BY WHICH WE OBTAINED OUR PRESENT COMPREHENSIVE KNOWLEDGE CONCERNING THE NATURE AND PREVENTION OF DIPHTHERIA

The careful clinical observations of cases and the study of the spread of the disease, without resort to animal experiments, yielded many facts which justified the conclusion that diphtheria was a contagious disease producing definite lesions in the pharynx and larynx. There remained numerous cases, however, the nature of which continued doubtful. There seemed indeed no way to differentiate between these cases, unless possibly a specific microorganism could be discovered. Many attacked the investigation of this problem. Laycock published a paper in Edinburgh in 1859 declaring that diphtheria was due to the *Oidium albicans*. One after another discovered different organisms which they tried to connect with the disease. Klebs demonstrated in 1881, that there were no microorganisms in the internal organs of the majority of diphtheria patients. Two years later he demonstrated that in sections there were near the surface of the membrane, little rod-shaped bacteria. In the same year, Heubner showed that pyogenic cocci were regularly present, but that these, while pathogenic for animals, still did not produce lesions like those of human diphtheria. He came to the conclusion that the organism was yet to be discovered. Koch at that time laid down his three postulates which required as proof that any of the numerous varieties of microorganisms, shown to be present in the throat in cases of diphtheria, was the exciting factor, the finding of the organism in the affected part, its isolation in pure culture and its reproduction of the disease when inoculated in pure culture.

The investigations due to Koch's suggestions led to the discovery of the diphtheria bacillus and of its antidote. The following pages will again and again have to record the fact that these results would have been impossible without animal experimentation.

THE DISCOVERY OF DIPHTHERIA BACILLUS BY LOEFFLER

As already stated, the results published prior to the investigations of Loeffler were so inconclusive that many different kinds of bacteria were under consideration as the possible cause of the disease. Loeffler in 1884 reported the results of a very careful series of studies. He examined sections stained by a special alkaline solution of methylene blue, of the locally affected parts and also of the organs of patients who had died of diphtheria. These investigations showed that the lesions were not always uniform in character, but could be arranged in various groups. The first group was characterized by loss of substance and the presence of greyish-yellow necrotic material, false membranes being absent. All the cases of post-scarlatinal diphtheria belonged to this group. Micrococci, arranged in chains, were found pushing their way in wedge-like masses into the tissues and leaving necrotic areas behind them. Masses of micrococci were also frequently found in the organs of fatal cases. In the second group, thick false membranes occurred on the deeply congested mucous membranes of the throat, larynx or bronchi. Masses of bacteria of various kinds were found covering the surface of the false membranes in disorderly confusion, and more deeply, small rods were found arranged in groups and stained most intensely with methylene blue.

Anatomic and cultural investigations indicated that either streptococci or the bacilli now known to be the diphtheria bacilli were the exciting organisms, but gave no conclusive proofs of the specific significance of either. As other means failed, it was necessary to discover whether either of them was capable of producing in animals a disease analogous to human diphtheria. Experiments were made with pure cultures of the streptococci and other micrococci in a number of animals, mice, guinea-pigs, rabbits and monkeys, partly by feeding, and partly by subcutaneous, intratracheal and intravenous inoculations. Certain animals, especially mice, died from septicemia, with numerous chains of cocci in the blood, but in no case was a disease produced which resembled diphtheria. Since these organisms were only discovered alone in a limited number of cases simulating human diphtheria, and since they have been found similarly arranged in the organs in other infective diseases which are associated with lesions of the mucous membrane, Loeffler came to the conclusion that, in diphtheria also, the chain-forming micrococci were merely of secondary importance, occasionally invading the body under favorable conditions and giving rise to slight or grave local and general complications. Loeffler also regarded it as possible that the chain-forming micrococci might set up a disease resembling diphtheria by attacking the mucous membranes of the throat and multiplying in the lymph spaces.

With the pure cultures of the suspected bacilli obtained from a number of cases experiments were made on several species of animals. Mice were not affected by inoculations, but guinea-pigs died with characteristic lesions, greyish-white, pseudo-membranous masses at the seat of the inoculation, hemorrhagic edema, effusion into the pleural cavities, lobular consolidation of the lungs and catarrhal inflammation of the kidneys. The bacilli were found usually in small numbers only at the seat of inoculation, but were never observed in the organs. These facts "clearly indicated that a poison produced at the seat of inoculation must have circulated in the blood." Characteristic and striking results were obtained by the inoculation of rabbits. After inoculation of the conjunctiva was performed, the parts became much swollen and covered with whitish tough membranes. Inoculations into the opened trachea produced tracheitis, leading in the majority of cases to the formation of more or less extensive false membranes, which occasionally extended into the bronchi. The operation wounds frequently became covered with fibrinous deposits accompanied by hemorrhagic edema of the neck. Extension of the process from the trachea into the pharynx was never observed. In the false membranes, the bacilli were only found in small numbers and were only observed in those parts of the mucous membrane which were injured during inoculation and which appeared to be totally absent from the internal organs. Since the animals died, in spite of the scarcity of bacilli, Loeffler considered that this confirmed his idea that death was due to the absorption of a chemical poison produced by the bacilli at the site of inoculation.

These results of animal tests established for all time the rôle of the diphtheria bacillus as the sole essential exciting factor in producing diphtheria. The streptococci and other pathogenic bacteria were proved to be an associated and engrafted infection, which at times probably became as dangerous as the diphtheria bacilli, as in the case of a complicating pneumonia or septicemia. The idea of Loeffler that the lesions distant from the original site of the disease were caused by soluble poisons was proved correct by the work of Roux and Yersin. The injection of the filtrate from cultures produced the same histologic lesions in guinea-pigs as infection with the culture. Without animal tests it would have been impossible to determine this, for the chemical composition of diphtheria toxin is still unknown to us.

The etiologic importance of the bacillus isolated by Loeffler being established, it was possible to establish the nature of doubtful cases. Numerous tests by means of animal inoculations in cases of croup occurring in many parts of Europe and America showed that the opinion of Bretonneau, that fatal croup was almost invariably laryngeal diphtheria, was absolutely correct. Other discoveries were made, such as the fact that there were many mild cases of diphtheria which had not been recognized and had thus been fruitful sources of contagion. It was also disclosed that convalescent cases carried virulent bacilli for weeks or months after recovery and that healthy persons who were brought into contact with diphtheria were occasionally infected and thus might become carriers of diphtheria bacilli, infecting others though escaping themselves.

In all these discoveries it was necessary to use guinea-pigs because it was found that there were harmless bacteria in the throat which so closely resembled the diphtheria bacilli in every respect, except that of poison production, that the two could only be separated and identified through the injection of guinea-pigs.

The information thus obtained proved to be very useful and it was hoped that the intelligent separation, through practical cultures, of suspected cases into those that were diphtheria and those that were not, would make it possible to isolate the one and liberate the other. It was also believed that examination of persons exposed to diphtheria would make it possible to detect the diphtheria bacillus carriers and so prevent their disseminating the germs of the disease. Experience showed that while we could act much more intelligently than before, yet the doubtful cases and the bacillus carriers were so numerous that the problem was too difficult to handle. While the culture test was reliable in cases with exudate, it proved unreliable in convalescent cases and in bacillus carriers because the bacilli might at the moment be so few at the time of making the culture as to be missed, and the case passed as free from contagion, when, in fact, diphtheria bacilli were present in some recess ready to multiply at any moment. We found that in New York City, during the winter months, nearly 1 per cent. of the children are diphtheria bacillus carriers. These conditions, together with the influence of increasing congestion of the population, brought it about that the deaths from diphtheria (which had diminished for a time after the promulgation of Loeffler's discovery), began again to increase. Fortunately, the discovery by Behring, of the antitoxic power of the blood of animals which have recovered from slight poisoning with the toxin produced by the diphtheria bacillus, gave us a new and potent preventive which also could be used as a cure. This discovery would have been absolutely impossible without animal experimentation, for diphtheria antitoxin is only known by the fact that it acts to neutralize the poisonous action of the toxin. Furthermore, every lot of antitoxin which is sent out must be produced by animals and must be tested in animals.

THE RÔLE OF ANIMAL EXPERIMENTATION IN THE DISCOVERY AND PRACTICAL PRODUCTION OF DIPHTHERIA ANTITOXIN

Behring discovered that not only was an animal, after recovery from a less than fatal dose of diphtheria toxin, immune to an otherwise fatal dose of a diphtheria culture, but also, the far more important point, that the blood-serum contained the protective substance and that this injected into another animal conferred immunity. By testing a number of animals it was found that the horse produced the largest amount of this protective substance. By judicious treatment with repeated inoculations of toxins the antitoxin accumulated in the blood, since it was so slowly eliminated, and the newly formed antitoxin after each injection was added to the major part of that formed in response to the previous injections. It was found that when an animal is injected with the antitoxin produced by one of its own kind, its immunity lasts from four to six months, but when injected with antitoxin produced in another species, immunity lasts only two or three weeks. This difference in the retention of the antitoxin is of both practical and theoretical interest. As human beings always receive antitoxin produced by the horse, the duration of immunity is limited to about two weeks. With each repetition of the injection there is a restoration of the immunity. The duration of immunity as estimated in animal tests has been also proved in man by the exposure of persons during epidemics. The long retention of antitoxin in the bodies of animals of the same species as the one producing it, proves it to be a true cell product.

THE VALUE OF ANTITOXIN IN THE PREVENTION AND TREATMENT OF DIPHTHERIA

I shall first consider the results with which I have been personally familiar. The experience that we have had in New York in the immunization of persons subjected to danger of infection has been very extensive.

The health department inspectors immunized fourteen thousand six hundred persons last year. These were all exposed to contact with diphtheria. In the last three years over thirty-five thousand cases have been treated without a single serious accident. Very few of these contracted diphtheria and not a single one died of the disease. In over 100,000 persons immunized since the introduction of antitoxin there has been but one known fatality due to the serum injection. This child suffered from status lymphaticus and died shortly after an injection of 1,000 units. This was four years ago and followed an injection of serum which had not been refined. The sister of the child received 5,000 units from the same vial and suffered no deleterious aftereffects.

Two occasions in which the immunizing value of the antitoxin was strikingly manifested are the following: The first was in an epidemic that was raging in a large institution for children. It broke out in the fall of 1894, a few weeks before we obtained our first antitoxin. Every endeavor was made to isolate not only the sick, but also those from whom diphtheria bacilli were obtained. These measures proved to be insufficient and three or four new cases developed daily. The danger to the children was so great that we decided to use the greater part of a small consignment of antitoxin which we at that time obtained from Germany. All the children were given a moderate injection (300 units). The epidemic ceased at once and no new case developed after the day of the injections for a full ten days when one mild case developed. This summer an epidemic started in a large insane asylum near New York City. Within six days of the discovery of the first case, many developed. These were not only among patients, but also among the doctors and nurses. As rapidly as possible over two thousand persons were given 1,000 units of antitoxin. No immunized person was attacked and the epidemic was stopped within less than a week. Similar experiences to those we have had in New York City have been met with wherever antitoxin has been used.

TREATMENT

The value of antitoxin in the treatment of disease is not so readily determined as in the prevention. Our experimental tests in animals show that as soon as antitoxin enters the blood-stream it neutralizes any toxin present, but that it only slowly passes through the capillaries to reach any toxin which has passed out previously or is still retained in the mucous membranes at the site of the disease. When antitoxin is subcutaneously injected it is absorbed quickly enough to render the blood-current feebly antitoxic within a few minutes, but strongly so only after several hours, for the antitoxin is apparently chemically allied to the globulins and, like them, is slowly absorbed. Animal tests have demonstrated that by injecting antitoxin into the vein of a patient, we immediately stop further passage of toxin from the blood-stream, and, within a short time, we neutralize any toxin in the tissue fluids and so prevent further injury of cells whether situated at the point of disease or at distant parts. Animal experiments give us no reason to believe that cellular injury already accomplished can be remedied. Antitoxin is really therefore a preventive of further poisoning and cannot restore to health those who have suffered irreparable injury, any more than rescuing from the fire can save one from death who has been burned to an extent incompatible with continued life. Animal experiments give us reason to expect that in cases of diphtheria treated early, the lesions will not advance. In early cases the patients will recover and in the more advanced cases they will improve at least locally, but in many cases they will die from paralysis due to the progress of degeneration from previous injury or complications such as pneumonia, due to bacteria, the toxins of which are not neutralized by diphtheria antitoxin.

RESULTS OF ANTITOXIN TREATMENT

It is now sixteen years since the antitoxin treatment of diphtheria began to be used. At first only a small percentage of the patients received the treatment, but steadily year by year a greater proportion of patients were injected with serum until now probably 90 per cent. of all cases are treated with antitoxin. The cases treated in one year in the United States equal at least one hundred thousand and those treated in Europe must total nearly one quarter of a million more. If antitoxin is of real value, we shall find as it becomes more used, a lessened number of deaths, and an increasing consensus of medical opinion in its favor.

THE ABSOLUTE MORTALITIES DURING A LONG SERIES OF YEARS IN LARGE CITIES AS AN INDEX OF THE VALUE OF ANTITOXIN TREATMENT

Of all methods at present available, perhaps the least open to error is a comparison of the absolute number of deaths per 100,000 before and after the introduction of antitoxin.

To be of value, statistics of this kind must cover a long period of years. While this, of course, is true for all kinds of statistics it is particularly important in diphtheria in which mortality figures move up and down in irregular waves. These irregularities, however, become apparent only when a considerable number of years are taken into account. For example, in the six years ending 1882, the average of deaths per 100,000 from diphtheria and croup was always above 140 in Baltimore, and reached 200 or over in three of these years. In the seven years following, the mortality fell sharply and continuously until it reached its lowest point in 1889, when it was 52 per 100,000; yet no difference in treatment occurred in 1882.

Care must therefore be taken to secure readings which do not constitute merely a part of an epidemic, unless due allowance be made for this fact. In order to distinguish epidemics, it is necessary to know the average number of deaths for many years. Lack of this knowledge was the weak point in a number of earlier statistic studies and was made use of by the opponents of serum therapy. Further, statistics of this kind ought to be taken mainly from the large cities, for reports of deaths are usually indifferently kept in the rural districts. It must also be remembered that, at first, antitoxin was used in only a minority of the cases and often at too late a stage of the disease.

In compiling the following statistics, therefore, we have taken only cities having over 125,000 inhabitants, in which the registration of deaths has long been efficient. Apart from these two points the cities were taken at random, some from the United States, some from Great Britain, and the remainder from the continent of Europe. The figures are in all cases from the official records and are, with the exception of Paris, the combined "diphtheria" and "croup" figures. In order to overcome the fluctuations commonly seen in diphtheria mortalities, we have gone back to 1878, i. e., fifteen years prior to the introduction of antitoxin, and have carried our figures up to December 31, 1905, i. e., ten years after the use of antitoxin. We believe that the evidence thus obtained of the great value of diphtheria antitoxin is overwhelming. The figures obtained by us of the deaths in a number of the cities up to the present year show a continuous lessening in the deaths.

Before giving the combined figures of many cities, we shall give those for New York City since 1860 and some for England and Wales and London. The English figures are especially interesting as there has been much discussion of the results in England. The conditions there were somewhat peculiar.[1] The antitoxin treatment was slower in being adopted than in continental Europe and America. Then again, diphtheria had been increasing for a couple of years and this epidemic influence continued until 1899. The fact that during the earlier years membranous croup was not reported as diphtheria and later was included with it, made it possible to mislead by quoting only those reported as diphtheria. This subject has already been fully considered.

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[1] Thirty-Ninth Annual Report of the Local Government Board for 1909-10, Appendix A, No. 1, pp. 6 and 7.

STATISTICS FROM NEW YORK CITY

Year	Deaths from Diphtheria and Croup in the Old City of New York	Deaths Per 100,000
1878	1,506	132
1879	1,193	101
1880	2,300	190
1881	3,287	264
1882	2,254	184
1883	1,653	125
1884	1,838	136
1885	2,180	158
1886	2,695	188
1887	3,056	206
1888	2,553	167
1889	2,291	146
1890	1,783	110
1891	1,970	118
1892	2,105	123
1893	2,558	145
1894	2,870*	158*
1895*	1,976*	105*
1896	1,763	91
1897	1,590	81
1898	923	46
1899	1,085	53
1900	1,276	62
1901	1,227	58
1902	1,142	53
1903	1,270	56
1904	1,270	57
1905	860	28
1906	983	39
1907	1,015	40
1908	1,097	41
1909	1,065	39
1910	1,034	37
1911†	787	28

* The Antitoxin Laboratory established in the autumn of 1894. Free distribution to the poor begun early in 1895.

† Estimated for last four months.

The deaths during the first eight months of 1911 are 24 per cent. less than during the same period of 1910. If this improvement continues the death-rate will be 28, or about one-fifth of the average before the introduction of antitoxin. In the whole city of New York, there were reported from January 1 to April 1, 1911, 4,198 cases, and 411 deaths as against 4,957 cases and 597 deaths in 1910. The case fatality was thus only 9.8 per cent. as compared with 12 per cent.

DIPHTHERIA IN LONDON

Year	London		Hospitals of Metropolitan's Asylum's Board. Mortality Percentage in Diphtheria Cases Treated in Hospital *
	Rates per 1,000 Persons Living		
	Notifications	Deaths *	
1892	1.96	.44	29.3
1893	3.18	.74	30.4
1894	2.58	.61	29.3
1895**	2.57	.52	22.8
1896	3.07	.59	21.2
1897	2.97	.50	17.7
1898	2.66	.39	15.4
1899	3.05	.43	13.9
1900	2.66	.34	12.3
1901	2.68	.29	11.1
1902	2.31	.25	11.0
1903	1.68	.16	9.7
1909	1.39	.126	9.8

This table is from page 7 of Appendix A of thirty-ninth annual report of the local government board.

* These figures include those dying from "membranous croup."

** Introduction of antitoxin treatment.

From the last registrar general's report we find that there were in England and Wales 8,609 deaths in 1889, 10,516 deaths in 1894, 10,301 deaths in 1899 and 5,889 deaths in 1908 from diphtheria and membranous croup. The death-rate in 1889 was 30.3; in 1894, 34.7; in 1899, 32.4, and in 1908, 16.6 per 100,000.

Combined statistics of deaths and death-rates from diphtheria and croup in New York, Brooklyn, Boston, Pittsburgh, Baltimore, Philadelphia, Berlin, Cologne, Breslau, Dresden, Hamburg, Königsberg, Munich, Vienna, London, Glasgow, Liverpool, Paris, Frankfort.

Year	Population	Deaths from Diphtheria and Croup	Deaths Per 100,000
1890	16,526,135	11,059	66.9
1891	17,689,146	12,389	70.0
1892	18,330,737	14,200	77.5
1893	18,467,970	15,726	80.4
1894	19,033,902	15,125	79.9
1895*	19,143,188	10,657	55.6
1896	19,489,682	9,651	49.5
1897	19,800,629	8,942	45.2
1898	20,037,918	7,170	35.7
1899	20,358,857	7,256	35.6
1900	20,764,614	6,791	32.7
1901	20,874,572	6,104	29.2
1902	21,552,398	5,630	26.1
1903	21,865,299	5,117	23.4
1904	22,532,848	4,917	21.8
1905	22,790,000	4,323	19.0

* Introduction of antitoxin treatment.

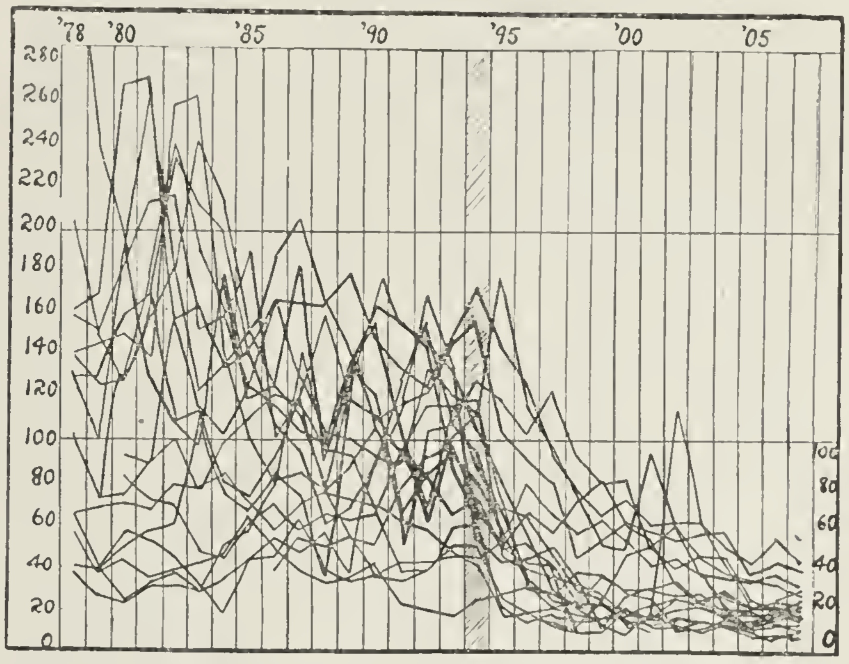

Chart showing deaths from diphtheria (including membranous croup) per 100,000 in nineteen large cities, 1878-1908. The death-rate of each of the nineteen cities is represented by a line. The marked lowering of the death-rates is clear in spite of temporary variations in certain cities.

We see from these figures that although there were marked fluctuations in the absolute mortality per 100,000 in the pre-antitoxin years, in no period did all of the cities show a decrease. Thus in 1884 about half of the cities show a decline and the other half an increase in mortality; the same is true for 1888. Not until we come to the critical year, 1894, do we find almost all the cities showing a like behavior, a drop in the mortality per 100,000. This drop, moreover, has continued until the present time. The difference between 79.9 per cent. in 1894 and 17 per cent. in 1907 is so great and the time of the beginning of the decrease so coincident with the introduction of the antitoxin treatment that it is difficult to attribute any other explanation than that the saving of life was due to antitoxin.

THE RESULTS OBTAINED IN HOSPITALS AND ELSEWHERE IN THE YEARS BEFORE AND AFTER THE INTRODUCTION OF ANTITOXIN

The figures from the London hospitals have already been given. They show that a mortality of 29 per cent. has been reduced to about 10 per cent.

The Boston City Hospital[2] has had a similar experience. Before the use of antitoxin about 70 per cent. of the patients presenting intubation cases died; now only about 35 per cent. die.

At the Hospital for Contagious Diseases in New York City very few patients having membranous croup die unless they develop pneumonia. We have little fear of the outcome in any uncomplicated case of diphtheria which receives the antitoxin early.

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[2] See article by Park and Bolduan, quoting from McCollom's 1905 report.

Similar results have been obtained by physicians in Europe and America both in hospitals and private practice. The results are much the best in cases of patients treated early in the disease. Royer[3] has analyzed 3,894 cases of diphtheria in which the patient received antitoxin treatment as to the results according to the day on which treatment was begun.

DEATH-RATE. ACCORDING TO DAY OF INJECTION

	Death-Rate
218 cases treated on first day	.....
1,153 cases treated on second day	4.59
880 cases treated on third day	12.50
598 cases treated on fourth day	16.40
351 cases treated on fifth day	14.24
694 cases treated after fifth day......	14.15
Total, 3,894 cases..................	10.57

THE SIMULTANEOUS OBSERVATION OF CASES OF DIPHTHERIA RECEIVING AND NOT RECEIVING THE ANTITOXIN TREATMENT

Fibinger[4] observed during a period of time a series of cases of alternate patients treated with and without antitoxin.

Among 238 patients treated with antitoxin, 8 died (mortality 3 per cent.).

Among 245 patients treated without antitoxin, 30 died (mortality 12 per cent.).

This method, however, for obvious reasons cannot be extensively used. We made in 1895 a similar test at the Willard Parker Hospital, but the difference in the behavior of the patients appeared to us to be so greatly in favor of those treated with antitoxin that the test after six weeks was stopped and all patients since that time have received antitoxin.

A POSSIBLE DECLINE IN THE VIRULENCE OF THE DISEASE

The observation of the cases of patients who come to us without having had antitoxin treatment, indicates that there has been no marked change in the average virulence of the disease.[5]

THE EXTENT TO WHICH ANTITOXIN IS USED

The observations made under the direction of the Department of Health show that in New York City almost every physician uses antitoxin. There are a good many patients among the poorest classes who do not receive antitoxin early, but this is because a physician has not been called to see the child.

The health authorities of all the northern states have arrangements for making antitoxin available either for the poor or for all classes. So far as I can determine there is no hospital for the care of diphtheria patients in any part of the world in which diphtheria antitoxin is not used.

AFTER-EFFECTS OF SERUM INJECTION

Serum carrying the antitoxin is apt to produce after-effects of varying intensity. These effects are due chiefly or altogether to the serum and not to the antitoxin or other antibody which it carries, which is proved by the fact that serum containing no antibodies gives the same symptoms. This fact is of importance, and has led to the elimination of much of the useless serum elements.

FIRST INJECTION

Von Pirquet and Schick have given the name "serum sickness" to the symptoms caused by an injection of serum. After an incubation period which usually covers from five to twelve days, local redness and itching or swelling surrounded by urticarial wheals develop. This is followed by swelling of the lymph nodes, fever, a rash which may spread over the body, edema and swelling of the joints. These symptoms all develop only in severe cases, various combinations occur, and one or another symptom may be most prominent. In the great majority of cases, the rash is the most prominent symptom and is best likened to an attack of "hives" and is of no more seriousness.

Only about 20 per cent. of those injected with serum develop a rash and in many cases only a local reaction occurs.

In a few cases, the reaction occurs more quickly. An immediate general reaction is very rare. This immediate general reaction may be severe and alarming; in a very few instances it has been fatal.

Not all the cases described as fatalities due to the serum will stand close investigation. Some are clearly due to heart paralysis caused by the diphtheria toxemia, and in some the cause is doubtful. These serious accidents have been mostly in adults and many of the cases were asthmatics. How rarely this occurs is seen from our own experience in New York City, already referred to, where only two fatalities occurred since the introduction of antitoxin. If we refer to the number of deaths from diphtheria in nineteen cities for 1894 and 1904 we find there is a reduction of over 10,000. On this basis, one is safe in estimating that the daily saving of life by antitoxin is greater than the total number of fatalities due to its use during the entire sixteen years since its introduction. Further, the danger from immediate general reactions is fortunately almost *nil* in young children. It is in them that the disease causes the greatest loss of life, and antitoxin must be used most freely.

SECOND INJECTION

Arthus, in 1903 at the instigation of Lichet, investigated the results of repeated injections of horse serum into rabbits. Rosenau and Anderson, Otto and others observed the results in guinea-pigs. They found that serum itself gave no toxic effects on the first injection, but if a certain time was allowed to elapse the succeeding injections were toxic. Von Pirquet also found that when a second injection in man gave symptoms, these came on much more quickly, at times immediately, instead of occurring after an incubation period of some days. An interval of about ten days must elapse between two injections for this change in reaction to become evident.

With this interval coming between, the second injection in man is apt to be followed by a local reaction in a few hours and a general reaction within twenty-four hours. In some cases the reaction comes on in a few minutes. These reactions may in some cases be much more violent than reactions following the first injection; in some instances they have been alarming. The most important point, however, is the change in the time of reaction.

THE FREQUENCY OF SERUM REACTIONS

The frequency of serum reactions increases somewhat with the size of the dose; thus Weaver[6] reports that 11 per cent. of those receiving less than 10 c.c. of serum showed reactions, while 27 per cent. developed symptoms when between 10 and 20 c.c were given. The serum of some horses is more apt to cause a rash than that of others; further, some people react more readily than others.

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[3] Modern Treatment, Hare, p. 815.

[4] Reported by Faber, 1904.

[5] See chapter on Mortality in Bacteriology of Diphtheria, Nuttall and Graham Smith, p. 594.

[6] Arch. Int. Med., 1909, iii, 485.

ERADICATION OF AFTER-EFFECTS

The first method that would occur to anyone would be to give as much antitoxin as possible with a minimum of serum. One way to do this is to have very high potency serum so that little need be used. If we could separate the antitoxin from the serum elements this would be the ideal way. A long step in this direction has been taken. The antitoxin is bound up with a portion of the globulins. These are separated from the other constituents, giving a refined and concentrated antitoxin. In this way a large number of units can be given in a small bulk, and naturally less foreign proteid than if the same number of units had been given in the original serum.

This globulin solution containing antitoxin can be injected with much less tendency to produce serum after-effects.

After-effects do still occur, and in rare instances are serious, but compared with the benefits of antitoxin, viz., in the prevention of diphtheria and the saving of thousands of lives yearly, they are very small indeed. There is every possibility that with further experimental work, based on animal tests, the antitoxin will be obtained in a practically pure state, and that even these few untoward effects will be wholly eliminated.

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ELEMENTS OF ERROR IN STATISTICS OF BREAST AMPUTATION FOR CANCER

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I have long held the belief that the statistics of recoveries after operations for neoplasms of the female breast, diagnosed as cancer, were unreliable as a basis of scientific knowledge.

It is not my purpose in presenting this paper to arraign a settled professional judgment, or to impeach the accuracy of eminent observers. My object is to emphasize the fact that tumors of the breast diagnosed as malignant, do not, in a certain considerable percentage of cases, undergo malignant degeneration, and that the histologic arrangement of a tumor does not necessarily determine its future life history or development; that certain tumors removed for malignancy would, if unmolested, eventually disappear. This announcement may be regarded as rank heresy, although easily demonstrable; and if proved, render, *pro tanto*, the records of recoveries for long periods of time after amputation of the breast for cancer, unreliable. Opinions based on the macroscopic appearances of breast tumors are no longer regarded as of much diagnostic value. The topography, mobility, density, contour, duration, absence of adhesions, trauma, pain, sensations, family history, etc., are contributory evidences. The final decision as to diagnosis rests on morbid histology. But there is obviously something more required than microscopic arrangement of cells in order to predict malignant activity in a given tumor; essential factors in the chemistry, biology and physiology of malignant and benign neoplasms that have thus far eluded our cognition. Dr. H. Gideon Wells,[1] in an interesting paper on "The Resistance of the Body to Cancer," refers to the abundant available evidence that the human body has some means of natural defense against cancer, and that this property of resistance applies more or less to all tumors. Among the natural means of defense he cites the following:

1. Spontaneous local inhibition or temporary retardation of growth.
2. Retardation of recurrence after removal.
3. Retrogression of secondary growths after removal of the primary tumor.
4. Disappearance of portions of tumor tissue left after an incomplete operation.
5. Spontaneous healing of a primary tumor without any operative intervention whatever.

Actual spontaneous disappearance of tumors, microscopically determined to be malignant, is attested by numerous eminent observers: e. g., Martin of Greifswald reports spontaneous disappearance of scirrhus of the cervix and vaginal vault, microscopically determined, with no recurrence after twenty-two years; Jacobsthal, carcinoma of the temple; Saar, a small carcinoma of the breast, and the spontaneous healing of chorion tumors observed by Gaylor and Clows and the spontaneous disappearance of superficial carcinoma observed by Mohr and others. The processes of natural defense in these cases are variously ascribed to calcification and the ensnaring and invasion of the cancer cell-nests by fibrous tissue and the strangulation of cancer tissue by fibrous overgrowth. This body resistance to active malignant proliferation is abundantly attested and proves the presence of at least one constant element of error in the surgical statistics of cancer cure after amputation of the breast.

In view of these facts, it is interesting to inquire what would become of the 40 per cent. of reported recoveries after amputation of the breast by skilled operators, and the 10 to 20 per cent. of this 40 per cent., free from recurrence after three years, could we have eliminated from the records the cases that were non-malignant, those that would not have taken on malignant activity, and the smaller percentage that might have spontaneously disappeared by the natural process of body resistance? An unbiased consideration of these elements of error in our scientific data, at present indeterminate, and possibly indeterminable, leads to the pessimistic conclusion that tumors of the breast, having once taken on malignant degenerative action, are never, or rarely cured by any operation whatsoever.

Here permit me a word regarding the classical three-year period, after which, there being no return, patients are considered cured. As such they swell statistics as operative triumphs in cancer cure. The professional world has, I believe, quite generally adopted Professor Volkmann's teaching, that patients three years after operation with no return, are to be regarded as cured. Now as we are considering statistics of cancer after operation with reference to accuracy as a basis of final judgment and scientific knowledge, it behooves us to define accurately our meaning of "cure." If by cure, we mean a definite eradication of a disease, leaving the organism in a healthy state, we clearly misuse and strangely pervert its meaning. It is sheer sophistry or juggling to apply the term "cure" to the mere arrest, or temporary disappearance of a morbid process, and unlimited audacity to consider the results of the operation as *post hoc*—a necessary anatomic sequence. It is known that the surgical records are replete with numberless examples of recurrence of cancer in the bones, tissues and viscera, five, ten, fifteen and more years following radical operations, and here we are again confronted by an undeniable source of error in our surgical statistics.

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[1] Wells, H. Gideon: The Resistance of the Body to Cancer, The Journal A. M. A., May 29, 1909, p. 1731.

The vagaries in the evolution of tumors diagnosed as malignant that have transpired under my observation will illustrate the points I desire to make.

Case 1.—The patient is the mother of four children; of German extraction; of excellent habits and family history; has never been ill. Twenty-five years ago she consulted me for a tumor occupying the upper and outer quadrant of the left breast, in mass equal to a small egg, irregular in outline and movable. Her attention was attracted to the tumor by pain, which she described as lancinating and severe. She did not know how long it had existed. Her age, the density of the growth, its situation, and the pain led me to advise its immediate removal. She positively declined operation, and in order to convince her of the importance of its removal and the danger she incurred by delay, I advised her to seek other advice, and she consulted four eminent surgeons of this city, who all advised immediate removal of the growth, assuring her meanwhile of its malignant nature. She declined operation and returned to me for further assistance. I had her support the breast by adhesive straps, as it was rather large, and dismissed her. Within the following year the tumor had disappeared. Eleven years after this event, she applied to me for the repair of a lacerated cervix. The operation was done at St. Mary's Hospital with perfect results and the patient was again dismissed, her health being most satisfactory in every respect. Five years elapsed and she again consulted me for uterine hemorrhage, which she said had continued the past year. On examination I found extensive carcinoma of the uterine cervix and body, with infiltration of the vesicovaginal and rectovaginal walls, with no recurrence of tumor of the breast.

Case 2.—The patient was a nullipara, aged 42; married; menstruation normal; family history of cancer and insanity. The patient had consulted me nine years ago for a tumor of the breast. The growth was hard, irregular and occupied the axillary and upper quadrant. An older sister died a year before, after an operation for a growth of the neck, said to have been sarcoma. The gross appearance of the tumor was, to me, unequivocally malignant and I earnestly advised its immediate removal, and gave among my reasons her unfortunate family history. She declined surgical interference. She remained in the city under my observation for two years with no new developments in the growth. It is now seven years since I first saw her. She is living in Orange, N. J., from which place she writes, July 17, 1910, as follows: "The breast tumor disappeared entirely some years ago. There has been no return in that place or elsewhere, consequently there has been no necessity to consult any other physician, and my general health has been good."

Case 3.—The patient was a woman, aged 48; mother of four children; five years ago she discovered a tumor of the left breast. Four of the most eminent surgeons of San Francisco saw her in consultation. The diagnosis of carcinoma was unanimous, in which opinion the husband, a physician, joined. It was decided to take her abroad for further advice. En route the breast suppurated and the non-malignant character of the lesion was established. No operation was done and the patient is living and well.

Case 4.—The patient, a woman, aged 44, nullipara, married, gives a history of cancer on the paternal side, two having died of cancer of the breast and one of cancer of the stomach. Eight years ago she consulted me respecting a hard, irregular growth in the upper and outer segment of the mamma, about ¾ of an inch from the nipple. She had consulted two prominent surgeons, who had informed her that the growth was undoubtedly malignant and advised her to have it removed without a moment's delay. The nipple, she informed me, had been sensitive for two years and after the discovery of the growth, she has experienced lancinating pain radiating toward the axilla. At the time of my examination she was extremely nervous, much depressed and begged me to defer operation until she could be somewhat restored to health. With doubts and some qualms of conscience, I gave her tonics and sent her to the country, supported and strapped the breast. She improved steadily during these months. The tumor appeared to soften and diminish in size; within a year it had entirely disappeared and in August, 1910, eight years from the discovery of the growth, her health was perfect and the breast normal.

Case 5.—The patient was a married woman, aged 40, rather stout, with large pendulous breasts; the mother of one child. Two months before she discovered a small, hard, irregular nodule in the left breast. I found a small, hard, irregular tumor, deep-seated and perfectly movable. She complained of pain and was very nervous about it. The right breast had a similar development. I gave a guarded opinion but advised its removal, which she declined. She subsequently consulted a number of well-known surgeons, all of whom gave guarded opinions, but advised removal. She finally returned to me for operation, limiting the procedure to removal of the tumor. I removed the growth by a wide incision and closed the wound. I submit herewith the pathologic findings of Professor Ophüls of Cooper College:

"Small, hard, badly defined nodule in the fatty tissue near the mammary gland. Sections show that the tumor consists largely of bundles of large spindle cells with connective tissue fibers between them. There are also many very large multinuclear giant cells with central arrangement of nuclei. The tumor infiltrates the fatty tissue diffusely. In the fatty tissue about the tumor the oil in many places is changed into fatty acids, with formation of large partly multinuclear phagocytes at the edge of the crystals. Around the tumor there is some new formation of dense fibrous tissue with little cellular infiltration which is quite marked around one of the ducts of the mammary gland. No arterial disease. Diagnosis is: giant-celled sarcoma of mamma."

Four and a half years have elapsed since the operation and there has been no new development in either breast, nor other unfavorable change in the patient's health.

Case 6.—Mrs. P. of Morgan City, Utah, aged 50, multipara, came to San Francisco for removal of both breasts for tumors, diagnosed as cancer. Small, hard, movable nodules in both glands were well surrounded by fatty tissue. Family history was good; no history of tuberculosis or cancer in the family. The patient's general condition was fairly good, but she was somewhat depressed and nervous from anxiety. I regarded the tumors as benign and advised her returning home. I am in receipt of a letter from her husband under date of June 15, 1910, announcing the gradual reduction in the size of the tumors during the last year, great improvement in health and the absence of pain. The diagnosis of malignancy had been given by four reputable physicians in this case and removal advised.

Case 7.—Miss P, aged 26, in excellent health was sent to St. Mary's Hospital twelve years ago for removal of both breasts for malignancy. They were apparently adenomata and I sent her home with instructions to report to the hospital at once should any new or unfavorable symptoms arise. She made no report during the four subsequent years of my service.

Case 8.—The patient, aged 58, married, nullipara, had always enjoyed good health; there was no history of cancer or tuberculosis in the family. A year ago (1910) she discovered a tumor in the right breast. It occupied the upper and outer quadrant; it was freely movable; size 5 by 2.5 cm. It occupied the outer border of the mamma and I think it was an aggregation of the small lobules in that location. There was a small, rather hard elevation at the outer extremity of the tumor, over which the skin was slightly retracted. After the discovery of the growth she had some pain. In these cases pain almost never precedes the discovery of the tumor. The patient's family physician advised immediate removal of the growth, which she declined. I gave her a guarded opinion and began treatment by strongly strapping the breast to the chest walls, first applying mercurial ointment, camphor and stramonium, and internally, 5 gr. potassium iodid daily. Within a month prior to this report the tumor had become softer, the indurated lump was disappearing and the mass had greatly diminished in size; she had no pain. Within a few months the tumor will be, I think, indistinguishable from the gland substance proper.

The foregoing recital fairly illustrates the points I wish to make, viz.:

1. A certain percentage of tumors diagnosed as malignant spontaneously disappear if not operated on.
2. These tumors when removed are classified as malignant and enter into the statistics of recoveries after operation for cancer, thereby largely augmenting the record and invalidating its scientific value.
3. The accepted percentage of tumors of the breast, classified as malignant, is too high.
4. In exceptional cases a tumor microscopically malignant does not take on malignant activity.

There are certain facts in the biology of tumor growths that afford a substantial basis for believing that malignant tumors exceptionally disappear by a process of spontaneous healing. This may appear from a practical point of view, like a futile discussion of a pathologic anomaly. It is, however, a theme of the highest scientific significance, and should stimulate pathologists and physiologists to a more thorough investigation of the processes by which the body defends itself against disease, and, if possible, to imitate, supplement or increase these natural defenses.

Dr. W. S. Handley,[2] Hunterian Professor of Surgery at the Royal College of Surgeons, in an interesting paper on "The Natural Cure for Cancer," says that in the literature of cancer are a number of scattered observations of cases showing that under certain circumstances the disappearance of cancerous masses of macroscopic size may occur spontaneously. These facts have appeared strange and anomalous to the authors who have recorded them, and their possible significance in regard to the cure of cancer is difficult to overestimate. Professor Handley postulates the following in explanation of the phenomena and as a law of cancerous growth:

> Every aggregation of cancerous cells has a definite life-cycle, and after a varying period, and a varying rate, tends to undergo degeneration and fibrotic changes. These changes extend from the center of the mass centrifugally to its periphery, lead to its shrinkage, and terminate in the replacement of the cancer cells by a fibrous scar. The natural cure for cancer is, therefore, a local and not a constitutional process.

In this connection Dr. Handley suggests the probability that certain chronic ulcers of the stomach accompanied by great fibroid thickening are really extinct carcinomata, and that for every cancer which reaches its full clinical development even as atrophic scirrhus, it may be that a hundred are strangulated in the process of birth and while still in the microscopic stage.

A feature of much interest in the natural process of defense against carcinoma is the microscopic evidence of perilymphatic fibrosis, in which the permeation of a lymphatic is normally followed by a certain process of fibrosis. The cancer cells which at first fill the lymphatic without distending it, by their continued proliferation finally burst the tube of endothelium within which they are enclosed. Around the lymphatic some extravasation of blood usually takes place and a dense aggregation of lymphocytes appears. Soon the lymphocytes are replaced by young fibrous tissue which forms an adventitious sheath for the cylinder of cancer cells set free from the bursted lymphatic. This newly formed fibrous tissue contracts on the newly formed cancer-cells and they ultimately entirely disappear. The original lymphatic is now represented by a solid thread of fibrous tissue and the process of natural cure is locally complete.

Admitting the probable exaggeration of reported recoveries after operation for cancer of the female breast by reason of mistaken diagnoses, the fact remains that tumors of the breast present a perplexing problem to the conscientious surgeon. A large percentage of tumors of the breast are malignant; a certain smaller percentage of the border-line or non-malignant group, e. g., the various forms and combinations of adenoma, cysts and those classified as chronic mastitis or involution tumors, tuberculosis and retromammary lipoma, hydatid and gumma, are subject to possible malignant degeneration. Therefore it has justly come to pass that all tumors of the female breast are to be regarded with suspicion. But shall every breast tumor that comes to the surgeon be subjected to a radical or mutilating operation? If not, what clinical findings should guide the surgeon in dealing with neoplasms?

We might reasonably indulge the hope that out of the vast storehouse of knowledge, statistics and surgical experiences, we should be able to unite on some fundamental principle as a basis of procedure in breast cases. In looking over a large field of surgical literature on cancer of the breast, I find some well-defined suggestions from the pen of Dr. Charles L. Gibson,[3] of New York. He holds that true cancer of the breast is rarely seen in young women under 25, and that in the absence of important clinical features breast tumors may be held to be innocent,and even up to 30 the indications are not urgent. Past 30 we should be more vigilant and aggressive. Past 35 we should assure ourselves on an anatomic basis of the nature of the tumor and in most cases forestall future changes for the worse. Forty and over is the definite carcinomatous stage, and at this stage not a single chance should be taken. In women up to 30 the diagnosis may be made on the clinical findings; past that age the opinions should be based on anatomic examination. Mutilating or disfiguring operations should be avoided unless unequivocally necessary.

By the consensus of medical opinion at this time, 85 per cent. of breast tumors are actually or potentially malignant, and the remaining 15 per cent. are liable at some indeterminate period to take on malignant activity.

The corollary is, therefore, that few tumors of the breast are essentially or inherently benign; those admittedly so are so rare as to be practically negligible. Hence the surgeon when confronted with tumors of the mammæ should not temporize. It is mandatory that he should remove, or advise removal of, all breast neoplasms. This decision of medical judgment is the law as it now stands, and it is eminently proper that we take the public into our confidence.

The remaining question then is as to method. Should transitional, border-line or presently-to-be-malignant neoplasms be treated by the radical method?

It is my impression and belief—not, however, demonstrable by statistics—that the major number of breast amputations, here and elsewhere, are made by the radical method, and this too, irrespective of malignancy, relative or transitional. Plastic operations are rare or ignored; radical removal is the vogue, and for reasons not justified by the pathologic findings in many instances. A large number of breast tumors, for example, the fibro-epithelial type, the fibro-adenoma, the intracanalicular myxoma, and the multiple tumors in older women, and single and multiple cysts, can be safely removed and yet preserve the symmetry and cosmetic relation of the mammæ.

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[2] Handley, W. S.: Brit. Med. Jour., March, 1909.

[3] Gibson, Charles L.: The Rational Treatment of Non-Malignant and Border-Line Tumors of the Breast, Ann. Surg., xlix, 478.

The unreasonable preponderance of radical methods is due, in my opinion, to exaggerated apprehension of actual malignant activity, undetermined pathology, and in part to surgical enthusiasm, amounting almost to surgical furor, that has swept over this country for the past decade, desolating thousands of lives by unnecessary and ill-timed surgical procedures, especially those of the abdominal cavity, where also great triumphs have been achieved, so perfect in technic and so beneficent in results as almost to blind us to the darker aspect of the picture. And here permit me to say, at the imminent peril of incurring denunciation as ultraconservative and hypercritical, that there is surgical license based on high attainment, knowledge of fundamental principles, adequate training and apprenticeship under competent masters that lightens the saddest burdens of mankind, and illuminates the world. There is also another sort of license of which we see and hear too much, the ill-timed and unnecessary surgery having relevancy rather to the interests of the practitioner than to the welfare of the patient. The apology for this license is to gain experience, to learn by practice, to become skilful by the lesson of blunders.

Such missionaries, if the word is not a misnomer, have been incontinently thrust forth on a reluctant and long-suffering world. Without training or adequate apprenticeship, they spring Minerva-like, full-formed and perfect from the head of Jove.

The operator who invariably selects radical methods for the removal of fibrocysts, fibro-adenoma and non-active tumors of the mammæ, who in the process of a curettement gets two feet of ileum into the vagina, who removes the uterus and its appendages for a cyst of the ovary and incidentally omits to inform the patient that she is unsexed, does a sort of surgery that has no place save one, which is graphically described and geographically located by the immortal Dante in his Divine Comedy—a place, I may remark, that is found neither on the earth nor in heaven.

Bloodgood, of Baltimore, in a recent paper on this subject, advises resection of the breast in chronic mastitis, fibro-epithelial tumors, adenoma and multiple cystic tumors, and in the breast tumors generally of young women.

In conclusion I wish to emphasize my position as to the radical operation in carcinoma. It is mandatory, without exception, but disfiguring operations should be avoided, unless unequivocally necessary. The procedure which most appeals to me in dealing with benign or relatively benign tumors of the breast is the plastic resection of Dr. J. C. Warren and Dr. W. L. Rodman. These methods, or some modification of them, I have practiced for many years with results most satisfactory to my patients and myself.

Case 1 presents some points of interest to which I invite attention, viz.: Was the primary tumor of the breast carcinoma and was its disappearance an example of healing by natural process? Had the tumor been removed in the first instance would there have been carcinoma of the uterus? Was the uterine carcinoma after sixteen years the result of potential cancer elements, held in check by natural body resistance during the vigorous period of life and developing only at the menopause, when body resistance was lowered, or was the uterine carcinoma a development *de novo?*

Case 2 is one of exceptional interest—the disappearance of a tumor presenting gross symptoms of malignancy in a person of the carcinomatous age, with a family history of cancer.

Case 4 is likewise of equal interest. The tumor had gross characteristics of malignancy, the patient was at the carcinomatous age and the family history was strikingly unfavorable.

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EXPERIENCES WITH SALT RESTRICTION IN NEPHRITIC EDEMA

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SALT EQUILIBRIUM

The sodium chlorid in the body fluids is normally maintained at a constant level. Below and above this level normal function becomes perverted. Hence the body tenaciously retains a definite percentage of sodium chlorid and reacts by an exaggerated elimination when its intake is increased, by a depression and finally a complete cessation of its output when the intake is decreased. So long as the means of output remain competent salt accumulation is merely temporary. About 2 gm. of sodium chlorid per diem suffice to maintain salt equilibrium and this amount at least must daily be added to the diet. Sodium chlorid in this respect occupies a peculiar position in our dietary, inasmuch as it is the only mineral constituent of the food that must be artificially supplied.[1]

SALT ELIMINATION

The elimination of sodium chlorid is chiefly a function of the kidneys. Some sodium chlorid is eliminated by the skin, the lacrimal glands, the stomach and the intestine, but in relatively insignificant amounts. The chlorid concentration of the stomach rarely exceeds that of the serum. The feces, even in profuse, vicarious diarrhea, incorporate only a few grams of sodium chlorid per diem.

The exact mechanism of sodium chlorid excretion by the kidneys is still a matter of controversy. The glomeruli by a process of filtration and diffusion excrete chiefly water and salt, the resulting liquid possessing the same percentage composition of filterable constituents as the blood-serum. In so far as the urine is normally more concentrated in these constituents than the serum, a corollary to this conception is partial reabsorption of water and salt in the tubular region of the kidneys, i. e., a secondary concentration, the rate of this secondary reabsorption being a function of the concentration of the fluid leaving the glomeruli as well as of the rate of its flow, in the sense that the more concentrated the fluid and the slower its flow the greater the reabsorption of chlorids in the tubular region. This is one of the factors that favor salt retention in nephritis.

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[1] While carnivorous animals and peoples require no salt, even dislike it, herbivorous animals and vegetarians cannot endure without it and prize it highly. Omnivorous creatures, occupying a middle position, require it. The food of both herbivora and carnivora contains a sufficient quantity of sodium chlorid, a vegetarian diet, however, containing more potassium salts than a meat diet. This excess of potassium drives out some of the sodium from its connections in the body, and hence the latter must be replaced. There is an interesting exception, which merely confirms this rule, in the case of rice-eaters, who do not require the addition of sodium chlorid to their diet; but rice contains scarcely one-sixth as much potassium as any of the other cereals.

PERVERSION OF SALT EXCRETION IN NEPHRITIS

There is no constancy or uniformity in regard to the perversion of the salt excretion according to the type of nephritis or the region of the kidneys involved.

Four possibilities must be thought of in nephritis, viz: The salt excretion equals the intake; the salt excretion is retarded but not reduced; the salt excretion exceeds the intake, or it falls below it.

In many cases of nephritis, especially during the stage of good diuresis, the salt output parallels the salt intake. Retardation, however, is much more common. For, whereas a normal subject gets rid of all the sodium chlorid ingested within twenty-four or forty-eight hours, most nephritics require several days to accomplish the same result. The study of a single day's chlorid excretion, even when carefully compared with the intake, is, therefore, of very little value, particularly as fluctuations in the daily output of sodium chlorid are especially characteristic of nephritis.

When in nephritis the salt excretion is found to exceed the salt intake, this invariably indicates preceding retention of sodium chlorid. It is, of course, also witnessed in normal persons fasting or on a salt-free diet, as well as after the use of bromids and large doses of potassium salts, the bromin ions having the power of driving out the chlorin ions, and the potassium, the sodium ions from their combinations.[1]

When the urinary salt output is smaller than the salt intake, we are, as a rule, dealing with renal inadequacy.[2] This is readily demonstrated by the fact that in unilateral kidney disease the sick kidney eliminates less sodium chlorid than the healthy one. The addition of sodium chlorid to the diet as a test does not cause a corresponding increase of the sodium chlorid excretion, as in a normal subject; often, in fact, the excretion will become still further diminished thereby. There occurs, therefore, a true salt retention, particularly in acute nephritis at the height of the disease, in severe parenchymatous nephritis, in heart disease kidney, especially during the stage of decompensation, and in nearly all forms of glomerular nephritis.

SALT RETENTION AND EDEMA

Salt retention is, as a rule, accompanied by edema, and when the proper elimination of sodium chlorid becomes reestablished the edema decreases correspondingly. It is sometimes difficult to determine whether the salt retention precedes the water retention, or vice versa. For one can as readily postulate that water is primarily retained as the result of renal insufficiency, circulatory weakness, or increased toxic permeability of the capillaries, and that a certain amount of sodium chlorid is secondarily retained in order to bring all the fluids up to the required concentration, as that salt is primarily retained as the result of renal insufficiency and that enough water is secondarily held back to maintain the proper osmotic solution.

Simple salt retention does not, however, explain all cases of nephritic edema and certain toxic factors no doubt play a rôle (chiefly, however, in determining the localization of the edemas). They become operative presumably by causing localized toxic permeability of blood-vessels, for we see quite similar phenomena in certain infectious diseases not associated with nephritis, especially in croupous pneumonia and in peritoneal tuberculosis, in the toxemia of gastric carcinoma and after certain drugs, as morphin and potassium iodid.

RATIONALE OF SALT RESTRICTION

Whenever nephritic edema is due to salt retention, then a reduction of the salt intake becomes a rational procedure; it is certainly less irrational than to attempt forced elimination of sodium chlorid through sick kidneys by drugs, when the kidneys have spontaneously manifested their inability to perform this function properly. Vicarious elimination, spontaneous or induced, is, as a rule, inadequate and also constitutes a rather forcible method of procedure that violates the principle of sparing already overtaxed or weakened organs rather than driving them.

As a matter of fact, in proper cases, a diet poor in sodium chlorid aids immensely in the rapid elimination of retained sodium chlorid and of water, generally causing a decrease of the edema.

CHLORURE FIXÉ AND CHLORURE LIBRE

The renewed excretion of sodium chlorid and water does not, however, always run in a parallel way. One must assume with Maries that a certain amount of the retained sodium chlorid becomes attached to the cell protoplasm in solid combination. This is the first event when the kidneys become inadequate; here we witness salt retention without edema. As soon as these affinities are saturated, sodium chlorid is forced into the circulation in excessive quantities, water must be retained to form the proper solution and we witness edema.

Following salt restriction, then, the circulating chlorin (*chlorure libre*), with a corresponding amount of water, is first eliminated in a broad stream with resulting rapid decrease of the edema. The elimination of the attached chlorin (*chlorure fixé*) occurs much more slowly and is accompanied by a much smaller outpouring of water. At this stage the addition of even small quantities of sodium chlorid to the diet may cause prompt reappearance of edema as the cell capacity for retaining surplus sodium chlorid is already overtaxed.

SALT RESTRICTION AND POLYCHLORURIA

A most difficult phenomenon to explain is the effect of chlorid restriction to produce an increased excretion of urinary chlorids. The idea of rest to the kidneys must be thought of first. It is known that they excrete sodium chlorid with difficulty when they are diseased. By restricting the chlorids of the diet the kidneys are therefore spared, have an opportunity to recover their impaired function and to resume normal chlorid excretion until the body is finally rid of the surplus salt and water. Besides, as we have seen, the chlorid excretion in most cases of nephritis is not really absolutely reduced, but merely retarded; consequently, if only enough time is given and no excess of sodium chlorid is administered, the kidneys will gradually get rid of the surplus until normal concentrations are reestablished. Here the interesting relations of fixed and free chlorids, the peculiar balance occurring between glomerular excretion and tubular reabsorption mentioned above must all be thought of.

EFFECTS OF EXCESSIVE SALT RESTRICTION

Occasionally we see the paradoxical phenomenon of an increase or a reappearance of edemas when the salt restriction is carried too far. This is due to loss or insufficiency of the power of the kidneys automatically to dilute and concentrate the urine; for when this power of adjusting the water output to the chlorid excretion becomes insufficient, as in some forms of nephritis, then the kidneys may, for instance, excrete 3 gm. of sodium chlorid with only 400 c.c. of water instead of accompanying this excretion of 3 gm. with the outpouring of about 900 c.c. of water ordinarily required; in other words, a certain amount of water, which would ordinarily be excreted, is retained and the edemas increase accordingly.

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[2] Other disorders are mentioned further on.

SALT RESTRICTION AND WATER EVAPORATION

Still another factor that operates to reduce edemas when salt is restricted must be considered, viz., the greater facility of water evaporation from the lungs and the surfaces of the skin when concentration of the body fluids becomes reduced. In this way enormous quantities of water may be eliminated. Profuse sweating, in fact, frequently follows salt restriction in patients suffering from nephritic edema.

TOLERANCE DETERMINATIONS FOR SALT

As a preliminary to chlorid restriction a tolerance determination for chlorids should be made, in order to determine whether or not there is actual retention of chlorids or merely retardation in their output, or whether the organism is in chlorid equilibrium and capable of getting rid of an ordinary chlorid ration.

Such a tolerance test is simple, if the chlorid contents of the diet are looked up in appropriate tables,[3] and if the salt addition to the diet is weighed and a chlorid determination of the twenty-four-hours' urine is made for several successive days. The technic of a urinary chlorid determination is simple with the aid of a little apparatus constructed on the principle of the Esbach albuminometer.[3] One should also, of course, be guided in instituting salt restriction by the amount of urinary water, compared with the liquid intake, by fluctuations of the weight of the patient and of the edema.

As a rule, a partial restriction of the chlorid intake to about 2.5 to 4 gm. is sufficient to produce the desired result, while at the same time no particular hardship is thereby imposed on the patient, nor is his appetite materially impaired. To simply say, "stop all table salt," is the crudest routine and often so difficult for the patient to carry out that it cannot be enforced. The preparation of a salt-free bill of fare, or a dietary containing little salt, is an art. There are several monographs on this subject which can be consulted.[3]

SALT RESTRICTION AND DRINK RESTRICTION

In very acute forms of nephritic edema salt restriction is fitly combined with drink restriction. Here the results are usually brilliant, especially as far as the edemas are concerned. One should not be afraid of scanty urine. I often remain content with 8 to 12 ounces each twenty-four hours for many days or weeks, provided the liquid intake is kept below 20 ounces and provided the diet is low in salt and nitrogen. So far I have never seen an accident of a uremic character, in fact, have occasionally seen uremic headache, pulmonary edema and uremic asthma disappear. A drinking day occasionally, or a salt day, singly or combined, is a useful means of testing the renal capacity and the degree of retention of chlorids, or of retardation in their excretion. A very rapid loss of weight is, of course, to be expected, and I have found it valuable to warn patients of this; it usually frightens them, because they do not understand that it is due to the loss of water. The patient should be weighed at frequent intervals, for this is a valuable means of control, a gain of a pound or two in twelve or twenty-four hours usually indicating renewed salt and water retention and calling for appropriate restrictions.

PERSISTENCE IN SALT RESTRICTION

The greatest persistence in carrying out salt restriction is desirable. A few days' trial is generally useless, for so short a period does not suffice to spare the kidneys and to give them an opportunity to regain their function. One often sees no result for a week or two, particularly in the more chronic forms of nephritis. Occasionally even salt restriction, for reasons indicated above, produces a temporary increase of the edema and a transitory retention greater than before. Then sometimes quickly, more often, however, gradually, an increased excretion of chlorids begins to be noticed and therewith a rapid decrease in the edema. It is astounding what enormous quantities of chlorids the kidneys can often get rid of after the reexcretion of chlorids has once been fairly inaugurated. I have seen, with a daily intake of 2 or 3 gm. of sodium chlorid as much as 200 to 250 gm. of sodium chlorid excreted within two weeks.

SALT RESTRICTION AND DIURESIS

The process of salt elimination can occasionally be inaugurated by the judicious use of diuretics, of which theocin is probably one of the best, given in 3- or 4-grain doses, three or four times a day. As a rule, however, one can get along very well without the use of diuretics, although most of the patients that I see have been through an energetic course of this kind; the object of this therapy being to rid the body of water and salts by forcing them through the kidneys; a procedure that, as shown above, is altogether irrational.

RESUMPTION OF SALT FEEDING

The resumption of sodium chlorid feeding should be very gradual, even after the edemas disappear and the sodium output equals the intake. One should stay near the requisite minimal 2 gm. per diem ration as long as possible and should control the balance between intake and output carefully. One should proceed here as gradually and as carefully as in the resumption of starches and sugars after the use of a carbohydrate-free diet in diabetes mellitus.

OTHER USES OF SALT RESTRICTION

That salt restriction has other fields of usefulness, I merely mention. In diabetes insipidus it sometimes helps, but not always. It is worth trying by all means, for in diabetes insipidus the power of producing a urine of sufficient concentration is lost. When the organism becomes overloaded with chlorids, the excessive water elimination is increased. Chlorid restriction at all events helps reduce the thirst, so that in diabetes insipidus, as well as in many other conditions in which drink restriction is indicated (obesity, certain cardiac and cardiovascular disorders, etc.), a salt-free diet facilitates this therapy.

In certain other states, finally, salt restriction is of the greatest value, namely, (1) in the treatment of inflammatory exudates, especially involving the serous membranes; (2) in certain stages of croupous pneumonia; (3) in any disorder in which it is desired to produce a bromid effect; especially, therefore, in epilepsy. It appears, as indicated above, that a part of the bromin effect is due to its power to replace chlorin. The action of bromids can therefore be strengthened by restricting the chlorid intake, and very much less bromid will be required to produce any desired result. Salt, on the other hand, may be considered an antidote against bromidism and should be so employed. Epileptic attacks can sometimes be produced by large doses of salt in cases otherwise controlled by bromids.

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[3] Croftan, A. C.: Clinical Therapeutics, Ed. 4; Strauss, H.: Praktische Winke für die Chlorarme Ernährung, Berlin, 1910.

LIMITATIONS OF SALT RESTRICTION

So simple a measure as the regulation of the table salt intake may assume, therefore, the dignity of a fundamentally important therapeutic inroad. Again empiricism has pointed the way and full scientific explanation must come a little later. In view of the occasionally brilliant results that have been obtained; in view of the apparently simple (and correspondingly incomplete and inaccurate) explanations that have been offered, enthusiasm has gone somewhat beyond bounds in regard to salt restriction as a therapeutic measure. It is by no means a panacea for all nephritic edemas. With careful selection of types and with methodic regulation and control, salt restriction can probably never do harm and will usually do good; but employed as a routine measure without control, promiscuously, in every case of edema, it will more often disappoint than fulfil the expectations based on it.

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UP-TO-DATE METHODS OF ANESTHESIA*

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Modernizing an old house is a much more difficult procedure than building a new one. Similarly, it is more difficult to correct misinformation than to inculcate sound principles from the beginning. The more difficult task, however, is before me.

THE AMPHITHEATER

It may not be going too far afield to say that an up-to-date anesthesia should be given in an up-to-date amphitheater. This gives me an opportunity to air certain phases of the life of a surgeon and anesthetist and incidentally the life of each patient that comes under their care. I refer now to the poorly ventilated operating-rooms existing in the most modern hospitals. In not a single operating-room that I know of is the air changed and rendered livable. The air should be forced in near the ceiling through gauze and should be drawn off near the floor, in this way giving a constant supply of fresh air and, of course, at the same temperature. An electric fan merely sets in motion the impure air in the room and does not purify it. In addition to having the walls and ceiling wiped down with a weak bichlorid solution, the floor, regardless of its composition, should always be cleaned with oiled sawdust, or something having a weak solution of oil in it so that any particles of dust dropped by the surgeons, assistants and nurses from their clothes and shoes will remain under foot.

THE PSYCHIC ELEMENT

Crile,[1] in a recent paper, has attempted to show that there is a physical basis existing in the brain that accounts for the element of fear in some patients as regards the operation, and that, therefore preliminary medication is an absolute essential of every up-to-date anesthesia. I have long been the advocate of modified physiologic doses of morphin, chloretone or other drugs to allay fear and prevent the psychic element from being in evidence in the slightest degree. The patients take the anesthetic more kindly and require less of it, and do not demand immediate attention after the operation, being in a quiet state and suffering neither mental anxiety nor physical pain. On the other hand, some of the best-known surgeons in the United States absolutely ignore the fact that such a thing as fear exists, not realizing the responsibility of such a position.

OBJECTIONS TO THE USE OF MORPHIN

Bevan[2] agrees with his anesthetist, Dr. Isabella Herb,[3] that "drugging," as they term giving small physiologic doses of morphin, "is objectionable in that it delays reflex excitability of the air-passages, retards coughing, favors the retention of aspirated blood or vomitus in the trachea." Bevan also states that "many people are not able to take morphin without distress and with such individuals the disagreeable after-effects of ether would be aggravating" . . . : that "it masks the most valuable guide in anesthesia, the pupillary reaction." As morphin is given as a routine thing in suitable doses by men who use spinal, local and rectal anesthesia, and by all who use nitrous oxid and oxygen anesthesia, the objections, as stated by Bevan and his anesthetist, could apply only to the two pulmonary anesthetics, ether and chloroform, and possibly ethyl chlorid.

The eye is never touched or looked at under nitrous oxid and oxygen anesthesia and a great majority of anesthetists to-day rely on the respiration and the maintenance of an open air-way as the principal guides. In addition to these we have the pulse, color and lid reflex, rarely observing the pupil, much less relying on it. It is hardly fair for Bevan and his anesthetist to ask us to relinquish the use of morphin on account of the pupil.

Another reason which they give for refusing to use this drug is, in my opinion, the strongest argument for the use of it, as illustrated by the well-known therapeutic fact that "one drug will augment the action of another." An overdose of the anesthetic is not more possible with morphin than without it by one who knows what he is doing. Bevan asserts: "In case of any untoward accident there is not only the volatile and quickly removable drug but also the non-volatile and comparatively permanent one to be eliminated." Again this is a sound argument in favor of using morphin as a preliminary. The volatile and quickly removable drug is gradually withdrawn toward the close of every operation, leaving the patient in a quiet, pain-free state. The small physiologic dose that we prescribe helps to prevent shock, but never masks it entirely. When this occurs in an operation the anesthetist eases up on the volatile anesthetic, and the patient is in better fighting attitude to resist the shock than if he were wholly under ether or chloroform.

The other objections of Bevan, in regard to retarding cough and favoring the retention of aspirated blood and vomitus in the trachea, etc., taken with other parts of his article, are sufficient internal evidence that his mind still lingers in an age that should be past as regards anesthetics. Dr. Isabella Herb's article[3] has an illustration of a strap which is used in insane asylums for restraining patients, also directions for cleansing the mouth of mucus, saliva, etc. The question is: Shall we use straps and, in a great number of cases, have the mucous râle in the throat of the patient during the operation and also the nausea afterward that always accompanies the mucous râle and in addition the mental suffering, or shall we have the patient come in a neutral state and take the anesthetic quietly, and during the operation not have the mucous râle and finally come out without nausea or vomiting at the end of the operation?

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* Read before the Practitioners Club of Jersey City, Dec. 12, 1911.

[1] Crile, George W.: Newer Methods for Further Increasing the Safety of Surgical Operations, The Journal A. M. A., Dec. 2, 1911, p. 1811.

[2] Bevan, Arthur Dean: The Choice of the Anesthetic, The Journal A. M. A., Dec. 2, 1911, p. 1821.

[3] Herb, Isabella C.: Administration of General Anesthetics with Special Reference to Ether and Chloroform, The Journal A. M. A., May 6, 1911, p. 1312.

Collins[4] published the report of a series of over 1,000 cases in which he used morphin and scopolamin (hyoscin). The patients not only took the anesthetic quietly and easily, but in over 90 per cent. there was no nausea or distress following the operation.

The question immediately arises here, Shall we, like the devoted followers of popular cults, follow the teachings of our great surgeons blindly, or shall we separate the wheat from the chaff, the gold from the dross, analyzing and weighing every proposition, thus arriving at a correct conclusion?

ANESTHETICS

The Reason for Giving Preliminary Medication.—The principal objection to withholding preliminary medication from the patient about to undergo an operation is the mental suffering undergone at this time if the patient is not so treated. This may eventually come back to him at some future date and possibly prevent him from undergoing a necessary operation until the time limit has expired and nothing but palliative surgery is possible. All patients, except possibly those under 8 and over 80, or those in a state of coma, should have preliminary medication. As Collins says, it is much easier to anesthetize a patient half asleep than one with all reflexes in rebellion.

The Administration.—With our patient suitably prepared, we are now ready to administer the anesthetic. If we are to do this scientifically, while we should presumably have a general idea of what we are going to give, we should always be prepared to change or modify our anesthetic as the exigencies of the case demand. The objection to adhering strictly to some one anesthetic or method of administration is that it handicaps the anesthetist and places the patient at a disadvantage at once.

The First Death Under Nitrous Oxid and Oxygen.—This is strikingly illustrated by the first reported death under nitrous oxid and oxygen. Dr. Lydston,[5] of Chicago, reported this death with all attending circumstances and surroundings. Nitrous oxid and oxygen had been determined on as the anesthetic suitable for this special case. In less than ten minutes from the time the mask was applied the patient was dead. From the way the case was reported the anesthetist must have known in less than three minutes that this was an unsuitable case for nitrous oxid and oxygen and should have been prepared to switch. Numbers of deaths that have never been reported have occurred under nitrous oxid and oxygen anesthesia.

Nitrous Oxid and Oxygen Anesthesia.—This is not the innocuous anesthesia that manufacturers of gas and apparatus, and enthusiasts like Crile and Gatch, would have us to believe. One death occurred in Crile's clinic which, he says, he felt would not occur at the present time. Dr. Teter[6] reports a death which he does not think attributable to the anesthetic; two deaths are reported by Gatch,[7] at Johns Hopkins Hospital, neither of these attributable to the anesthetic and yet one of these patients had been successfully anesthetized a short period previously with ether. Crile, in his last article, wipes the one preventable death from his memory and states that no deaths have occurred in his clinic from nitrous oxid and oxygen anesthesia. I know of one professional anesthetist who had narcotized thousands of patients with ether and chloroform without a single death for a period extending over ten years, and less than one year after his taking up nitrous oxid and oxygen two deaths occurred in his professional family, presumably through no fault of the anesthetic or the anesthetist. Thus are statistics made. Far be it for me to decry the value or the increasing use of nitrous oxid and oxygen, but if we are to give an up-to-date anesthetic, should the patient show symptoms that his life is in constant danger from this method of anesthesia, we should give him the immediate benefit of some other method and some other anesthetic.

The Safest Time to Change to Nitrous Oxid.—The safest and best time during the course of an anesthesia to administer nitrous oxid and oxygen is at the close of the narcosis. It is an easy matter to follow up an ether administration with nitrous oxid and oxygen. The tissues of the human body are in such a condition at the close of an operation lasting one hour or more that if any untoward effects are to occur from the use of chloroform or ether they are apt to occur after this, and here is where nitrous oxid and oxygen should be introduced so quietly and carefully that the surgeon will not be aware of the substitution.

Nitrous Oxid-Ether Sequence.—The nitrous oxid-ether sequence is used supposedly in many hospitals to-day. These are a few rules by which the surgeon will know whether or not the nitrous oxid-ether sequence has been used:

1. The patient should be under the gas in less than two minutes.

2. When the ether is given there should be no struggling or hesitancy in any way as the change is made. If the stage of excitement is present in any degree whatever, faulty technic is somewhere responsible. When struggling occurs, what really happens is that the patient is given one or two bags of gas; but air is admitted at the same time through a faulty inhaler or between the inhaler and the face. The ether is now turned on with the consequent result that a tremendous flow of saliva is occasioned, which handicaps the anesthetist throughout the operation. The idea of the nitrous oxid-ether sequence is to prevent the second stage of excitement and the flow of saliva. In addition, it allows a reduction of the amount of ether used, and modifies the nausea and vomiting. If any of these things occur, the patient has not had the full benefit of the sequence. If the patient takes the nitrous oxid or nitrous oxid and oxygen quietly and easily, there is no reason why this should not be continued. If a greater degree of relaxation is required there is no good reason why a switch should not be made to ether, and then, if necessary, to chloroform.

Comparative Safety of Ether and Chloroform, and Nitrous Oxid and Oxygen.—As a broad general proposition, I wish to state that properly administered, an ether or chloroform anesthesia is as safe and also as free from after-effects as is a nitrous oxid and oxygen anesthesia.

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[4] Collins, C. U.: THE JOURNAL A. M. A., March 26, 1910, p. 1051.

[5] Lydston: Med. Rec., Nov. 12, 1910, and Feb. 11, 1911.

[6] Teter, Charles K.: THE JOURNAL A. M. A., Aug. 7, 1909, p. 448.

[7] Gatch, W. D.: The Use of Rebreathing in the Administration of Anesthetics, THE JOURNAL A. M. A., Nov. 11, 1911, p. 1593.

METHODS OF ADMINISTRATION

The question arises: In what form shall we administer the anesthetic, by the cone, drop or vapor method? The cone method is acknowledged by all to be the worst possible anesthetic for the patient and yet this is still used in many hospitals.

The Drop Method.—The drop method has been strongly advocated by the Mayo brothers,[8] Murphy,[9] Bevan and other leading men. The article of Dr. Isabella Herb presents sufficient internal evidence for the discarding of this method. I use the drop method daily at some time during the anesthesia, but *not constantly*.

The Vapor Method.—The vapor with the warm attenuated moist air is so far superior to the drop method that it cannot be compared with it. The only anesthetic to which the vapor can be compared is the nitrous oxid and oxygen combination. I feel that the vapor method is so much safer than the nitrous oxid and oxygen that if I were to be anesthetized myself I would not hesitate to choose the vapor in preference to the other combination.

DUTIES OF THE ANESTHETIST

The anesthetist should have entire charge of the preliminary medication, as also of the medication during and after the operation, i. e., as far as it relates to the anesthetic. At the close of every operation the patient should have from 1 to 2 pints of warm saline with 1 ounce of glucose per rectum, to restore the glycogenic function of the liver and to relieve the thirst and fill out the veins; as the operation is closing or a little later, an enema of 3 to 6 ounces of warm olive oil should be given in order to restore the opsonic index.[10] With these precautions and additions not one patient in ten will have any nausea or vomiting, or any unpleasant recollections of the work of the surgeon and his assistants.

40 East Forty-First Street.

TACKS AND NAILS IN THE AIR-PASSAGES: BRONCHOSCOPY *

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From among a number of my unreported cases of bronchoscopy for foreign bodies in the air-passages, I have selected for consideration the histories of three, each of which possesses some features of unusual interest.

Case 1.—A boy of about 14, whom I saw in 1910, was suspected of having drawn a tack into his air-passage eight weeks before he was brought to me. The mother informed me that the delay in seeking relief was due to the boy's precocious fear of death, which he thought might result from an operation. The history showed that this patient had suffered from hacking cough and almost daily fever since shortly after the accident, the temperature varying from 99.5 to 104.5 F., but there was no dyspnea and he complained of no pain. He had had a convulsion two days before I saw him, but the history gave no statement as to whether or not he had ever had any others.

Examination.—The temperature was running high every day, the respirations about 30, pulse varying from 102 to 132. The appetite was fair, bowels and urine normal. The hacking cough was attended by expectoration of a small quantity of tenacious mucus. Signs in nose and throat were negative. Liver and spleen were normal. Chest normal in form but some loss of movement on the right side. Heart's apex in natural position and giving normal sounds excepting slight systolic murmur, confined to apex. Physical signs over left lung normal. Over the right side, especially the lower part, the vocal fremitus was very weak. The vocal resonance was normal above the sixth rib but very much diminished below that. In front the pulmonary resonance was normal as low as the sixth rib when he was sitting, but only to the fifth when he was lying down. Immediately below these lines great dulness was found for ¾ inch, and flatness below that. This suggested that the pleural cavity was filled with fluid up to these lines; but it should be noted that the line of flatness was lower when he was sitting than when he was lying down, just the reverse of what should have occurred from the presence of fluid. Posteriorly, the line of flatness was found at the seventh interspace but it did not change when he lay on the left side. An occasional râle could be heard over the upper part of the right lung; but below the line of flatness there were neither râles, vesicular murmur nor bronchial breathing. The physical signs over the lower half of the right lung thus spoke first for pleuritic effusion, but the normal position of the apex of the heart and the raising of the line of flatness by placing the patient on his back, and the fact that this line did not change posteriorly or laterally when he was placed on the opposite side, was against this conclusion and indicated either extensive pleural adhesions or complete filling up of the air-passage in this portion of the lung, due to pulmonary collapse, extensive pneumonic consolidation or to secretions in the bronchi and air vesicles, or to these combined.

Operation.—A radiograph was taken which showed the shadow of an upholsterer's tack well down in the right main bronchus, with the point upward. After removal this tack measured 1.9 cm. in length and its brass head measured 9 mm. in diameter. Notwithstanding the high temperature, an operation appeared the only means of relief; therefore, he was given ether and a bronchoscope introduced. I found the right bronchus filled with granulations which had to be removed before I could get sight of the tack. The moment this tissue was disturbed bleeding occurred which obscured the field of vision and caused great delay from the necessity of swabbing away the blood. This is one of the greatest difficulties when granulomas are encountered in these cases, and one which occupies at least nine-tenths of the operator's time; for when the bleeding has been checked and the field of vision once more cleared, the next portion of the granulation tissue that is removed causes a repetition of the whole procedure; and this is likely to occur repeatedly before the foreign body can be seen, as it did in this case. After prolonged effort with numerous delays from the blood, occupying about an hour's time, I brought the tack into view and grasped it with a Killian forceps that had a very good grip. I withdrew it slowly, as the head was so large that it stuck quite firmly in the bronchus and even in the trachea. It was altogether too large to be drawn into the bronchoscope, which had to be withdrawn at the same time. When the tack was in the vicinity of the glottis, it slipped from the forceps and I searched for it again for half an hour, this time greatly hindered by the escape of large quantities of pus which had been set free by the displacement of the head of the tack which had acted as a perfect stopper. Finally, having had the patient an hour and a half under the anesthetic and discouraged from not again being able to see the tack, I slowly withdrew the bronchoscope and immediately afterward found the tack in the patient's mouth.

In another case of the same kind of foreign body, I had a similar experience with slipping of the forceps, prolonged search for the tack and finally as the bronchoscope was withdrawn it fell out on the floor. I cannot yet guess where these tacks were hidden previously.

I had this patient under the ether with the bronchoscope in the trachea for an hour and a half, which is, I think, much too long; but every minute I had hoped would be the last and thus the flight of time was unheeded. The heart-breaking delays, the extreme anxiety for the patient and the knowledge that prolonged operations of this kind are dangerous, while failure may spell death for the patient, place the operator under such circumstances under an indescribable stress.

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[8] Magaw, Alice: A Review of Over Fourteen Thousand Surgical Anesthesias, Surg., Gynec. and Obstet., December, 1906, p. 795.

[9] Murphy, John B.: Practical Medical Series, 1911, xi, p. 33.

[10] Ferguson, Robert H.: The Opsonic Index in Relation to Surgical Anesthesia, E. R. Squibb and Son.

* Read before the South Side Branch of the Chicago Medical Society, December, 1911.

After such operations there is great danger from edema of the upper air-passages or even of the lungs, or of a fatal bronchitis or bronchopneumonia. I think these dangers are minimized by placing the patient in a croup tent for forty-eight hours and administering saline diaphoretics and diuretics in sufficient quantity to keep down the temperature.

Jackson has recommended also keeping the foot of the bed elevated for a day or two after the operation, and therefore I usually order this as an additional precaution.

Postoperative History.—After the operation this patient was given 10 grains acetate of potassium and 2 drams of solution of ammonium acetate every four hours for two days, when the temperature was found to be only 97 F. and then the dose was reduced to one-half this amount, but the temperature speedily rose to 103 and 104 F. during the next two days. The notes show that the full dose of the medicine was then resumed and the next day the pulse was 96 and the temperature 99.2 F., and within a few hours went down to normal where it remained for two days, although it subsequently went up to 100 F., at least once. For a few days after the operation the patient expectorated large quantities of mucopus; but it is noted that he was in good condition when discharged one week after the operation.

The patient remained well until nine months later when he caught cold, and afterward suffered considerable cough and expectoration for eight months, when he came to me again. I found a general bronchitis which did not wholly subside for five or six months.

This case illustrates the importance of early operation to avoid the formation of granulation tissue and the annoyance the latter causes; also, the unusual signs and the serious condition that may result from a foreign body. It shows the confusing conditions that an operator may have to contend with; the necessity for strong forceps that will not slip, the importance of careful management of the patient after the operation, and the value of some of the older therapeutic measures that are likely to be overlooked at the present day.

Case 2.—A boy, aged 6½ years, was brought to me this fall with a history of having drawn a tack into his air-passages seven months previously. Shortly afterward he had pneumonia with a temperature of about 104 F. for nine days. He then improved and felt much better for two weeks; but then became worse, ran a high temperature and was confined to bed for three months. Subsequently he had fever, often from 104 to 105 F. in the afternoon, almost daily, until he came to me.

Examination.—The patient was weak and pale with night sweats, poor appetite and constipation; weight only 37 pounds, whereas before the accident it had been 60. He had some cough and a whitish mucous expectoration especially in the forenoon. There was no apparent dyspnea on the slight exertion that he was able to take; but the pulse was 138 and the temperature 101 F. before noon and 105 in the afternoon. Signs in nose and throat were negative. Heart was normal in position, size, rhythm and sounds, but rapid. The right lung was normal. The whole of the left lung was consolidated, the lower two-thirds being impervious to air and but very little air entering the upper third.

First Operation.—A radiograph revealed an upholsterer's tack lodged in the upper part of the left main bronchus head down. After removal, this measured 1.9 cm. in length and the large brass head 9 mm. in diameter. Four hours before the operation the child was given hypodermically atropin sulphate gr. 1/300, and half an hour before ether was administered he received in the same way atropin sulphate gr. 1/300 and morphin sulphate gr. 1/18, for the purpose of checking secretion during the operation. As soon as the patient was well anesthetized, I introduced a bronchoscope but found the left bronchus closed by granulation tissue which completely hid the tack. Having a fair knowledge of its position, I pushed a forceps through the granulation tissue and grasped it, but it was held so firmly that the forceps soon slipped off. Immediately afterward, because the head of the tack had been moved and the granulation tissue disturbed, quantities of pus and blood filled the bronchoscope and caused a long delay before it could be cleared out. Even then I could not see the tack but I grasped it again; the forceps again slipped off, and again quantities of blood and pus occupied my close attention for about ten minutes. This was repeated in all four times. The last time the forceps held longer and the tack was drawn nearly to the glottis but when it slipped it was suddenly drawn 4 or 5 cm. farther into the lung than it had been at first and it unfortunately lodged in the upper branch of the left main bronchus, which appears to me the most difficult place to reach with a bronchoscope.

Afterward, by prolonged swabbing with strips of gauze, I cleaned out the pus and blood and then passed a bronchoscope throughout the whole length of the left main bronchus and obtained a view down its lower branch. With a large probe I also explored the bronchi 5 or 6 cm. beyond the end of the bronchoscope but could in no way feel or see the tack. At the end of about one hour I abandoned the operation for the time, and sent the patient to his room where he was placed in a croup tent with the temperature at 85 F. and given 4 drams of solution of ammonium acetate every fourth hour. Air entered the left lung much more freely afterward and the patient had very little fever.

Second Operation.—Another radiograph was taken which showed clearly the new position of the tack. As the child was doing better I waited fifteen days for him to gain more strength. I then gave ether and did tracheotomy; for I felt confident that the foreign body could not be secured by upper bronchoscopy. When I introduced the bronchoscope, it was quickly filled with pus and blood, which came again and again for an hour and a half as I swabbed it out, giving me just a glimpse for about five seconds after every eight or ten minutes of swabbing. Finally, with the bronchoscope directed downward and outward at an angle of about 40° from the median line, I was able to bring the shaft of the tack into view with the point projecting above and outside the end of the instrument. Since the former operation I had obtained a much stronger forceps and with this I grasped the tack two or three times and manipulated it and the bronchoscope until I brought its point into the end of the tube. Then grasping it firmly and holding on like grim death I worked it gradually upward until I brought it and the distal end of the bronchoscope out of the trachea at the same time. The patient was treated as before. He did well and was allowed to go to his home in a distant state twenty days after the operation.

This case illustrates the difficulty caused by granulation tissue, and the importance of the after-treatment. It impresses on operators the necessity for having strong forceps and the importance of lower bronchoscopy when the foreign body has passed laterally any considerable distance from the median line.

Case 3.—A boy, aged 10, had inhaled a wire shingle-nail about 2.5 cm. in length when only 2 years of age and had carried it in his air-passages for eight years with very little discomfort and but little injury to his health, until within a few weeks before he was brought to me. The father stated that at the time of the accident the boy was taken with a sudden choking spell and that on looking in the throat he saw the point of a nail but was unable to get it out. The choking spell soon passed off and afterward the boy seemed very well to the parents excepting for frequent severe attacks of bronchitis attended by cough, wheezing and rattling in the chest. Notwithstanding these he grew and developed well. about ten days before he came to me, in the latter part of August, 1911, when taking a hard bicycle ride in the wind, he was attacked by a severe spell of coughing and raised some blood. He also coughed up some hard substance about the size of a pea. The father showed me two or three little grains, a millimeter or more in diameter, which the boy had coughed up and which appeared to be bits of iron rust. Since the coughing spell he had suffered four or five paroxysms of cough attended by dangerous suffocative symptoms.

Examination.—I found him as large as most boys of his age, weighing 70 pounds and in good general health. He had occasional cough and a small quantity of mucous expectoration, which had been blood-stained occasionally during the past two weeks. His appetite and digestion were good. The nasal and throat symptoms were negative, and the heart normal. Over the apex of the right lung as low as the fourth rib the resonance and respiratory sounds were practically normal but below the fourth rib there was marked dulness with considerable loss of movement, and the respiratory murmur was only about half as intense as on the left side. There were a good many bronchial râles over both lungs, but there were no other abnormal signs on the left side of the chest. The father brought with him a radiograph which showed an indistinct shadow in the region of the right main bronchus about 3.4 cm. long and 7 mm. wide, in the lower part of which we thought we could see the outline of the head of a nail. This in connection with the history and physical signs indicated the presence of a foreign body in the air-passages.

Operation.—The patient was taken to his home in a neighboring state for a couple of weeks, but then returned to the hospital where I did a lower bronchoscopy the next day. Four hours before the operation, 1/225 grain of atropin was given hypodermically and an hour before the operation ⅙ grain of morphin and 1/225 grain of atropin were administered in the same way. The patient was given ether and I attempted to introduce the bronchoscope but found some obstruction about 3 cm. below the glottis which at first prevented the introduction of a hollow director 6 mm. in diameter. The breathing at once became very difficult and suffocation was imminent; but I soon succeeded in passing the director beyond the obstruction which gave him much more air. I then did a low tracheotomy, leaving the director in the trachea during this operation. A few seconds after the trachea was opened, there came out about ¼ dram of a thick black fluid which I at first supposed to be very dark venous blood, but I soon found in it small hard particles and on introducing a forceps I grasped and brought out a small piece of the nail, which I found very friable. It was broken into many small pieces during removal, leaving only the head intact. After removing all that was near the opening into the trachea, I introduced the bronchoscope and removed all the pieces that remained. I found a marked cicatrix on the upper edge of the septum at the bifurcation of the trachea and another on the left wall of the trachea just above this from irritation by the point of the nail projecting from the right bronchus.

Course.—A tracheotomy tube was kept in the wound for two days to guard against danger of swelling of the larynx. The day before the operation the pulse ran from 84 to 90 and the temperature from 98.8 to 99.2 F. The day after the operation, pulse was 96-100, temperature 100.4 to 101.2. Subsequently both declined to normal on the fifth day. The patient was kept two or three days in a croup tent and given solution of ammonium acetate freely four times a day. He improved rapidly and was sent to his home six days after the operation. The father reported at the end of three months that the boy was in fine condition and had gained 10 pounds.

This case shows the remarkable tolerance sometimes exhibited by the air-passages for foreign bodies; it demonstrates the necessity for being prepared to do a quick tracheotomy when dyspnea is present, and the advantage gained by having a tube through the glottis into the trachea during the tracheotomy; and it illustrates again the postoperative treatment that has seemed to me very important after bronchoscopy in preventing dangerous sequelæ.

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A CASE OF REPAIR OF FACIAL DEFECT

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Patient.—D. P., a colored boy, aged 13, was recommended to the "Fund for Ruptured and Crippled Children" by Dr. J. L. Kirby Smith of Jacksonville and sent to Brewster Hospital in February, 1911.

History.—The early history of the case is very indefinite. The patient's mother states that the boy had been healthy until 6 years of age when a "small red spot or rising" appeared on his right cheek. This spot rapidly increased in size with intense local inflammation and great systemic prostration. Within ten days the inner portion of the right cheek, the right half of the upper lip with the exception of a part of the vermilion border, the right nostril and part of the superior maxilla had sloughed away. The parents deny having had syphilis and there is no indication of past or present lues in the boy. The condition as presented, together with the history of a rapid slough or gangrene, naturally leads to a tentative diagnosis of cancrum oris as the cause of the deformity.

Examination.—The boy's condition on admission is clearly shown in Figure 1. There were no raw surfaces. The defect in the superior maxilla in the region of the infra-orbital foramen was partially closed off by closely adherent skin. The alveolar process was missing from the median line of the jaw to the first right molar tooth, and there was an irregular defect in the hard palate extending posteriorly for three-quarters of an inch. The orbit and contents, the nasal septum, the external portion of the superior maxilla, and the lower jaw were not involved. The right half of the upper lip, with the exception of about one-half of the right vermilion border, the right nostril, and a portion of the right side of the nose had been destroyed. Cicatricial contraction had drawn the lower lip well out toward the right malar process. Nasopharyngeal adenoids were large and numerous.

It was decided to attempt a repair of the deformity in two stages. First, closure of the defect in the hard palate, and second by repair of the soft parts. The closure of the palatal defect, as in all large defects in the anterior portion of the hard palate, presented some problems because of the difficulty in forming mucoperiosteal flaps of sufficient size and having an efficient blood-supply.

First Operation (Feb. 14, 1911).—Under ether anesthesia the ragged borders of the defect in the palate were pared and beveled. The angle of freshening extended upward and backward to provide as broad a denudation of the edge as possible. A mucoperiosteal flap of half an inch in width, extending from near the right alveolar process to a quarter of an inch to the left of the median line, was lifted from the oral surface of the hard palate just posterior to the defect. Care was taken that the incision did not cut the main trunk of the descending palatine artery, hence the flap derived its nourishment from that vessel. The flap was shifted forward and to the right and its outer edge stitched with chromic catgut to the denuded margin of the defect.

A second mucoperiosteal flap was outlined on the left side of the oral surface of the palate by an incision extending along the left alveolar border from the median line to the second molar tooth external to the left descending palatine artery, and an incision directly backward in the median line of the palate. The flap was lifted, slid to the right and sutured to the free edge of the flap already in place. Both flaps were temporarily secured to the edge of the bony defect by a few stitches of fine catgut. The raw surfaces of both flaps were uppermost.

A flap of buccal mucosa, considerably larger than the area to be covered, was dissected from the right cheek and swung up and over the mucoperiosteal flaps so that the mucous surface formed a new floor for the nasal fossa and the raw surface was in contact with the raw surface of the oral flaps. The edge of the buccal flap was stitched with silk to the denuded border of the nasal mucosa. The adenoids were removed. The denuded areas of the palate were filled with iodoform strip and the roof of the mouth anteriorly was packed with iodoform gauze to protect the flaps and to hold them snugly against the bone in their new position. The gauze was held in place by cross strands of silkworm-gut carried through the alveolar mucosa. No packing was placed in the nose.

The results of the first operation were very satisfactory. Union was good except in the extreme anterior portion of the defect, where a part of the right mucoperiosteal flap atrophied. In the palate proper there was a sound partition between the oral and nasal cavities.

Second Operation (March 18, 1911).—Under ether anesthesia the outer border of the right nostril was denuded and the upper lid was loosened from the jaw. The lower lip was divided by a straight cut downward from a point corresponding to the right extremity of the vermilion border of the upper lip. The vermilion border of the outer segment of the lower lip was removed. A relief incision was made outward from the upper point of attachment of the lower lip, and a flap consisting of a part of the lower lip and cheek was freed from the bone. The flap was shifted so as to fill the defect in the body of the upper lip and to cover the lower portion of the major opening as shown in Figure 2. The skin and subcutaneous tissue were dissected from the bone at the upper outer side of the defect, loosened well out to the malar bone, and sutured to the side of the nose, nostril and upper edge of the lower flap (Fig. 2). All suturing in this operation was done with silkworm-gut and horsehair. An iodoform gauze dressing was applied externally. As a result of the second operation a portion of the defect was closed. The upper flap united nicely; the flap at the lower angle of the nostril sloughed and retracted. A small slough occurred in the median line of the upper lip. There was too much slack in the lower lip, and because the relief incision through the lower lip had not been extended far enough downward the outer angle of the mouth was drawn up.

Summarizing: the lower relief cut was too short; there was pressure necrosis from too many stitches at the lower angle of the nostril; there was too much tension on the lower flap.

Third Operation (May 1, 1911).—Chloroform anesthesia was used. The small opening in the middle of the upper lip was freshened and closed by two silkworm-gut stitches. The margins of the remaining defect were thoroughly denuded. The right angle of the mouth was cut through, the lower lip was pulled outward and cut so that its length was just equal to the length of the upper lip. This cut was extended downward, inside the facial artery, to the lower border of the inferior maxilla as a tension relieving incision. Another relief cut was carried from the upper margin of the defect, through the cheek to a point just below the lower jaw and external to the facial artery. The flap, therefore, was abundantly nourished. A lateral incision was made to relieve tension at the base of the flap. The facial artery again was avoided. The flap was drawn upward and toward the median line and sutured with alternate deep sutures of silkworm-gut and superficial sutures of horsehair, as shown in Figure 3. The lateral incision at the base of the flap was sutured longitudinally. Two long, deep tension sutures of silkworm-gut, secured by buckshot, were placed as shown in Figure 3. A moist dressing of salt solution was applied.

The results of the third operation were as follows: All openings were closed; union was firm; the slack in the lower lip was taken out and the mouth was fairly straight. The boy had but one nostril, but this provided for both sides of the nose, a part of the cartilage having been removed for the purpose. The development of pleurisy, probably tuberculous, a few months after the third operation, thwarted my desire to loosen the cartilaginous nasal septum, shift it to the median line and establish two nostrils.

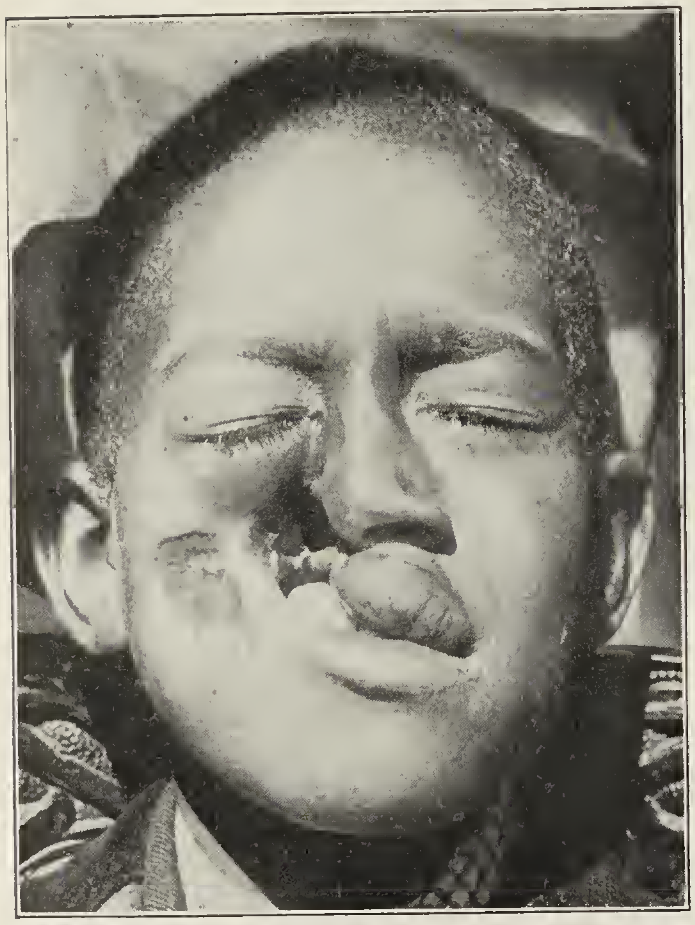

Fig. 1.—Facial deformity probably caused by cancrum oris in a boy of 13.

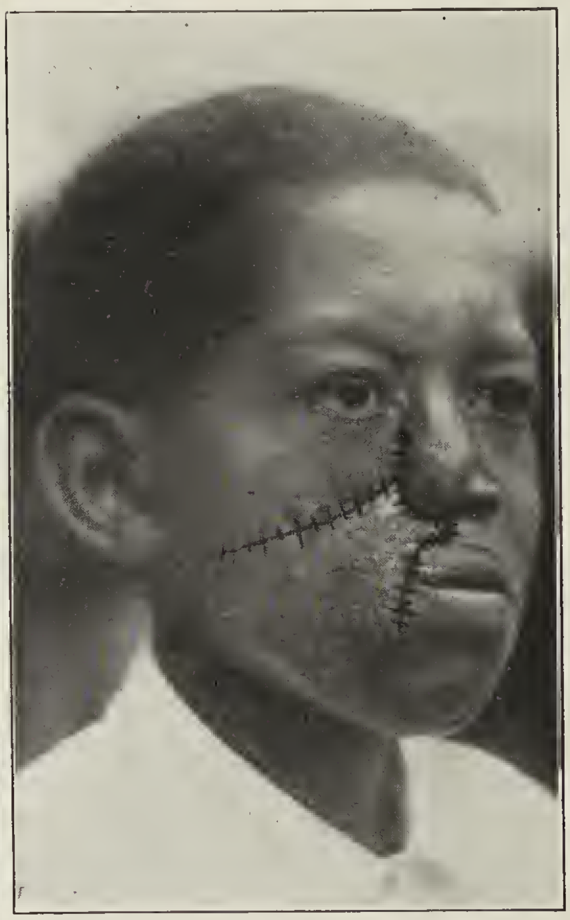

Fig. 2.—Same patient as in Figure 1. Illustration showing line of suture in the second operation.

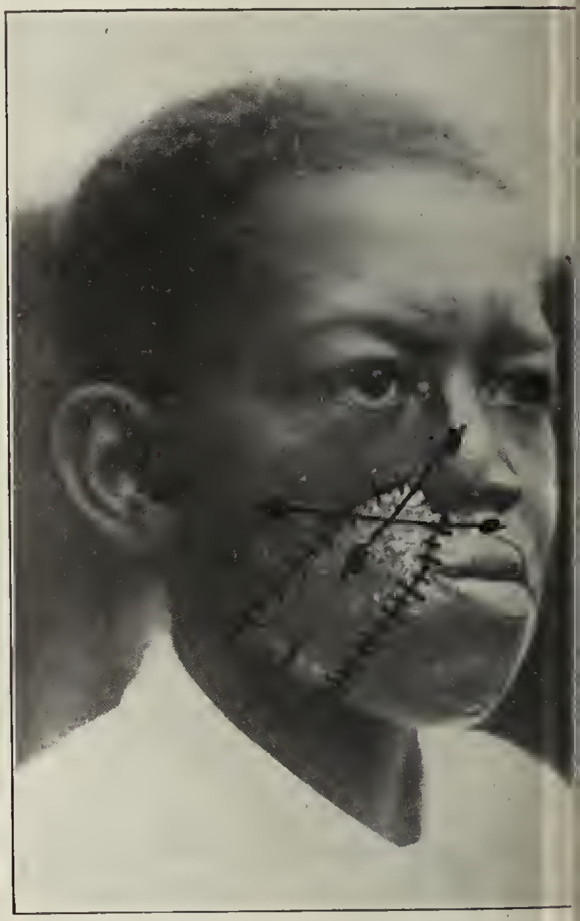

Fig. 3.—Third operation, showing construction and suture of flap and tensio sutures of silkworm gut secured by bucksho

Consolidated Building.

Medical Treatment of Insanity.—R. Jones (*Western Canada Medical Journal*) emphasizes that the first consideration in regard to the treatment of insanity is to ascertain if there is any abnormal condition of the bodily organs, removal of which will favor the disordered brain functions. Instances are not infrequent (the adolescent forms of insanity in anemic girls) in which the restoration of bodily organs to their normal functions is followed by mental improvement. The reestablishment of menstruation and the cure of anemia means in these cases mental recovery, indicating the necessity for the combination of sedatives with general remedies which help to restore and build up the various systems of the somatic whole.

A NEW, SIMPLE AND EFFECTIVE TOURNIQUET FOR CONTROLLING HEMORRHAGE OF THE SCALP *

ERNEST LAPLACE, M.D.
Professor of Surgery, Medico-Chirurgical College
PHILADELPHIA

The various means of controlling hemorrhage from the scalp are either very complicated or somewhat ineffective. Simple and effective control of hemorrhage is desirable inasmuch as in many cases profuse bleeding might be the cause of the patient's inability to recover from the given surgical procedure on the head.

The method here described controls the hemorrhage absolutely. It is at hand everywhere and offers advantages over all other methods used to-day.

It consists in applying to the patient's head a certain length of roller bandage, 2 inches wide, from the chin over the head to the nape of the neck, and a similar piece of bandage crosswise from shoulder to shoulder over the head. An ordinary quarter-inch piece of rubber tubing, 7 feet long, is then applied over the bandage around the head on a level with the external auditory meatus. The tubing is then stretched effectively so as to make four rounds about the circumference of the head; the ends of the tubing are then tied in a loop or clamped with forceps. The bandages which cross at the vertex of the head are then cut at the crossing point; this makes four strips of bandage, one on each side of the head, one over the forehead and one over the occipital protuberance. These strips passing under the rubber tubing are now tied at their respective places, securing the rubber tubing in position and preventing its slipping up or down.

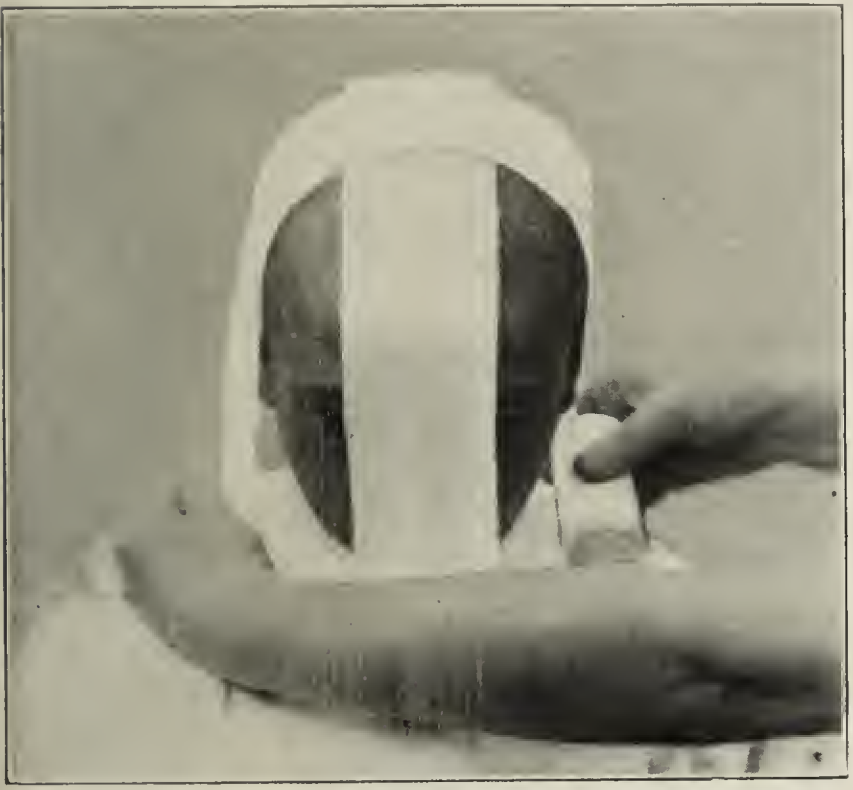

Fig. 1.—First step in the application of scalp tourniquet.

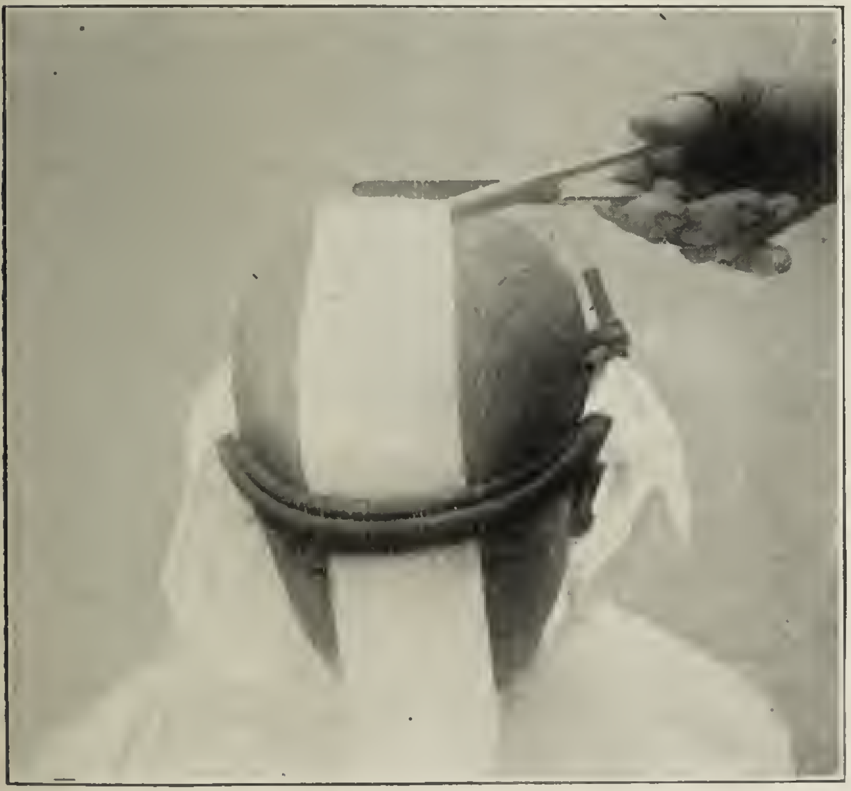

Fig. 2.—Rubber tubing applied around the head just above the ears, the strips of bandage across the head being cut.

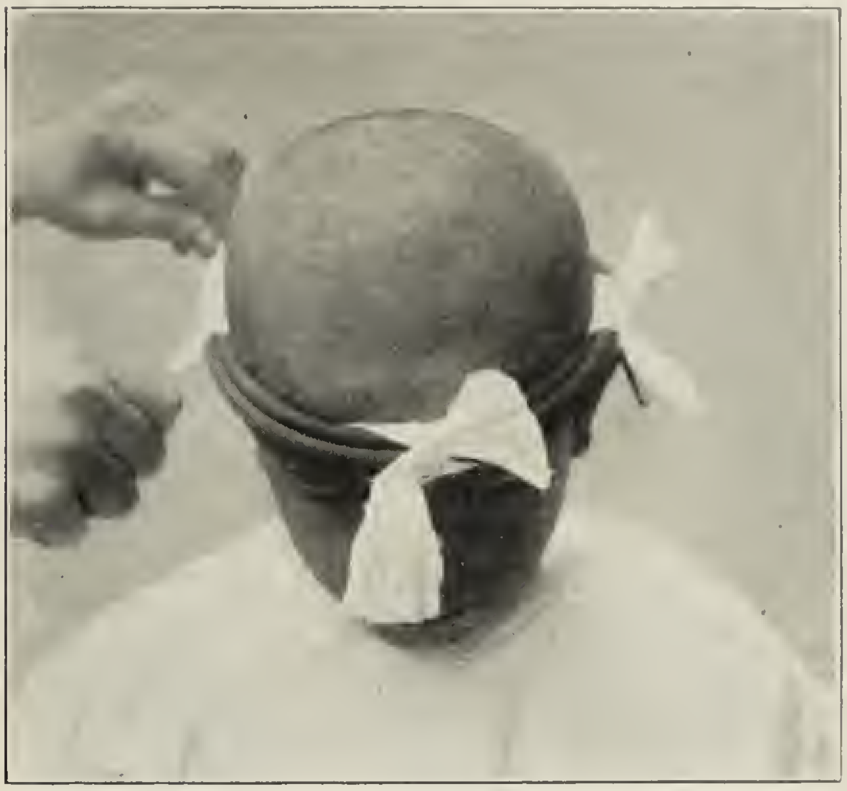

Fig. 3.—Method of tying the strips of bandage at the four points on the tourniquet.

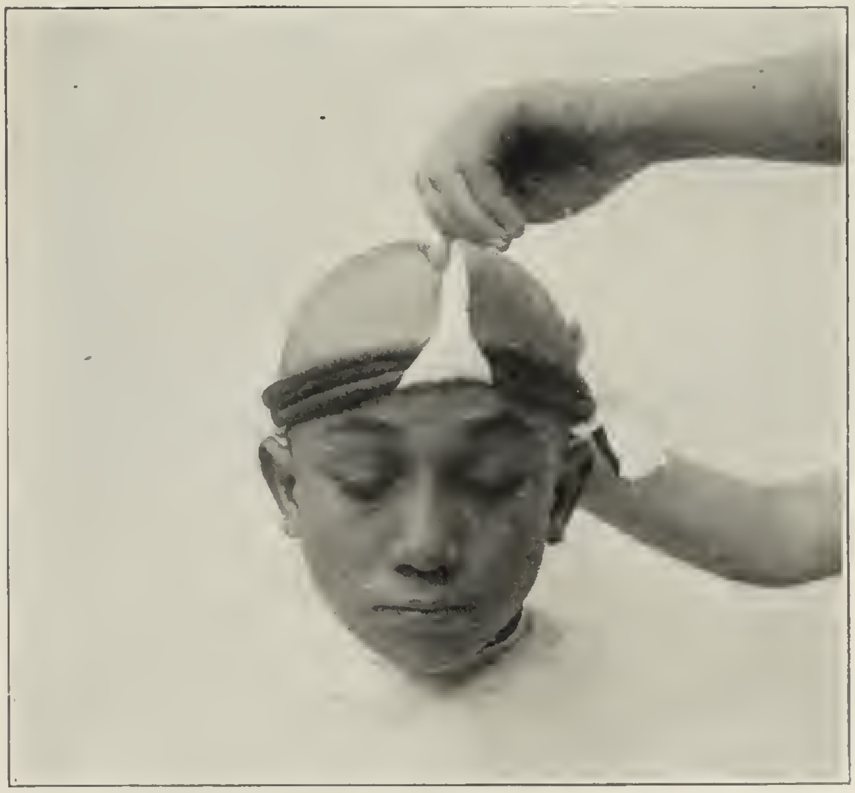

Fig. 4.—Raising of the frontal strip, showing control of the tourniquet.

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* Read before the Philadelphia County Medical Society, Dec. 13, 1911.

The loops can be held by an assistant and used to steady the head. If the strip of bandage in the occipital region is pulled down, the rubber bands are brought under the occipital protuberance and effectively control hemorrhage from the scalp in operations on the cerebellum.

This method enables one to perform the surgical operations about the scalp without the loss of any arterial blood and with the escape of but a trifling amount of venous blood, and as far as I know allows better control of hemorrhage than any of the more complicated methods now in use.

1828 South Rittenhouse Square.

DECOMPRESSION OPERATIONS FOR FRACTURES OF THE BASE OF THE SKULL *

ROBERT L. PAYNE, Jr., M.D.
NORFOLK, VA.

Fracture of the base of the skull has boasted of a mortality of 64 per cent., and only during the period of the past five years has this high fatality shown any decrease. The treatment up to 1906 was a tentative one, marked by such erratic measures as drugs, lumbar puncture, venesection and expectant measures, and only since the experimental researches of Leonard Hill, Cushing and Krause have we known the rationale of decompression in such lesions.

The understanding from these experiments of how blood at the base produces both a local and general increase of intracranial pressure and how this pressure causes death through anemia of the vital centers in the medulla, will readily explain the rationale of decompression operations for fracture of the base.

During a meeting of southern railway surgeons at Birmingham, in 1906, I took the stand that exploratory decompression for basal fracture was the only correct treatment, and before the same association, at Charlotte this year, in a paper on skull fractures I spoke of the basal type as follows:

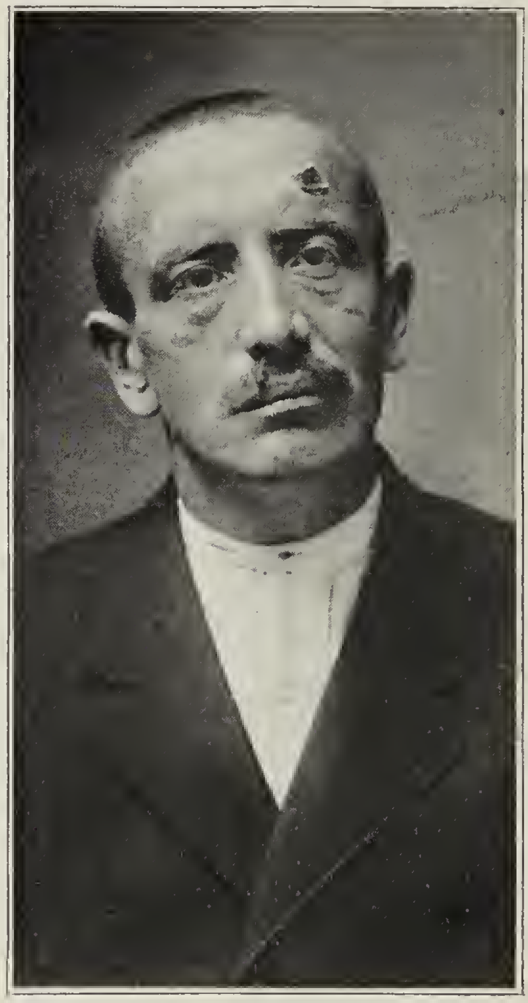
> Depending on the amount of extravasation present, we have more or less compression of the vital centers in the medulla, and when symptoms of this are present, operation is absolutely indicated. Given a case of suspected basal fracture with high blood-pressure, slow or very rapid heart, disturbed respiration of the Cheyne-Stokes type, and our procedure would at once be a subtemporal decompression. The brain should be elevated gently with a blunt spatula, and as much of the blood as possible be removed. If none is found, opening the opposite side is absolutely necessary. It is impossible to ligate bleeding points in this location, hence if clotting has not occurred, we must carry down to the bleeding area small, narrow strips of plain gauze, but if the hemorrhage has ceased, it is only necessary to prevent future compression of the medulla by draining with small rolls of rubber dam. Many a fatal case which is treated expectantly would be saved if this procedure were carried out.

Since this mode of treatment for basal fracture is comparatively a new procedure and only a small number of cases have been recorded, I submit the following case report:

Patient.—A. T., a sailor, while at sea was struck on the vault of his head by a falling yard-arm. Unconsciousness intervened immediately and three days later, when the vessel made port, he was brought to St. Vincent's Hospital under my care.

Physical Examination.—Some ecchymosis around the mastoid process of the left side was revealed, but no evidence of injury on the vault at the point of the blow. There was complete paralysis of the lower right face, the right half of the tongue, the right arm and right leg. The patient was breathing stertorously; the pulse-rate was 44; there was a pronounced increase of blood-pressure; a moderate dilatation equally of both pupils and profound unconsciousness. With these symptoms, especially the facial and tongue paralysis, a diagnosis of basal fracture with medulla compression was made, and a left side decompression immediately undertaken.

Operation.—Under a very small amount of ether, a large osteoplastic flap was turned down. The dura was found to be very tense, and when this membrane was nicked to begin the dural flap the cerebrospinal fluid came up through the small opening in a short parabolic curve. There was no clot or blood found on the cortex and the motor area was not involved. A small flat retractor was then passed down toward the foramen magnum and as it glided downward the fracture could be distinctly felt in the petrous portion of the temporal bone. When the temporal lobe was gently elevated there was at once extruded about one ounce of dark liquid blood, some clots and a few small pieces of brain tissue. The bleeding had evidently stopped, so a small piece of rubber dam was passed down to the medulla to prevent further compression, the osteoplastic flap replaced and the wound closed.



Patient with right facial paralysis indicating lesion at the base six weeks after the performance of a left-side decompression.

Course.—The patient's pulse immediately rose to 70, and twelve hours afterward he could slightly move the paralyzed foot. The improvement was steady and at the end of one week he had regained the use of his tongue, arm and leg, while the lower right face remained paralyzed. This persistence of facial paralysis in spite of the tongue regaining its motion is rather unusual. At the end of six weeks, when the patient was discharged, this facial paralysis still persisted in spite of a complete recovery of tongue, arm and leg function.

As a diagnostic measure lumbar puncture is valuable when instituted a few hours after hemorrhage has occurred, but, when undertaken as a therapeutic measure for relief of intracranial pressure, often results seriously. This is due to the fact that we have no ready means of determining the amount of increased pressure, and when this is high a sudden withdrawal through the spinal route permits the medulla and pons to be sucked into the foramen magnum, producing a fatal result through pressure on the vital centers. Several such cases have been reported.

The dangers of the old-time custom of venesection in cases of apoplexy, fracture of the skull and allied conditions having an increased intracranial pressure, are manifold. The older idea of venesection was to stop further bleeding through relief of the high blood-pressure as manifested by the full bounding pulse. This is decidedly wrong; for if we understand the effect of increased intracranial pressure on the vital centers in the medulla we will see that this high blood-pressure is Nature's effort to keep the patient living. Since the brain is no more compressible than water, the effect of increased tension is to produce an anemia of the vital centers in the medulla. The anemia thus produced acts as a stimulant to the vasomotor centers and as a depressant to the respiratory center. Stimulation of the vasomotor centers produces a general constriction of the vascular system, especially the splanchnics, resulting in the increase of blood-pressure so commonly found in these conditions. This increase in blood-pressure is raised sufficiently to overbalance the increase of intracranial tension and thereby the local anemia in the medulla is overcome and the respiratory center again resumes function. This increase of blood-pressure and corresponding support of the respiration continues for hours or days until exhaustion of the vasomotor centers occurs, when death takes place through respiratory failure.

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* Read before the Seaboard Medical Society, Virginia-Carolina, December, 1911.

Thus we can understand the error of venesection in these cases of intracranial bleeding and also appreciate the importance of closely watching the blood-pressure. A pronounced rise of blood-pressure would indicate the necessity of immediate decompression, while a fall would probably mean a fatal outcome through respiratory failure.

300 Freemason Street.

MULTIPLE HEMANGIOPERITHELIOMA OF THE BRAIN *

WILLIAM G. SPILLER, M.D.
Professor of Neuropathology in the University of Pennsylvania
PHILADELPHIA

Endothelioma or perithelioma is not an uncommon tumor within the cranium and usually is solitary. Endothelioma may occur in the form of multiple tumors on the dura, and sometimes as miliary dural growths, as in a case reported by Dercum, Keen and Spiller.[1] Endothelioma within the cranium usually has its origin from the dura and causes atrophy of the underlying brain by pressure, without infiltrating it. In this form it is one of the most benign of intracranial tumors, and yet it may recur if removed, and become most malignant and may infiltrate the bone above it. It is rare to find numerous tumors of an endotheliomatous character within the brain substance; as L. Bruns says: "In the brain substance itself, endotheliomas are very rare." In the form of perithelioma with the rosette-like arrangement of columnar cells about the vessels, it is more common within the brain substance than in the form of chains or columns of cells or groups of concentrically arranged cells.

I have seen multiple perithelioma within the brain substance only in the case reported in this paper, and have found no similar case recorded. The tumors were very numerous in this case, and every tumor was the site of hemorrhage. These hemorrhages varied greatly in size. The largest measured 2 by 3.5 cm., and some were the size of a pea or less. Most of the tumors had a connection with the cortex at one part, but some were entirely within the brain, one for example, the size of a pea, was within the right lenticular nucleus, and is shown in Figure 1. An old area of sclerosis was in the left upper temporal convolutions.

This case illustrates the malignancy that perithelioma may assume, as the tumors were found in the cerebellum and pons as well as in the cerebrum.

It is rare to find more than one recent hemorrhage in a brain, and yet I have at least three specimens in my laboratory in each of which two recent and separate hemorrhages occurred.

Souques[2] reports two remarkable cases of this kind. In one, twenty-eight recent hemorrhages were counted in the brain and cord, and in the other, eleven. Some hemorrhages probably escaped detection on account of the thickness of the sections, and those of the size of a pinhead were not regarded. The hemorrhages were small and mostly just beneath the cortex. Nothing in the clinical condition suggested multiple hemorrhage, any more than in my case. One patient certainly had nephritis, and the other probably had. I do not know of any description of multiple hemorrhage of the brain, each caused by tumor within the brain substance, and for this reason also the case reported here is interesting.

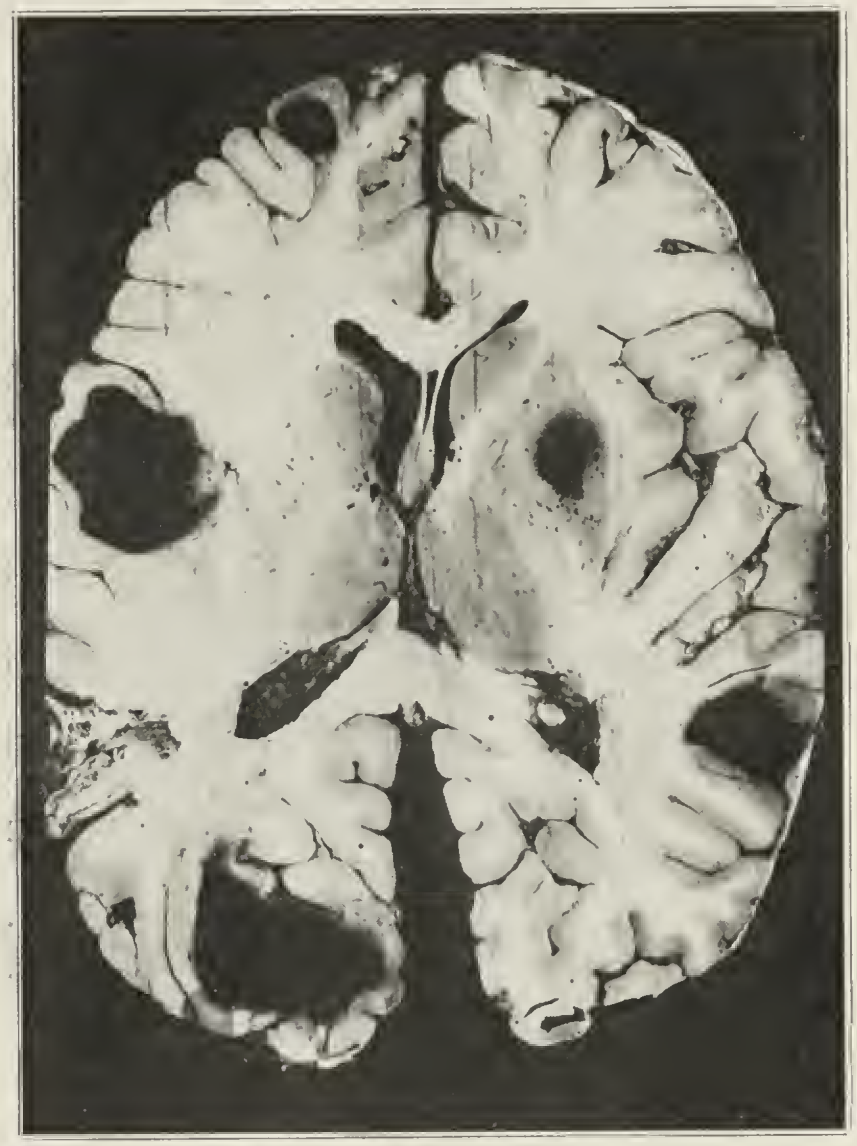

Fig. 1.—Transverse section of the brain in a case of multiple hemangioperithelioma of the brain, showing five tumors with hemorrhage.

Patient.—C. H., male, aged 60, was referred by Dr. L. B. Heimer to Dr. Mills, who sent the patient to the University Hospital, Feb. 28, 1911, to be placed under my care. Dr. Heimer furnished the following notes:

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* Read before the Pathological Society of Philadelphia, Dec. 14, 1911.

[1] Dercum, Keen and Spiller: The Journal A. M. A., April 28, 1900, p. 1026.

[2] Souques: Nouv. Iconog. de la Salpêtrière, May-June, 1911, p. 193.

History.—During February, 1910, the man suddenly became flushed and reeled when he attempted to stand. His speech was a jargon of syllables and numbers so that he could not be understood, and he did not understand what was said to him. He was unable to walk unassisted; his writing was as much disturbed as his speech. His condition gradually improved, and he returned to work. The sensory aphasia evidently was caused by the area of sclerosis in the upper left temporal convolutions.

In January, 1911, he had convulsions of the entire body, worse in the right side, and the face and eyes were turned to the right. When this attack passed off he was paralyzed on the right side, and remained so a few days.

When he was first seen by Dr. Heimer about the end of 1909, he had a large mass above the sternoclavicular articulation on the left side. Later he had several tumors on each side of his body and in the left elbow joint. The tumors became gradually more numerous and larger. The Wassermann reaction was negative.

Examination.—The man was examined by me March 2, 1911. Paraphasia was marked; he was word-deaf and word-blind. In testing him with a feeding-cup or a bright object, and by striking toward the eyelids, right lateral homonymous hemianopsia was revealed. The right nasolabial fold was not so deep as the left when the face was at rest or when the patient showed the teeth. He could only occasionally be made to show the teeth and then by imitation. The limbs were not paralyzed, but it was impossible to get him to grasp the hand of the examiner firmly. The biceps and triceps reflexes were about normal on the left side, and little exaggerated on the right side. The patellar reflex was about normal on the left side, and exaggerated on the right side. The Achilles reflexes were nearly normal. Upward movement of the toes in the Babinski reflex was obtained on the right side, downward movement on the left side. The right lower limb probably was paretic, as it was not withdrawn with the same vigor as the left when it was stuck with a pin. Numerous tumor-like swellings were found in different parts of the body.

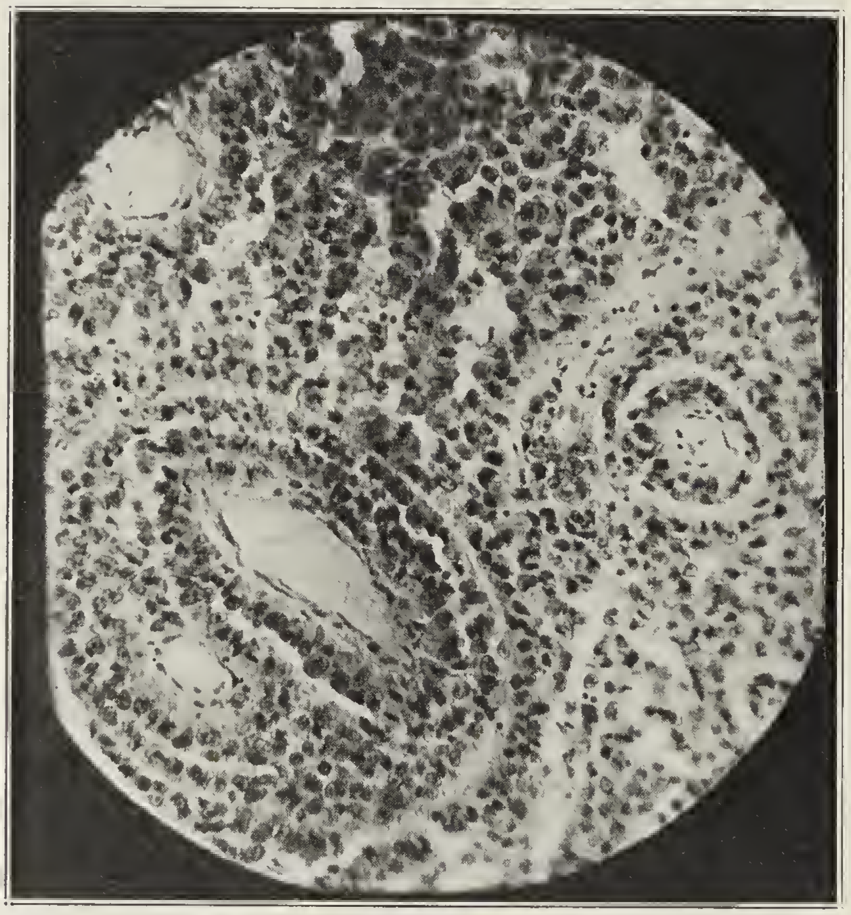

Fig. 2.—Microscopic section of a tumor, from a case of multiple hemangioperithelioma of the brain.

Dr. de Schweinitz examined the eyes and reported: "Right eye, disk shows no choking but upper and inner margins are clouded. Left eye similar, but margins are clearer than those on the other side. No hemorrhages. Pupillary reaction to light present but not very prompt."

Course.—A few days after the examination the man developed Jacksonian epilepsy, one convulsion rapidly following the other, implicating the upper part of the face on both sides and the right side of the mouth and the right upper limb. The right lower limb and the left limbs were not affected. After the convulsions were controlled, the right side of the body was in a state of flaccid paralysis. The man did not rally after this attack and died March 13, 1911.

Necropsy.—Permission was given for removal only of the brain and cord, and this was done by Dr. Karsner. Numerous areas of hemorrhage within the brain were examined microscopically and perithelioma was found in all the hemorrhages. One of the tumors removed from the trunk was examined by Dr. Karsner and diagnosed as endothelioma.

I am indebted to Dr. Allen J. Smith for the photographs.

4409 Pine Street.

A CASE OF ANURIA OF ONE HUNDRED AND FOURTEEN HOURS' DURATION

DECAPSULATION OF BOTH KIDNEYS WITH COMPLETE RECOVERY

ARTHUR D. DUNN, M.D.
OMAHA

Patient.—C. B., aged 45, married, traveling salesman, was seen March 13, 1909, with Dr. Alexander S. Beatty, of Council Bluffs, Iowa. The patient's past, personal and family histories, as far as they could be obtained from his wife, had no bearing on his present malady. Dr. Beatty had treated him three weeks previously for an attack of headache in which albumin and blood had appeared in the urine. The trouble had rapidly disappeared under saline diuretics. March 12, he had consulted Dr. Beatty for a headache at which time the urine had showed no albumin. March 9, at about 10 p. m., he had passed urine for the last time. Saline diuretics, diuretin, digitalis, sweats and hot irrigations of bladder were resorted to without effect. The patient had sunk gradually into a stupor in which the following examination was made at the end of the fourth day of complete anuria:

Examination.—The patient was a well-developed middle-aged man; his face was flushed, the breathing was stertorous, and his skin felt dry and hot. One could arouse him easily from his stupor but he could not fix his attention and his answers to questions were irrelevant. His eyelids were puffy. The pupils were normal in size and were equal but reacted sluggishly to light and distance. The extrinsic muscles and fundi were normal. The tongue had a brownish coat and the breath had a urinous odor. Examination of the heart was negative except for an accentuated aortic 2nd. The pulse was 80, full and bounding. The blood-pressure (Stanton) was 180; the temperature, 98.6. The lungs were normal except for numerous medium-sized moist râles at the base. Abdominal examination was negative. There was some tenderness in both lumbar regions.

The deep reflexes were sluggish; Babinski, Oppenheim and Gordon were absent. There was no clonus. The abdominal reflexes were barely perceptible. There was a general marked hypesthesia. Catheterization was absolutely dry, as it had been on several previous occasions.

Operation.—A diagnosis of acute congestive nephritis (or edema of the kidney) was made. Hot normal salt solution in large quantities per rectum was advised and, if no results were obtained in ten hours, removal to the hospital for decapsulation of both kidneys. The operation was performed by Drs. Macrae and Beatty at 12 noon, March 14, 1909, 110 hours after the last urination. Only a few drops of chloroform were used because the coma was almost complete. Both kidneys were found to be enormously swollen, dark red in color, tense and bulged through the slit in the capsule. "The kidneys seemed anxious to get out of their capsules," to use the apt expression of Dr. Macrae. Urination commenced four hours later (114 hours after complete suppression began) and 173 ounces were passed during the first twenty-four hours and 64 ounces during the second twenty-four hours. Dehydration was so rapid that subcutaneous and continuous rectal salines were employed to counteract an imminent collapse. Recovery was uneventful.

Postoperative History.—The patient is alive and well two and one-half years after the operation. Repeated examinations of the urine up to the present time have failed to reveal any chemical or morphologic abnormalities.

The condition with which we were dealing was that of an acute edema of the kidney dependent in its ultimate analysis on an unknown cause. The condition is best explained by variation of the affinity of colloids for water. This is dependent on the acidity of the kidney which is increased by lack of oxygen (Fischer). As the kidney swells, circulation is interfered with on account of a relatively tense capsule, the oxygen supply decreased and the acidity correspondingly increased. Thus a vicious circle is established. Decapsulation relieves the intracapsular tension, circulation is restored and oxidation facilitated with resultant diuresis.

The treatment of this condition with hypertonic sodium chlorid and sodium carbonate solution has been subsequently advanced by Fischer. This case was admirably suited for a test of such treatment.

We have here a case in which the much-abused operation of decapsulation was efficacious. The rationale of the procedure is clear and the operation should be reserved for similar crises in which an occasional brilliant result may be expected.

804 Brandeis Theatre Building.

PECULIAR TWIN ECTOPIC GESTATION

EVAN O'NEILL KANE, M.D.
KANE, PA.

M. P., aged 34, gave an indefinite history of abdominal and pelvic disturbance with menstrual irregularity for more than three months and had been treated by her local physician for indigestion and a suspected miscarriage.

Three days before operation, she had experienced severe pain in the lower abdomen, nausea and a feeling of prostration. On arriving at the hospital, she showed symptoms of shock—paleness, cold extremities, profuse sweating and a thready pulse. The abdomen was distended, boggy and tender to touch.

The abdomen was found filled with blood, fluid and clotted. A mass filled the lower abdomen and was generally adherent to the intestines and omentum. When this was torn through into the pelvis, a large sac was opened containing clear fluid. Within this lay two fetuses, the cords of which arose close to each other from a large single placenta adherent posteriorly. The fimbriated extremity of the thickened left tube was filled with coagula. These fimbriæ bled freely when the adhesions were broken up, but no definite circulatory connection could be demonstrated between them and the sac proper and its contents.

The greater thickening of the left tube, fimbrial blood-clot and bleeding therefrom were suggestive of ampullar origin despite the posterior position of the placenta and the fact that the principal blood-supply appeared to be derived from the rectum and omentum.

There is so much discussion as to the reality of true abdominal gestation that one is forced to conjecture whether most or all cases reported as abdominal gestations do not commence, as I presume this case did, at the mouth of the tube, being ejected therefrom at a very early date to points that may be quite distant, the true origin being undiscovered.

230 Clay Street.

AN ETHER VALVE FOR USE IN ANIMAL EXPERIMENTATION *

D. E. JACKSON, Ph.D.
ST. LOUIS

For many years various forms of ether valves have been in use in experimental laboratories.[1] The arrangement described below has been found, after several weeks' trial, to be more nearly free from objections than any other form of valve which has been in general use.

The valve consists essentially of a brass box, 5.5 cm. long, 3 cm. deep and 3.7 cm. wide. An interior partition divides the box into two compartments. A tube, *a* (and *a'*), 1.1 cm. in diameter and 5 cm. long, enters one end of the box. Air passes in through this tube. At *b'* the entering air comes in contact with a door-shaped valve (*b'*) which can be instantly set at any angle by means of the small lever *b*, seen in Figure 1. The angle at which this valve is set regulates the relative amounts of air and ether vapor which the animal breathes. When the lever is turned up all entering air passes down through the tube *c'*, in to the ether bottle and thence out through the tube *d'* into the compartment *e'*. From here a tube *f* (and *f'*) exactly similar to tube *a* (and *a'*) passes out. A rubber tube attached to this metal tube connects with the tracheal cannula. Inspired air passes from *e'* into the dog's lungs through tube *f* (*f'*) and expired air returns through the same tube to *e'*. From *e'* the expired air passes upward through a valve into a cylindrical chamber *g* (*g'*). The valve leading into this chamber from *e'*, and the one leading from the tube *d'* into *e'* are essentially similar, and consist of thin round

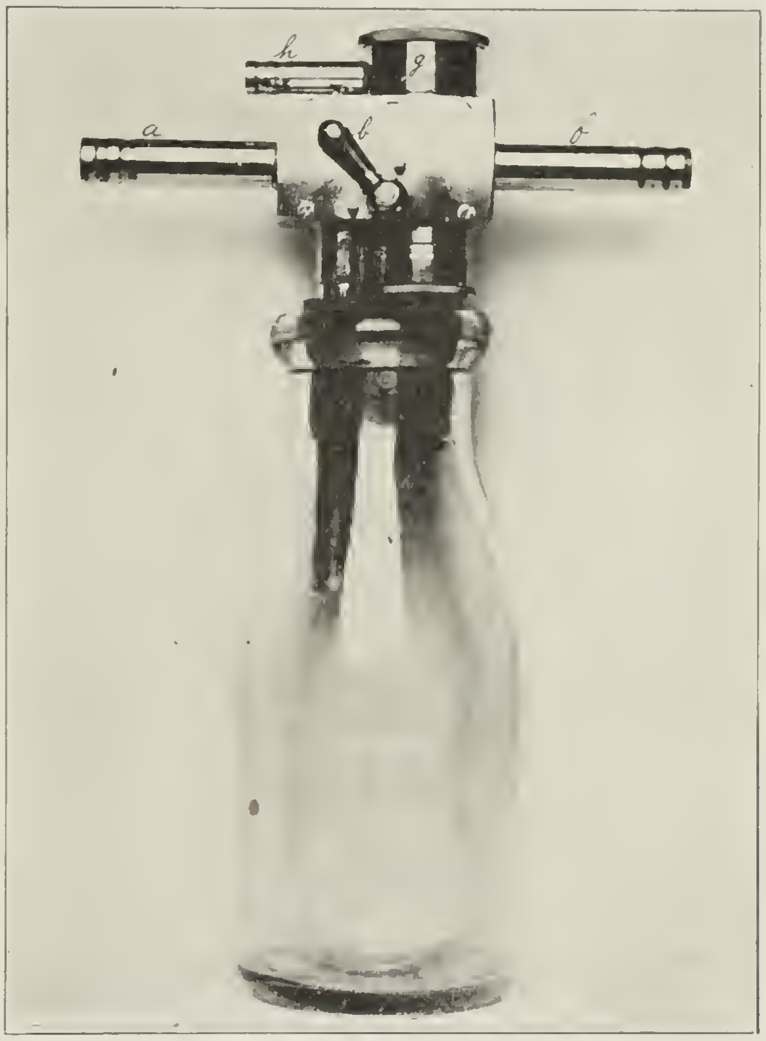

Fig. 1.—Ether valve for use in animal experimentation.

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* From the Pharmacological Laboratory of Washington University Medical School.

[1] One of the best of these has recently been described by Professor Guthrie of Pittsburgh, in The Journal A. M. A., Sept. 9, 1911, p. 887.

disks of metal which lie flatly down on the round openings in the metal below them. Each valve opens in an upward direction. Each of these valves has a screw cap which can be readily turned off in case anything should go wrong with the valves.

The expired air, which passes into g (g') has three ways by which it may pass out, depending on the adjustment of the tube h (h'). The chamber g (g') is made up of two walls 3.4 cm. in diameter and 1.5 cm. high. The inner wall is soldered firmly to the top of the box. The small diagram (Fig. 3) represents a horizontal section of these walls seen from above. The inner wall has three outlet openings and the outer wall has two outlet openings, to one of which the tube h (h') is soldered. This outer wall swivels around so that the outlet openings in it may be turned to correspond with the openings in the inner wall. By this adjustment, which is regulated by a spring ratchet on top of the box, part of the expired air may be used to operate a tambour led off from the tube h (h'), thus recording the respiratory actions of the animal; or all of the air may be directed out through the tube and led off to a spirometer, or other collecting apparatus; or all of the expired air may be simply allowed to escape into the room. A safety arrangement is provided for the respiratory tambour in case it should be necessary to suddenly give the animal artificial respiration. This consists in turning the tube h (h') sixty degrees around to the right. The spring ratchet catches the outer cylinder at this point and this shuts off all communication between the tube and the chamber g (g').

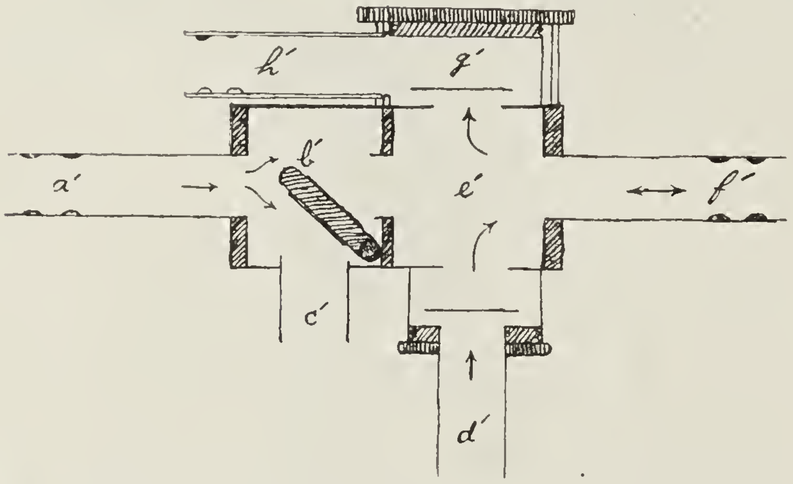

Fig. 2.—Diagram of ether valve for use in animal experimentation.

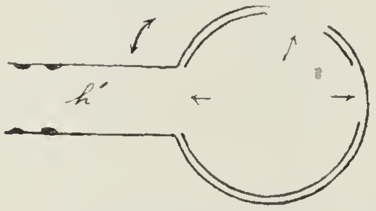

Fig. 3.—Horizontal section of walls of chamber g.

If the lever valve b' be set so that the animal breathes in partly air and partly ether (Figs. 1 and 2), then part of the expired air may pass out of tube a (a'). If it is desired to collect all the expired air, then the valve b' is turned upward tightly against the opening in the partition and all entering air passes down through the tube c' into the ether bottle. In case the animal should get too much ether during the experiment, the cork is simply pulled out of the bottle a little and air is inspired directly into the tube d', without having first passed through the ether bottle.

A friction ratchet inside the box holds the lever valve (b') at any position in which it may be placed. The valve is purposely made of such a size that it exactly fits into the cork of an ordinary pint milk-bottle which is durable, cheap and easily obtained. I have found that somewhat more than one-half the amount of ether ordinarily used in an operation may be saved by the use of this valve, and the air of the operating room is thereby kept in much better condition. The valve is compact, there are no separate pieces to be misplaced, there are no parts that are at all likely to get out of order, and access is easy to any valve which might not seem to be working correctly. The operator has instant command of the amount of anesthetic administered. The device is readily adapted for either natural or artificial respiration or for insufflation. This valve was made for me by Mr. Paul Bauer, mechanician for the Washington University Medical School.

1806 Locust Street.

CESAREAN SECTION PERFORMED BECAUSE OF DYSTOCIA FROM VENTRAL FIXATION OF THE UTERUS

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Cases of dystocia due to operations for relief of versions of the uterus have increased in number during the last few years. Ventrofixation and suspension are the chief causes, the latter seldom, if ever, leading to serious complications. In rare instances, suspension of the organ has terminated in a fixation due to adhesion of the fundus to the abdominal wall. These adhesions are traced to infections and abrasions of the serous coat during the operation, resulting in a firm adhesion of the uterus to the abdominal wall that prevents the freedom of expansion and mobility necessary in the pregnant uterus. The abdominal fixation of the pregnant uterus often results in uterine inertia, tetanic contractions and obstructive labor. The anterior wall of the uterus below the point of fixation becomes thickened and hypertrophied until it feels like a fibroid growth. This is due to the failure of this portion to expand during gestation. The cervix and lateral walls become greatly thickened and thus cause the uterus to buckle on itself above the point of fixation. The expansive power is weakened, the cervix dilates with difficulty and asymmetrically, and its thickened portion becomes a veritable tumor blocking the superior strait at the pelvic brim. In this condition the uterus cannot sink into the pelvis, and there is sometimes such an unsymmetrical expansion of the uterus that it looks not unlike a transverse presentation. There is marked anteflexion, and the cervix is drawn up backward until it points toward the promontory of the sacrum.[1]

The early history of these cases includes persistent vomiting, pain and abortion. Some patients are delivered at term of dead or living children by forceps, craniotomy or version.

It is plain that every patient subjected to a suspension or fixation should be carefully examined in the event of pregnancy. From the sixth to the eighth month, repeated examinations should be made in order to anticipate any possible dystocia. When such forecast is doubtful, premature labor at the eighth month is the most conservative treatment.

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[1] Edgar: The Practice of Obstetrics, 1904, pp. 657-659.
Dickinson: Am. Jour. Obst., 1901, xliv, 34-46.
Noble, Chas. P.: Tr. Am. Gynec. Assn., 1896, xxi, 247, 268.
Kelly and Noble: Gynecology and Abdominal Surgery, i, 559, 561.

Mrs. L., aged 36, white, American, the mother of two living children, in whom the previous labors were normal and uneventful, except for lacerations and uterine displacement, February, 1909, submitted to an operation for correction of the displacement. In April, 1910, she became pregnant; suffered from nausea and vomiting to a greater degree than in any previous pregnancy, and had more or less pain, which she referred to the region of the abdominal incision, in the pelvis during the entire gestation period.

On Jan. 23, 1911, I was called to see her in consultation with Dr. J. F. Robertson, who was unable to reach the cervix with the examining finger. Nor was I until I had placed her under chloroform and introduced the entire hand into the vagina. In my search for the mouth of the uterus the finger passed above the promontory of the sacrum. The os was partly dilated and pointed directly backward to the fourth lumbar vertebra. The head was presenting and water was escaping with each contraction of the uterus. By combined examination, the anterior uterine wall below the point of attachment to the anterior abdominal wall was found to be thickened to the consistency of a fibroid growth and occupied the larger part of the superior strait.

With two fingers in the anterior lip of the cervix I attempted to pull the uterus forward into the axis of the vagina, and partly succeeded. Taking away the chloroform in order to allow the return of the pains, I held the cervix in this position in the hope that the head might descend and engage. The first vigorous pain drew the cervix from my ineffective grasp and the uterine wall again filled the pelvic brim.

Returning again to the anesthetic, we undertook a podalic version in the theoretical hope that with a leg down we might succeed in keeping the cervix in the pelvis and in the axis of the birth canal. Passing across and above the face of the child I encountered a contraction ring encircling the uterus at a level with the point of fixation. This ring was due to the flexion of the uterus at this point.

By this time the pains were quite vigorous, the uterus scarcely relaxing between contractions. Despairing of delivering a living child by the vagina, and fearing tetanic contractions of the uterus and consequent rupture, I advised section in the interest of both mother and child. She was sent to the hospital, where, assisted by Drs. Robertson, W. V. Boyle and Guy F. Hobbs, I did a classical cesarean section. The extraction of the head was delayed by the contraction ring which grasped it below the chin, and was released only by extending the incision in the uterus into the adherent band that bound it to the abdominal wall. In spite of this delay the child cried vigorously and left the hospital with its mother on the fourteenth day.

327 Newton Claypool Building.

A Well-Expressed Aspiration.—May we keep our reverence unimpaired for the humble-minded and those who have suffered much, prays *Collier's Weekly;* our humor alert for our own mistakes and our self-sufficiency, and not at any time wreak it on the aged, the crippled, the obscure. May we guard childhood and honor age, however infirm and petulant, because it has gone a long way on the same road that bruises our feet; and ever seek to prolong the brief moment of joy as it visits children and lovers. May we have the grace to rejoice in the flow of life as it moves through men from generation to generation, and to be purified by the mystery in which we dwell—the night silences and the wonder of our inner life. May we look on the widespread spectacle of human suffering and, having endured to look on it, learn to know our single life—seemingly so unique—as a drop of that infinite sea. When it comes our time to realize that in this earthly progress we shall not long dwell with happiness or with success, may we clear our spirit of bitterness, and in calm strength continue at the work.

PRODUCTION OF ANTIBODIES BY TISSUES LIVING OUTSIDE OF THE ORGANISM *

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RAGNVALD INGEBRIGTSEN, M.D.
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The recent development of an efficient technic for large cultures has rendered possible the study of the functions of tissues living outside of the organism. In order to ascertain whether tissues cultivated *in vitro* retained the property of reacting against antigens by producing antibodies, we have attempted to induce guinea-pig's bone-marrow and lymph-glands to become hemolytic for goat's red blood-corpuscles. In these experiments we were very much indebted to Dr. Hideyo Noguchi, whose advice enabled us to obtain immediately positive results.

Guinea-pig bone-marrow and lymph-glands were cultivated in guinea-pig's plasma in Gabritschewski boxes. Goat's blood was selected as an antigen because it is only slightly, or not at all, hemolyzed by guinea-pig's serum. Two drops of washed goat's blood-corpuscles were generally added to a culture containing twenty drops of plasma and five or six drops of a suspension of tissues in Ringer's solution. Together with every culture containing goat's red blood-corpuscles, a control culture without antigen was prepared. Other control cultures were made, composed only of guinea-pig's plasma and goat's blood, or of guinea-pig's plasma, goat's blood and bone-marrow killed by heat.

The Gabritschewski boxes were then deposited in an incubator at a temperature of 39 C. After a few hours, the fragments of bone-marrow and lymph-gland were surrounded by cells which soon invaded the whole medium. On the second day of their cultivation *in vitro,* leukocytes were inactive against the red blood-corpuscles, but on the third day they phagocyted them rapidly. On the fourth or fifth day, the boxes were opened. The plasmatic jelly was cut in small pieces and aspirated into a large pipette. The fluid that covered the bottom of the box was also taken. Fluid and medium containing the tissues were placed in glass tubes, frozen, brought back to room temperature and centrifugated. The technic of Epstein and Ottenberg, which permits of testing the hemolytic power of very small amounts of serum, was followed. The characters of the hemolysins were investigated by the ordinary methods.

It was found that the serum of the cultures containing goat's blood had acquired the power to hemolyze markedly goat's red blood-corpuscles, while the serum of the control cultures remained inactive. It follows that hemolysin appeared in the cultures under the influence of the antigen.

The nature of the hemolytic power acquired by the fluid of the cultures was then investigated. This fluid hemolyzed goat's red blood-corpuscles without the addition of complement. After having been heated at 56 C. for half an hour, it lost its hemolytic power. Then, by addition of complement, it regained the lost power to hemolyze goat's red blood-corpuscles.

Goat's red blood-corpuscles were placed for four hours at 0 C. in the fluid extracted from a five-day-old culture. Then they were separated from it by centrifugation, and guinea-pig's serum (complement) was added to them. They became hemolyzed, while fresh goat's blood-corpuscles, to which guinea-pig's serum was added, remained unaltered. It was found also that the fluid, separated from the globules by centrifugation, and mixed with fresh goat's red corpuscles, had lost almost completely its hemolytic power. Therefore, it appeared that the hemolytic power acquired by the cultures was due to substances acting as natural hemolysins.

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* From the Laboratories of the Rockefeller Institute for Medical Research.

Since guinea-pig's bone-marrow and lymph-gland cultivated for five days with goat's blood generate substances that are hemolytic for goat's red blood-corpuscles, it can be concluded that tissues living outside of the organism react against an antigen by the production of an antibody.

Sixty-Sixth Street and Avenue A.

DIRECT TRANSFUSION OF BLOOD IN ACUTE HEMORRHAGIC DISEASE

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YORKVILLE, ILL.

Patient.—S., male, aged 19 months. Family history entirely negative as to hemophiliac or other hemorrhagic tendencies; no discoverable syphilis; one paternal aunt died of pulmonary tuberculosis. Father, mother and one older brother healthy.

Examination.—The patient was a well-developed, well-nourished child. No rickets, no scurvy, or other constitutional dyscrasia. He had always been well except for an ordinary attack of measles from which he had recovered three weeks previously. Without apparent cause slow, continuous, uncontrollable epistaxis first appeared. The nares were unsuccessfully packed with adrenalin (epinephrin) tape. Twenty-four hours later hematuria, melena, hematemesis and hemoptysis appeared. These were accompanied by innumerable petechiæ of skin and all visible mucous membranes, which were small, varying from pin-point to split-pea in size, most numerous on forearms and legs. There were large ecchymoses under eyes. Temperature was 100 F., pulse 190, blood-pressure 70 Hg (Faught). The child was in a very critical condition.

Treatment—At this time direct transfusion of blood from the father was practiced and the blood-pressure of the patient was thus raised to 140. An interesting point is that the arm, when a small constrictor was lightly applied to it, immediately assumed a dark purple color and blood could be fairly seen oozing into the skin at a countless number of points. An immediate improvement was noticeable both in the epistaxis and in the patient's general condition. The patient was placed on aconite, calcium chlorid and gelatin, with slow enteroclysis of normal salt solution. Twenty-four hours later all hemorrhage had ceased. The temperature was 102.2 F.; pulse 142; blood-pressure 110. From this time on the recovery was uneventful. Six weeks later the child had presented no evidence of bleeding.

EARLY NERVE INVOLVEMENT IN SYPHILIS

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VINELAND, ONT.

Patient.—The patient, J. D., a man aged 23, single, bank clerk, with negative family history, had always enjoyed good health until in April, 1911, in Winnipeg, he developed a hard chancre, three weeks after exposure. He was given an injection of salvarsan, resulting in the disappearance of the sore in a couple of weeks. This was followed by about one month's course of mercury. No Wassermann test was done. I could only get the history from the patient himself.

Clinical History.—About the middle of August, he began to notice some weakness of the right lower extremity, with some pain. He was treated for "rheumatism." As he was gradually getting worse, he came home about September 10, at this time walking with the aid of a cane. He was there seen by my father, who, as syphilis is practically unknown in that part of the country (Ottawa valley), and both poliomyelitis and cerebrospinal meningitis are common, did not at once recognize the nature of the trouble. The left lower extremity was rapidly involved, and by September 20, both lower extremities were completely paralyzed. He developed very severe headache, not relieved by coal-tar products. The pupils were dilated, sluggish, and he could not see to read. There was no vomiting. The temperature was normal throughout. September 28 he was put on potassium iodid, and improvement in the subjective symptoms began at once.

Examination.—I saw the patient, with my father, on October 9. At that time the headache had disappeared and he could see to read. He had general enlargement of the lymphatic glands. There were secondary eruptions more or less all over his body, and in his hair, the hair being dry and falling out. There were numerous mucous patches in the throat. Both lower extremities were paralyzed and flaccid. He could lift the right foot slightly (the one first involved), the left not at all. There was some muscular atrophy, most marked in the glutei. The plantar, patellar and cremasteric reflexes were completely abolished. Common pain and heat sensations were much reduced up to the middle of both thighs. He was hypersensitive to cold in the same areas. Coordination in the upper extremities was perfect. There was no sign of weakness in resistive movements. The bicipital reflex was slightly exaggerated. There was no sign of paralysis. The pupils were somewhat dilated and sluggish. There was no contraction of the field of vision. There was no opportunity of making an ophthalmoscopic examination, or a Wassermann test.

Treatment.—We decided to put the patient on mixed treatment: iodid of mercury, with potassium iodid. We taught his brother to massage the lower extremities, and to carry out resisting movements, taking precautions against infecting himself. Improvement was rapid; in two weeks the patient could move both lower extremities. In a month he could get around with crutches and was encouraged to do so; in six weeks he could walk with the aid of a cane; in two months he could walk unaided. The reflexes are returning. At the present time (January, 1912) he is apparently well and is anxious to get back to work. He has promised to persist in treatment.

The interesting features of the case are:

1. The short time elapsing between the time of the appearance of the primary sore, and the appearance of nervous symptoms (five months).
2. The extent and severity of the process, apparently involving the whole central nervous system.
3. The surprisingly rapid and complete recovery.

We have not thought it well to advise a second injection of salvarsan, in view of the nervous involvement. Surely, too, it shows the danger of giving salvarsan unless one has control of the patient, and the means of making the Wassermann test.

REMOVAL OF PARAFFIN FROM THE BLADDER *

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Visiting Surgeon, City and County Hospital
DENVER

The peculiar difficulties of diagnosis and the method of removal resorted to in this case, I feel, render it worthy of record.

Patient.—A man, aged 24, single, glass-blower, with negative family and personal history. Eight months ago he inserted an improvised bougie made of paraffin chewing-gum into the urethra "to relieve an irritation" near the meatus. Instead of being able to force it out, he felt it pass on deeper and glide into the bladder. At first it caused no symptoms, but after several months it began to develop signs of vesical irritation.

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* Read before the Denver City and County Medical Society, September, 1911.

Examination.—When the patient consulted me he presented a classical picture of vesical calculus. Cystoscopic examination with water distention revealed nothing, but with a small quantity of water and sufficient air to complete the distention a foreign body about three-quarters of an inch in diameter and resembling a phosphatic stone was seen bobbing up and down like a buoy. Since the larger part of this body was paraffin, any attempt to remove it by litholapaxy was considered out of the question, as an instrument would not crush but only change its shape. I knew that benzin would dissolve the paraffin, if the phosphatic coating was not too thick, but the possibility of its baneful local or constitutional effect made me hesitate. The report of a case by Dr. Franz Weisz of Budapest,[1] in which benzin had been successfully used for the removal of a wax candle from the bladder, induced me to use that method in my case.

Procedure of Removal.—After the bladder had been cleaned with boric acid solution, a small quantity of which was left there, 4 ounces of benzin were injected and allowed to remain in the bladder about eleven minutes. After the bladder contents had been churned with a litholapaxy bulb, during which time the phosphatic coating was deposited in the sediment glass, the benzin was drained into a glass. It was opalescent and evidently held some of the paraffin in solution. A second instillation of benzin was injected into the bladder and allowed to remain about four minutes, when it came away much clearer than the first. A third and fourth were clear when removed. No anesthetic was used, and the procedure caused no more discomfort than the ordinary bladder exploration. No constitutional symptoms were noticed, but considerable pain was caused by irritation of the scrotum and inner aspects of the thighs, which had become soiled with benzin spilled in removing the several instillations. This soon passed away and the patient went home on the street-car, and to work two days later. There was no irritation of the bladder or urethra following the use of the benzin, which indicates that the liquid is an irritant only when conditions permit of evaporation, and that it is perfectly safe to retain in the bladder a sufficient length of time to dissolve paraffin.

611 California Building.

Therapeutics

COCA U. S. P.: ERYTHROXYLON COCA

DESCRIPTION

The official coca (genitive cocæ) consists of the dried leaves of what is known commercially as Huanaco coca or Truxillo coca, which should yield not less than 0.5 per cent. of ether-soluble alkaloids. Erythroxylon coca comes from South America, but the plant is also now found in India and some of the islands of the Indian Ocean. The leaves of the plant growing in Peru and Bolivia seem to furnish more of the alkaloid, cocain, than that growing elsewhere.

An alkaloid was discovered in this plant by Gardeke, in 1885, which he called erythroxylin. It was later studied by Niemann, who gave it the name of cocain.

The local anesthetic properties of the drug were first noticed by Moreno Y. Maiz, in 1862, again by von Anrap, in 1880, but Carl Koller, in 1884, was the first to demonstrate the practical value of the drug.

Several other alkaloids have been discovered which are named cocamin, homococamin, isococamin and homoisococamin, all of which contain, according to Cushny, a molecule of ecgonin combined with various acids. These alkaloids, however, have not as yet been found of any therapeutic interest. Tropacocain, occurring especially in the Java coca, is a combination with benzoic acid as a base, and has been recommended for spinal injections.

LOCAL ACTION

The alkaloid cocain acts locally as an anesthetic to the terminations of the sensory nerves. The action on the unbroken skin is not pronounced, although when incorporated with an oil or fat it may penetrate enough to cause some loss of sensation and dulling of pain. It is very active on mucous membranes as a local anesthetic and as a temporary contractor of the blood-vessels, and is quickly absorbed when injected hypodermatically, causing also local anesthesia of the part in which it is injected. On the mucous membrane of the nose it causes anesthesia and the loss of smell, and there is a partial loss of the sense of taste when applied to the tongue. Injected into a nerve-trunk, or near a nerve-trunk, it acts as an anesthetic to its peripheral distribution. While the sensory fibers are paralyzed or benumbed, the motor fibers may still be active, so that the muscles to which the nerve is distributed may be voluntarily called into play, though the part is anesthetized.

The anesthesia produced by cocain applied locally occurs in from five to ten minutes, and then passes off rather rapidly, the length of anesthesia depending largely on the method of application, the strength of the solution, and whether or not the parts injected or treated are incised and the injected liquid allowed to run out with the blood and be lost.

Its use as a spinal anesthetic has been described in a previous article on local anesthesia.

Cocain has been very largely used in the eye, both to dilate the pupil partially and to contract the blood-vessels of the conjunctiva. Also, it has been frequently used for eye operations. While it causes partial loss of accommodation, it is not sufficiently active to allow of a complete examination of the eye as an optical instrument. It seems to dilate the pupil by acting on the dilator fibers of the iris. As it sometimes causes an increase of intraocular tension, it should be used with great care if glaucoma is suspected or is present. It has been thought at times to retard healing after eye operations, and for that reason is not used so frequently in the eye as it was some years ago.

SYSTEMIC ACTION

A dose of cocain, which seems to represent well the activity of the drug coca, if sufficiently large to produce symptoms, shows its activity in cerebral and circulatory stimulation. The heart-beat is increased in rapidity, the blood-pressure is somewhat increased, respirations are more rapid, the pupils dilate somewhat, the patient generally becomes more talkative, and may show marked excitement and even delirium. At times, however, the first evident action of the drug is a faintness and collapse, with evidences of heart failure, as cold, clammy skin, pale face, nausea and vomiting, or there may even be cyanosis. At times tremors and tremblings occur, and convulsions have been noted. Such phenomena are perhaps due to cerebral anemia.

The drug seems to combine activities represented by atropin and by caffein, and in those who become used to its effects it seems to relieve fatigue, temporarily, at least, to increase mental activity and muscle ability, and also to relieve the sense of hunger.

Cocain seems to act largely on the medulla oblongata, stimulating its various centers, especially the respiratory center, and it is the vasomotor center stimulation that causes a rise in blood-pressure, although the increased rapidity of the heart, owing, probably, to stimulation of the accelerator mechanism, may have something to do with this rise of blood-pressure. On the other hand, though primarily a respiratory stimulant, it is secondarily a respiratory depressant, and its depressant action on those who are not accustomed to its use occurs so soon and is often so pronounced that cocain should never be used as a circulatory stimulant.

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[1] Am. Jour. Urol., December, 1909.

At times it is sufficiently stimulant to the spinal cord to cause an exaggeration of the reflexes, and may even cause spinal convulsions.

There is some slight action on the blood-vessel walls as shown when the drug is injected or used locally. There is some blanching of the tissues when it is used on mucous membranes. Such action, however, does not last long, and is followed by a dilatation of the local vessels.

This is one reason why cocain so readily causes a habit in hay-fever patients when it is used locally for its benumbing and vasocontracting effect, for as soon as the effect passes off, the patient desires to use the drug again, and he soon acquires a habit. Therefore, cocain should never be given to a hay-fever patient for his own use.

Small doses of cocain have seemed to increase peristalsis of the intestines, but any circulatory depression is likely to cause inhibition of peristalsis.

While the temperature is generally increased from cocain stimulation, if there is circulatory depression the temperature is not increased.

The alkaloids of coca are more or less completely broken up in the body, so that but a small amount is excreted by the kidneys.

Action of a Therapeutic Dose or the Primary Physiologic Action.—The action of coca is that of its contained cocain, and the action of an ordinary active dose of cocain is slightly to stimulate the heart, slightly to raise the blood-pressure and slightly to stimulate the brain, causing increased mental activity, and wakefulness, slight muscle exhilaration and perhaps a general feeling of well-being. If such stimulation is frequently attained, the desire of the system for it grows until it must be taken more and more frequently and in larger doses, and a habit is acquired.

Toxic Symptoms.—Cocain may be classed as a poison among the nervous stimulants, but it quickly becomes a nervous depressant. The symptoms of acute poisoning are excitement and nervous irritability, there is more or less delirium, there may be convulsions followed by coma, the pupils are dilated, the respiration is more or less rapid and shallow, the pulse is weak and the heart rapid. On the other hand, the first symptoms may be collapse, with dyspnea and cyanosis. Death from acute poisoning with cocain has not frequently occurred, and the greatest danger seems to be within a few minutes, as if the patient lives from fifteen minutes to half an hour, he will probably recover.

TREATMENT OF POISONING

If the poison has been taken into the stomach, 1 or 2 gm. (15 or 30 grains) of tannic acid should be stirred in a glass of warm water and taken immediately. If vomiting does not soon occur, the stomach should be washed out with warm water, or an emetic should be administered. Camphor (one of the aseptic ampules of camphor solution) should be administered hypodermatically several times at fifteen-minute intervals, if indicated. Strychnin sulphate, 1/30 grain, should be given hypodermatically and repeated if needed. The patient should be surrounded with dry heat. Artificial respiration may be employed if necessary. A hypodermatic injection of 1 part to 10,000 of suprarenal active principle (aseptic ampule) should be given intramuscularly. If convulsions occur, chloroform inhalations must be given.

As cocain is rarely administered internally, and would only be taken internally by accident, the acute poisoning is more likely to occur from its absorption after local use for operative procedures, or after a hypodermatic injection to deaden pain. To be on the safe side, especially where operation will not immediately cause the injected parts to lose the solution from the incision, a dangerous dose should never be used. The 10 per cent. solutions once used are never safe. Four per cent. solutions of cocain certainly seem sufficient on mucous membranes, and 2 per cent. solutions, where the cocain is to be injected into the tissues, seem sufficient, and if a considerable amount of fluid is to be used, 1 per cent. should probably be the strength; but as above stated, it should be remembered that a poisonous dose may be 0.05 or 0.06 gram (about a grain). While more may be tolerated, much less than this amount has caused poisoning in susceptible patients. When a considerable amount of the cocain solution is used for infiltration anesthesia it should be remembered that the water alone, by distending the tissues, causes benumbing of the sensory nerves, and especially in instances in which the operative procedure is done immediately after rapid infiltration, it is the water and distention that have caused the anesthesia, and not the cocain at all. Hence, where a large area of infiltration for an operative procedure is indicated, it is best to omit the cocain from the solution.

The action of cocain locally may be prolonged and the danger of rapid absorption prevented by the addition of the suprarenal active principle in perhaps a strength of 1 to 5,000 to 10,000. If the operation is on an extremity, retardation of the return circulation by a bandage will of course prevent rapid absorption and systemic poisoning.

COCAIN HABIT

Chronic cocain poisoning, or the cocain habit, is one of the saddest of drug habits. Occasionally it is caused by the careless use of a wine of coca, or by the use of cocain inhalants or sprays or nasal powders, or anticold combinations. The dire effect of catarrh powders containing cocain is now generally understood and recognized, and legislation is attempting to eradicate and prevent this crime.

It was thought that cocain would be a safe cure of the morphin habit; it was quickly found that it was a most unjustifiable treatment of that habit. Many persons were given the cocain habit by such treatment.

The symptoms of chronic cocain poisoning are great nervousness, sleeplessness, a variability of muscular and mental activity, impaired nutrition, imperfect sight, anorexia and digestive disturbances. When a cocain habitué is in need of a dose of cocain, he is greatly depressed, and the quick stimulation of its action when he receives or takes his dose is markedly evident. From being quiet and depressed, he becomes talkative and alert. Some users of cocain, especially of the lower classes, obtain marked erotic effects. It is quite probable that cocain is often obtained and often used and the habit thus formed on account of this activity.

No treatment is effective outside of an institution, and it seems that the drug must be more or less rapidly withdrawn.

THERAPY

Except for local action in the stomach to quiet pain from cancer, there seems to be no justifiable use of cocain internally. Even such use as this is probably rarely necessary. The use of coca wines, or fluidextracts of coca are hardly justifiable. While they cause a certain amount of mental and muscular stimulation, it should not be forgotten that the cocain habit readily develops after use of this drug.

As a local anesthetic, enough has already been said. One or 2 per cent. solutions used in the eye or on mucous membranes will certainly quiet pain, and stronger percentages become distinctly anesthetic. Its action as a sedative to the eye and as an anesthetic has already been described. It may be used as a sedative, and if partial dilatation of the pupil is advisable in glaucoma it does not cause the harm that would be caused by atropin. This dilatation is quickly overcome by a physostigmin (eserin) solution.

In painful inflammation of the ear it is often of marked benefit and gives great comfort, used locally. It is most constantly used in operations on the nose and throat. It has been largely used in dental surgery.

Watery and oily lotions of cocain are sometimes used in annoying skin irritations, as in pruritus vulvæ, and it is sometimes of benefit in painful ulcers. It should not be used on absorbing surfaces, as after a fresh burn, or the raw surface of a blister.

OFFICIAL PREPARATIONS

Cocaina occurs as crystals, prism-shaped, and has a bitter taste. It is very soluble in alcohol; almost insoluble in water. The following is the most used preparation:

Cocainæ hydrochloridum, or cocain hydrochlorid, occurs as colorless prisms or as a white crystalline powder. It is very soluble in water, and readily dissolved in alcohol. Solutions of cocain in water should not be boiled, as the alkaloid is decomposed. Consequently, it must be dissolved in previously sterilized water.

The internal dose is 0.03 gm. (½ grain). This dose should not be frequently repeated, and as above stated, there is no good reason for administering it internally, except in rare instances in acute conditions of the stomach.

Oleatum cocainæ is a 5 per cent. solution of cocain in oleic acid and olive oil. This preparation is not needed in the Pharmacopeia, as if it is advisable to use cocain in oily solution locally, it should be made fresh and of the strength desired for the individual patient.

SYNTHETIC AND OTHER SUBSTITUTES

Beta-Eucain.—In an attempt to discover some drug or synthetic combination which would act as a local anesthetic and yet not present the toxicity of cocain, a number of drugs have been offered. One of the first was eucain, but this was soon followed by beta-eucain, which was found to possess the advantages of eucain and offer less irritation, and was more permanent. The action of beta-eucain (benzoylvinyldiacetonalkamin hydrochlorid) is identical with that of cocain, except that anesthesia is slightly less prolonged, and there seems to be much less danger of toxic action. It has been said to be but one-third as toxic as cocain. A solution of it in water may be boiled without deterioration. This is not true of cocain. A 2 per cent. solution is generally satisfactory for anesthetic purposes.

A eucain (beta) lactate can also be obtained. It has probably no advantage over the hydrochlorid.

Tropacocain.—This is a compound of pseudotropein (benzoylpseudotropein) and is best used in the form of the hydrochlorid. This may be obtained from coca grown in Java, but is also prepared synthetically. It is less poisonous and less depressant to the heart than cocain, and acts for a shorter time. Its solution is supposed to be more stable, and therefore it may be sterilized.

Stovain.—This is a synthetic product (dimethylaminobenzoylpentanol) discovered by Forneau. This drug is used in the form of the hydrochlorid, and seems to be less toxic than cocain. It has been thought at times that on mucous membranes it has caused some irritant effect; otherwise it seems to act similarly to cocain as a local anesthetic, and causes anemia of the tissues.

Alypin.—This is another local anesthetic, used in the form of the hydrochlorid, but has no advantage over stovain, and is found to be quite irritant, and is nearly or quite as toxic as cocain.

Novocain.—This, one of the more recent local anesthetics (para-aminobenzoyldiethylaminoethanol), is used in the form of the hydrochlorid, and seems to be much less poisonous than the above-named drugs. It is less strong as an anesthetic, and the anesthesia does not last as long as that of cocain.

Anesthesin.—This was first offered in 1900. It is an ethylic alcohol of paramidobenzoic-acid. It is used in the form of the hydrochlorid, but it has not been found to be as efficient as the other local anesthetics.

Orthoform.—(Methyl-ester of para-aminometaoxybenzoic acid). Acts as a local anesthetic to the peripheral sensory nerves. It occurs as an odorless crystalline powder, is soluble in alcohol, slightly soluble in water. It is used mostly as a powder, or in ointment for local application to painful sores, ulcers, or burns. It has been used for painful ulceration of the mouth and larynx, and in cancer and ulcer of the stomach. The relief caused is sometimes very considerable. It seems to be non-poisonous, and may be slightly antiseptic. It may, however, cause, at times, some irritation when applied too long to a mucous membrane. The anesthetic effect lasts for a long time, perhaps many hours, and anesthesia may begin within five or ten minutes. It acts only locally, is not deeply absorbed and cannot penetrate to the deeper tissues. One-half gram (7½ grains) or even more may be given internally. It may be applied externally as a powder, or mixed with any inert substance, as starch or talcum, in any strength, or may be combined in an ointment.

Magnesium Sulphate.—This was suggested for spinal anesthesia as a substitute for cocain, as it had been found to be anesthetic to nervous tissues, and when injected into the spinal canal it produces anesthesia of the part and all of the nerves below the part to which it is applied. Thus used it often causes vomiting. The quantity used is 1 c.c. of a 25 per cent. solution for every twenty pounds of body weight.

Meltzer has shown that when injected into a nerve trunk, it paralyzes first the sensory fibers and later the motor fibers. When injected into the spinal canal anesthesia is generally prolonged, and it is therefore not suitable for surgical procedures. Some tetanus patients, however, have been so treated, and have recovered. When given intravenously, it produces a general anesthesia and death by respiratory failure. Its action may be stopped by the injection of a calcium salt, which seems to oppose its paralyzant activity.

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[*For other information see second page following reading matter*]

SATURDAY, FEBRUARY 17, 1912

THE OPHTHALMIC REACTION AS A DIAGNOSTIC TEST FOR TYPHOID

Recently Austrian has described[1] an ophthalmic reaction in typhoid which may prove a valuable diagnostic aid. The reaction is similar in principle to Calmette's ophthalmic reaction in tuberculosis, and was first described in 1907 by Chantemesse,[2] who obtained positive results in each of seventy cases of typhoid and negative results in forty-nine of fifty control cases. Floyd and Barker,[3] using a modification of the same technic, obtained positive reactions in 96 per cent. of typhoid cases and negative results in 84 per cent. of controls. Other investigators have obtained a variety of results in both typhoid and control cases, and some have concluded that the reaction is not specific. Others attributed the various results to a difference in strength of the extracts of virulent typhoid bacilli which were used as an antigen in the reaction. Austrian advances the hypothesis that the patient develops a sensitiveness toward the predominating strain of the organism with which he is infected, and a relatively small degree of sensitiveness toward other strains, just as a patient produces immune bodies in large amount against the strain with which he is infected and has relatively few antibodies against other strains. Acting on this hypothesis he prepared antigen for the reaction from a mixed culture of eighty different strains. These were grown in plain bouillon for twenty-four hours and were then sedimented, washed, and killed by heating for two hours at 60 C. The mass of bacilli was then thoroughly dried and ground with sodium chlorid crystals in an agate mortar, after which it was macerated with water for three days and the watery extract precipitated by pouring into absolute alcohol. The residue was then collected, dried, pulverized, and a solution made in the proportion of 10 mg. to 1 c.c. of water. One drop of this solution dropped into the lower conjunctival sac of the typhoid fever patient produced a mild inflammation with reddening of the conjunctival membrane, and sometimes slight edema of one or both eyelids. The reaction reached its height in from six to ten hours, and the symptoms even when marked were not sufficient to cause the patient to complain of discomfort.

The report shows extensive charts in which this reaction is compared with blood cultures and agglutination tests in seventy-five cases diagnosed clinically as typhoid fever. The test was positive in seventy-one and negative in four—a much larger proportion of cases than were positive by either blood cultures or agglutination. Of nineteen tests made during the first week of the disease eighteen were positive, and the nineteenth gave also negative results by both blood-culture and agglutination reaction. Positive reactions were often secured from the third to the fifth day and in a few cases as early as the second day of the disease. In 190 controls including a great variety of febrile and afebrile conditions and twelve normal adults the ophthalmic reaction was absent without exception. The reaction was found to be present most often during the acute febrile stage, and absent most frequently during convalescence.

Austrian claims the following advantages: The technic is very simple, requiring no complicated apparatus, presupposing of course that the antigen is furnished from reliable laboratories. It is a bedside test and is available during the early stages of the disease. It causes the patient less inconvenience probably than does the taking of blood for other diagnostic purposes. Its results more closely parallel those of blood cultures than do those of the agglutination test. If the ophthalmic reaction can establish these claims it needs no other recommendation to secure its general acceptance into clinical use. We shall await with interest further reports concerning its use in routine diagnosis.

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[1] Austrian: Bull. Johns Hopkins Hosp., 1912, xxii, 1.

[2] Chantemesse, A.: Deutsch. med. Wchnschr., 1907, xxxiii, 1246 and 1572.

[3] Floyd, C., and Barker, W. W.: Jour. Med. Research, 1909, lvi, 1417.

ESTABLISHMENT OF THE EXACT SIGNIFICANCE OF BOVINE TUBERCLE BACILLI IN HUMAN DISEASE

In the years that have passed since Koch stirred up the bovine-human tuberculosis question by his repudiation of prevailing ideas, there has been no lack of careful study of the difficult problems which were brought forward thus abruptly. The heat of conflict has long since abated, the necessary refinement of methods has been developed and used long enough to yield trustworthy results, and now that many of the returns are in we find a most satisfactory and convincing agreement among investigators in all parts of the world. For all practical purposes, it would seem, we are now able to say exactly how much of a menace bovine tuberculosis is to human health and life under existing conditions.

In the first place, the evidence is conclusive that, so far as ordinary phthisis is concerned, bacilli of bovine origin are so rarely concerned as to be of very little significance. Of 709 cases in which the type of bacillus present in the sputum was studied in a way to assure the value of the results (305 of these being American, 152 Japanese and the rest European cases), the compilation of Kossel[1] shows that in only two was the bovine form responsible for the condition. Both of these were English cases, and were so carefully investigated that the results seem reliable. There is also one other probable case of bovine type infection, and one case in which both human and bovine type occurred together, leaving 705 cases of pulmonary tuberculosis in which only the human type of organism was present. In other words, if the same ratio exists elsewhere, only about one in two hundred cases of pulmonary tuberculosis is of bovine origin.

With surgical tuberculosis, and particularly in infants and children, the story is very different. According to the investigations and statistical studies of Park and Krumwiede,[2] in young children from 6 to 10 per cent. of all deaths due to tuberculosis are caused by the bovine type of tubercle bacilli, the cases of tuberculous adenitis and abdominal tuberculosis of children being, indeed, more often caused by the bovine than by the human type. Even in adults a significant proportion of tuberculous infections elsewhere than in the lungs is found associated with bovine tubercle bacilli, namely, cervical adenitis, 3.6 per cent.; abdominal tuberculosis, 22 per cent.; bone and joint tuberculosis, 3.5 per cent. In lupus the British Royal Commission found a type of bacilli so different from the standard bovine and human types that its origin could not usually be determined. According to Burckhardt, those cases of joint tuberculosis in which there is a long history of infection and practically no bone involvement are likely to be of bovine origin. Surely a source of infection which causes up to one-tenth of the fatal cases of tuberculosis in children, and which, in the words of Park and Krumwiede "causes a marked percentage of the cases of cervical adenitis leading to operation, temporary disablement, discomfort and disfigurement . . . a large percentage of the rarer types of alimentary tuberculosis requiring operative interference or causing the death of the child directly or as a contributing cause in other diseases," cannot be looked on as negligible. It is no little satisfaction to be able to feel that we can speak with exact knowledge on this important subject and plan our campaign according to established facts.

THE CHARACTERISTICS OF CHRONIC POISONING

"Acute intoxication is a physiologic experiment; chronic poisoning is a disease." This dictum of Straub is exemplified in a consideration of the action of any of the more familiar poisonous substances which exhibit both acute and chronic effects. Acute alcoholic intoxication, for instance, is a transitory narcosis, and at first its consequences are only temporary; chronic alcoholism brings with it permanent organic damage. In acute poisoning, mercury salts produce a gastro-enteritis or nephritis; the symptoms of the chronic variety are exhibited in disease of the central nervous system. Acute arsenical poisoning resembles cholera in its immediate effects, whereas the chronic features are subtle, like those of tuberculosis.

The enumeration of such contrasts suffices to draw attention to the disparities between acute and chronic effects of poisons. If it is asked how such anomalies of action are to be explained, the answer is not easy on the basis of present knowledge of toxicology. The distinctive features of the acute form are appreciated in many cases. The effective dose is known within reasonably narrow limits, and the observed symptoms frequently can be interpreted in their causal relations. Oxalic acid, for example, owes its toxicity to the property of combining with calcium to form an insoluble salt and thus upsetting the salt equilibrium of the organism. But when we turn to chronic forms of poisoning, the available facts leave us in the lurch. The quantities of poison involved are often seemingly insignificant; and the impression is gained, to quote Straub again, that in the genesis of chronic poison effects it is the time element rather than the quantity factor that is foremost in the process.

There are surprisingly few adequate experimental studies of chronic poisoning, if a few more prominent "favorites" like arsenic are excepted. Added interest therefore centers in recent investigations of Straub[1] on chronic lead-poisoning. The peculiar conditions pertaining in the every-day development of this condition, namely, the continued introduction of minute quantities of lead into the organism, were imitated in a most ingenious way. A deposit of an insoluble lead salt, such as the sulphate or carbonate, was introduced beneath the skin in the hope that minute fractions would gradually find their way into the circulation and be distributed. This did, in fact, take place. In the course of time the cerebrospinal symptoms of the chronic form of lead-poisoning, resembling poliomyelitis and bulbar paralysis in some respects, made their appearance. Analysis of the residual lead deposits showed an average disappearance of about 0.15 gram of lead in the case of cats exhibiting typical chronic effects. Acute symptoms were entirely absent. The transported lead was not found deposited in any special tissues such as the nervous organs, and evidently was excreted from time to time. Taking into account the period which elapsed before the effects were noted it may be assumed that a quantity of lead approximating 2 or 3 milligrams per day (for the cat) disappeared from the deposit, that is, effectively entered the organism.

If the chronic effects were characterized by an increasing accumulation of lead in the specifically affected tissues, for example, the central nervous system, until a toxic dose becomes deposited, the analogy with acute poisoning would be obvious. The delay in the onset and the final outcome could be attributed to the fact that the necessary quantity of lead was only slowly available for the organism to absorb. But as a matter of fact the poison is not found abundant in specially involved tissues. It accordingly appears probable in the light of the evidence reviewed, that in chronic lead-poisoning the toxic factor consists in the feeble yet continuous current of lead traversing the body, accomplishing its destructive manifestations rather on account of its duration than its intensity.

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[1] Kossel: Deutsch. med. Wchnschr., 1911, xxxvii, 1972.

[2] Park and Krumwiede: Jour. Med. Research, 1911, xxv, 313.

[1] Straub: Ueber chronische Vergiftungen, speziell die chronische Bleivergiftung, Deutsch. med. Wchnschr., Aug. 10, 1911, p. 1469.

WHAT DETERMINES THE DEVELOPMENT OF THE SECONDARY SEXUAL CHARACTERS?

There are manifold indications that the development of what are termed the secondary sexual characters is associated in some way with the characteristic sexual glands, the testes and ovaries respectively. One need only recall the imperfections of growth and the disappearance of specific peculiarities and manifestations of sex which commonly follow castration or pathologic alterations in the organs concerned here. In lieu of a more adequate explanation it has become customary to speak vaguely of their "internal secretion" as the exciting cause of appropriate sexual unfolding during the prepubertal years. The evidence has, however, been rather indirect.

Professor Steinach[1] has lately furnished experimental facts regarding the extent and nature of these regulatory functions in developing the sexual instincts. Employing rats and guinea-pigs, he has transplanted testes and ovaries into early castrates of the same or opposite sex. These tissues can maintain their integrity in the new environment; and the influence exerted on the sexual unfolding of the recipient is quite striking. In males whose testes were transplanted in early youth into a muscular region, the masculine characters and incident sexual impulses were fully developed, in contrast with the absence of these in castrated males. Steinach believes that the evolution of this masculinity is determined by "the chemical influence of an internal testicular secretion on the central nervous system." More striking even is the fact that implanted ovaries can remain intact in castrated males. They exert no favorable influence on the development of masculine characters; in fact, they tend to check this. If uterus and tubes are transplanted into such males along with the ovaries the new tissues will grow and exercise a unique effect on the male organism. Feminine characters begin to make their appearance; there are noticeable changes in the mammæ; the proportions of the body, the character of the fur coat, the tendency to lay on fat assume the features of the female of that species. Even in psychic details there appears to be a "femalizing" of the male.

The upshot of these interesting reports is that neither the somatic nor the psychic secondary sexual traits are fixed in the individual. They develop in one direction or the other under the domination of the respective glands which are present and functionally active. Great possibilities in the application of these findings loom up; but it is too early for anything more than interesting speculations.

VEGETABLES AS A FACTOR IN THE SPREAD OF TYPHOID

The possibility of the conveyance of typhoid organisms by means of vegetables and fruits has long been suspected, and as a result of epidemiologic studies in recent years, presumptive evidence has been collected of the great probability that such foodstuffs play an important part in the transmission of typhoid infection. Typhoid fever is a rural disease; typhoid fever patients are frequently found on farms where green vegetables are cultivated for market; and, in some localities at least, the practice is prevalent of using human excreta as fertilizer to force the growth of vegetables that are intended to be eaten raw.

In studies to determine the factors responsible for the spread of typhoid fever, it is highly important to determine the viability under natural conditions of the typhoid bacillus. In recent years a number of investigators, working under different conditions, have recovered this organism from previously contaminated soil after varying periods up to fifty days, and Mair regained the organism after eighty-four days from soil inclosed by glass and moisture added. Since the longevity of the typhoid bacillus is greater in soil than in unsterilized water (from seven to thirty days in the latter), it would seem that the soil of a watershed might serve as a reservoir of infection to the stream which drains it.

The latest work on this subject is reported by Creel,[1] who, working in the Hygienic Laboratory, conducted experiments both within doors and in the open air, with exposure to rain and sunlight. Two experiments were made to correspond to natural conditions except as to the infecting material, which was artificially infected feces, no naturally infected specimen being available. Under these conditions, the typhoid organism was carried up from the soil by the growing plants, and on repeated examination the organisms were recovered from the leaves and stems up to thirty-one days. A leaf of lettuce from an infected bed yielded positive cultures after three washings, thus indicating that rainfall will not free vegetables from infected material. These results have practical significance in view of the insanitary conditions on many farms, particularly the lack of sanitary privies and the common practice of using human excrement as fertilizer.

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[1] Steinach: Geschlechtstrieb und echt sekundäre Geschlechtsmerkmale als Folge der innersekretorischen Funktion der Keimdrüsen, Zentralbl. f. Physiol., 1910, xxiv, 551; Umstimmung des Geschlechtscharakters bei Säugetieren durch Austausch der Pubertätsdrüsen, ibid., 1911, xxv, 723.

[1] Creel, R. H.: Pub. Health Rep., Feb. 9, 1912.

The demand for fresh vegetables being so great and the means of transportation so rapid, vegetables grown in one section may be shipped great distances and used by large numbers of persons. In view of these experiments and recent epidemiologic studies, it would appear that there is danger of the transmission of typhoid fever by this means. The inspection of truck farms therefore seems advisable, and permits for the cultivation of vegetables for public sale might properly be withheld from all farms on which improper methods of fertilizing are practiced.

LISTER*

Lister, the founder of the antiseptic method, illustrious among surgeons because of the marvelous results of his great and simple discovery, has just died at the age of 84. His family belonged to the Society of Friends and some of its members were eminent in natural science; his father achieved permanent distinction in optical science and introduced improvements of fundamental value in the construction of microscope lenses. While serving in the University College Hospital under Mr. Erichsen, Lister had occasion to observe an outbreak of hospital gangrene, which he studied closely and the parasitic nature of which he strongly suspected; he also studied minutely cases of pyemia, and was early impressed with the helplessness of surgery with respect to the prevention of these dreadful diseases. In his Huxley lecture he tells us that he used a compound microscope given him by his father in the study of histology and in the examination of materials from the diseases mentioned. On graduation in medicine he went to Edinburgh and was house-surgeon to Mr. Syme (later his father-in-law), being fascinated by the prominence he gave to the pathologic side of surgery. On finishing this service he gave an extramural course of lectures on surgery in connection with which, and by way of preparation, he carried on a series of investigations on inflammation and other subjects, which reveal a high investigative ability. In 1860 he was appointed to the chair of surgery in the University of Glasgow and it was in the Royal Infirmary of this city that he did his early epoch-making work on the methods of antiseptic surgery. In 1869 he succeeded his father-in-law in the chair of clinical surgery in Edinburgh, and in 1877 accepted the chair of surgery at King's College, London, and thus became more centrally located with respect to the surgical world at large. In 1896 he retired from active practical work, but remained interested in scientific pursuits, and from 1895 to 1900 he was president of the Royal Society. He was made the object of enthusiastic and memorable ovations at international congresses in Berlin and elsewhere, and notably in Canada in 1897, when he was the retiring president of the British Association for the Advancement of Science, and when the British Medical Association met in Montreal. His appearances in foreign countries at times became, so to speak, triumphal, and he received the highest honors ever bestowed on scientific men. In 1883 he was created a baronet and in 1897 he was raised to the peerage. Lister's writings, which are not voluminous and practically all in the form of articles for journals, are lucid and forcible; unfortunately, very little of his purely surgical work has been published. He was of kindly manners, full of dignity and strength, but modest and free from all pretense.

In order to grasp fully the significance of Lister's great achievement, it is well to recall the general conditions of surgical practice at the time when he entered on his duties as professor of surgery in Glasgow. It is true that anesthetics had been introduced shortly before and that thus the agony of surgical operations and the consequent necessity of speed had been removed, so that surgeons could venture on more intricate and difficult operations than before, but this enlargement of opportunity for the surgeon could not be fully and freely realized because of the awful mortality from wound infection. Not infrequently wound infections would rise to the height of pestilential epidemics in hospitals, and that in spite of improvements in ventilation and in cleanliness in the ordinary sense. The very name of hospital was dreaded. When Lister began his work in Glasgow the infirmary was a hotbed of septic diseases, "of which the most fearful was pyemia." He began to investigate again the nature of pyemic pus at the same time as he did his "utmost against that deadly scourge." He gave sulphite of potash internally as a prophylactic and tried by local measures to limit the contagion from one wound to another. In his own words: "I freely used antiseptic washes, and I had on the tables of my wards piles of clean towels to be used for drying my hands and those of my assistants after washing them, as I insisted should invariably be done in passing from one dressing to another. But all my efforts proved abortive, as I could hardly wonder when I believed, with chemists generally, that putrefaction was caused by the oxygen of the air.

"It will thus be seen that I was prepared to welcome Pasteur's demonstration that putrefaction, like other true fermentations, is caused by microbes growing in the putrescible substance. Thus was presented a new problem: not to exclude oxygen from wounds, which was impossible, but to protect them from the living causes of decomposition by means which should disturb the tissues as little as is consistent with the attainment of the essential object.

"It has been since shown that putrefaction, though a most serious cause of mischief in wounds, is not its only cause. In other words, it has been proved that there are microbes which produce septic effects without occasioning unpleasant smell. But the principle that first guided me still retains, I believe, its full value, and the endeavor to apply that principle so as to ensure the greatest safety with the least attendant disadvantage has been my chief life-work."

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* A biographic sketch and picture are given on page 499 of this issue.

It is not necessary to go into details in regard to the growth of the antiseptic method in Lister's hands. As all know, he first used phenol (carbolic acid) because it deodorized sewage and hence should be a powerful germicide; applied undiluted to compound fractures it formed a protective crust and "he had the joy of seeing these formidable injuries follow the same safe and tranquil course as simple fractures." Then came the phenol spray; phenol disinfection of hands, instruments, irrigation; and phenolized dressings, followed in due time by abandonment of the spray and of irrigation of the wound, and by other improvements and simplifications. Much labor and investigation were given also to the production of suitable suture material. Lister had the good fortune, given to but few discoverers, to witness the complete development and success of his own work, to see it utilized throughout the world.

The doctrine of antisepsis made it way slowly in Great Britain. Lister himself was shunned as a heretic in his own university. German surgeons were the first to give his teachings successful practical application, and as early as 1875, demonstrations in Lister's honor were made in Munich and Leipsic, and his monograph on the antiseptic method translated into German. Naturally the countrymen of Pasteur quickly recognized the significance of Lister's service.

With characteristic fairness and modesty Lord Lister always took pains to point out that his work really consisted in seizing on Pasteur's discoveries and applying them to surgery, as is shown by this passage from a letter by Lister to Pasteur, written in 1874:

"Allow me to take this opportunity to tender you my most cordial thanks for having, by your brilliant researches, demonstrated to me the truth of the germ theory of putrefaction, and thus furnished me with the principle on which alone the antiseptic system can be carried out. Should you at any time visit Edinburgh, it would, I believe, give you sincere gratification to see at our hospital how largely mankind is being benefited by your labors. I need hardly add that it would afford me the highest gratification to show you how greatly surgery is indebted to you. Forgive the freedom with which a common love of science inspires me."

On the occasion of the great celebration in honor of Pasteur in 1892, there occurred a memorable incident which, we are told, softened the hearts of all: As Lister finished his congratulatory address on the behalf of the Royal Societies of London and Edinburgh, Pasteur rose and embraced him, and, writes Pasteur's biographer, "the sight of these two men gave the impression of a brotherhood of science laboring to diminish the sorrows of humanity."

In a discussion of the application of the microbic theories to practical surgery, Richet points out there was a time when erysipelas, purulent infection and hospital gangrene struck down those on whom operations had been made, and when puerperal infection claimed a terrible number of victims. It would seem now as if the medical profession before 1868 was blindfolded and that its blindness was almost criminal; it is a sad record indeed, but we must look at it coolly, in order to understand what the auxiliary sciences can do for medicine. Left to their own resources, practitioners during long centuries could do nothing against erysipelas and the other wound infections, but with the powerful aid of bacteriology, surgery was able to triumph over these odious diseases and relegate them to the past. It should be borne in mind that while Lister did, as he said, nothing else than to realize clearly the vast importance of Pasteur's discoveries, and to work out their practical application with untiring skill, singleness of purpose and earnestness, animated by a pure love of humanity, yet he first saw the great importance of Pasteur's work "because he was watching on the heights, and watching there alone." Aided by anesthesia, Lister's methods became the most powerful agency in the wonderful development of surgery; to the surgeon's craft it was the one thing needful; by his perfection of operative practice he advanced every branch of the healing art and brought relief of suffering with prolongation of life to all parts of the world.

Current Comment

WHAT'S SAUCE FOR THE ECUADOR GOOSE IS SAUCE FOR THE AMERICAN EAGLE

Dispatches from Washington announce, with appropriate headlines, that

> Guayaquil, the "pesthole of the Pacific"—the clearing-house of the western hemisphere for cholera, yellow fever, small-pox and the bubonic plague—is to be cleansed. Uncle Sam has decided to force its sanitation; if the end sought cannot be accomplished by courteous diplomatic means, the star-spangled avuncular personage will drop in on Ecuador and do the job in his own thorough way.

This is well, nor will any right-minded person fail to rejoice that insanitary ports have been recognized as of sufficient importance to a nation to be made the subject of diplomatic representations. Surely yellow-fever germs, cholera-polluted drinking-water and disease-bearing mosquitoes are quite as deadly and as worthy of international notice as are dum-dum bullets, submarine mines in peaceful harbors, or torpedoes floating in the track of commerce, all of which are forbidden by civilized nations. The recognition of the rights of one nation to insist on proper sanitation in the ports of its friendly neighbor will constitute a distinct advance in international comity. But—is Uncle Sam prepared to accept the logical consequences of this invitation? If Secretary Knox, by diplomatic representation, can insist that Ecuador shall make Guayaquil sanitary, why cannot the Italian secretary of state insist that the United States compel Pittsburgh to furnish pure drinking-water for the Italians working in the steel-mills? Why cannot Russia insist that the United States clean up the tuberculosis-breeding tenements of Greater New York, in which thousands of Russians cough their lives away? The situation is worth considering. The advanced ground taken by our Department of State is distinctly in line with the march of civilization. But can the United States with consistency force little Ecuador to clean up her one sea-port when, in our own cities, thousands are dying each year from preventable causes? Would it not be well for Uncle Sam to clean up some of his own cities "in his own thorough way" as an object lesson to his little South American neighbors as to how the work should be done?

NOSTRUM-RESTRICTION A LIVE ISSUE

In our Department of Book Notices this week are reviewed two books bearing on the exploitation of nostrums in Russia and Sweden, respectively. Their appearance adds to the evidence that this question is a live issue all over the world and that its solution is believed to lie in popular enlightenment. It is interesting to note that a part of the method of attack of the problem in Russia is the autocratic restriction of nostrum advertisements; in more democratic countries the growth of public opinion has to be depended on for similar results. The success of the European campaigns against nostrums is due in no small part to a praiseworthy cooperation between the medical and the pharmaceutical professions.

A COMBINATION OF "ETHICAL PROPRIETARY" MANUFACTURERS

The "patent-medicine" makers long ago realized the value of organization and combined to form the Proprietary Association of America. How this association fought the enactment of laws that should protect the public from the evils of nostrums and quackery; how it spent money like water to lobby against legislation that every right-thinking man knew was needed; how it attempted to mold public opinion by means of faked statistics; how it tried to poison the public mind against the medical profession—all these things have been the subject of repeated comment. Now we learn that the manufacturers of the "ethical proprietaries" have taken a leaf out of the "patent-medicine" men's notebook; they, too, have organized within the last few days and have formed the National Association of Manufacturers of Medicinal Preparations. Most of the large manufacturing pharmaceutic houses have joined it. This organization, like its "patent-medicine" prototype, has apparently been created with but one object in view, to make money, honestly if possible, but to make money! This, at least, we gather from the very full report, given in the *Oil, Paint and Drug Reporter,* a conservative and reliable publication, of the meeting at which organization was accomplished. The representatives of various pharmaceutic houses met in New York and were in session two days. In these two days the association went on record as opposing the modification of the Food and Drugs Act, recommended in President Taft's special message, which would prevent "cancer cure" fakers and others in similarly disreputable businesses from publishing lies on the labels of their nostrums. In other words, the members of the National Association of Manufacturers of Medicinal Preparations seem to believe that a person should be allowed to make all the false statements he pleases, providing he confines his lying to therapeutic effects. The association also opposes the Richardson bill, which is one of the bills before Congress drawn for the purpose of strengthening the Food and Drugs Act. It further went on record as opposing the Mann bill, which would regulate the transportation of habit-forming drugs. The association registered a strong protest against Senate Bill 4727, which would require the weight or measure of all drugs sold in package form to be plainly printed on the label. Finally, the association admitted that it was organized for the purpose of opposing the campaign against ready-made mixtures. In fact, taking it by and large, it is difficult to see that the ethical stand of this organization of manufacturers of "ethical proprietaries" is in any degree higher than the stand taken by the manufacturers of "patent medicines."

THE CHOICE OF A MEDICAL SCHOOL

A Southern medical journal takes exception to an editorial under the above title which appeared in these columns some months ago,[1] on the ground that it was misleading, and that it discriminated against those medical schools which do not require a certain amount of preliminary education for admission. The purpose of the editorial was to point out to the prospective medical student the requirements of certain state licensing boards, and to give such information as would enable him to select intelligently the school he should attend; for on this might depend his success or failure as a physician. It was shown that five states — Colorado, Indiana, Iowa, Minnesota and North Dakota—demanded two years of college work as a minimum requirement, and that four states — Connecticut, Kansas, South Dakota and Utah — demanded one year of college work. Attention was drawn to the facts that many states require simply a diploma from a "recognized" or "reputable" medical college; that others have adopted the standards of the Association of American Medical Colleges; and that still others are guided by the classification of colleges prepared by the Council on Medical Education of the American Medical Association. If this was discrimination it was the right kind of discrimination; certainly it was not unfair. It was the analysis of the present situation in medical licensing, and was for the benefit of the student who desired to make a wise choice of a medical school. If a certain preliminary education is required for a license in certain states, certainly the time for the student to know it is before he begins his medical course and not at the time he applies for his license. It is likewise true that if a college does not give a course acceptable in the state where a student desires to practice, the time for the student to know it is before he begins his course and not at the time he applies for his license. Considering what the thoughtless choice of a college means to the student, there is nothing misleading in the last sentence of the editorial mentioned, and which we will emphasize by repeating: "Disappointed indeed will be that student who, after having spent a large amount of time and money, finds on graduation that his diploma is not recognized in a large number of states."

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[1] Sept. 30, 1911, p. 1138.

A NEW URINARY CONSTITUENT IN CYSTINURIA

A few unique anomalies of metabolism, notably alkaptonuria and cystinuria, have attracted attention quite as much because of the interpretation which they lend to the normal disintegration of protein in the body as on account of the pathologic features involved. From the fact that certain diamins, cadaverin and putrescin, characteristic of the putrefaction of proteins, frequently are found in conjunction with cystin in the urine of patients, it has at times been assumed that there is an essential connection in cystinuria between alimentary putrefactive changes and the output of characteristic abnormal excretory products. Cystinuria, however, has been regarded of late rather as an abnormality of protein metabolism in which the amino-acid cystin—a typical degradation product of albuminous substances—is not further broken down and oxidized as ordinarily. This view is strengthened by the simultaneous finding of other amino-acids, leucin and tyrosin, in certain cases. The latest novelty is the discovery of another amino-acid, lysin (diamino-caproic acid), in the urine of a patient with cystinuria.[1] Since this compound is known to be the mother substance of cadaverin, the intimate interrelation of the various observed constituents is further emphasized. Taken together, the accumulated data strengthen the conception of cystinuria as a condition in which the usual progress of protein catabolism is profoundly inhibited. One by one the unused fragments are cropping out as new cases become available for study.

RECOMPENSE

Periods of depression and of pessimism are inevitable. After receiving a particularly large batch of nostrum advertisements of the worst type, we are fain to ask: Is it worth while? And then in the next mail, perhaps, comes a letter like this and the question is answered:

> "At times, you may perhaps wonder just what effect your exposure work is having. I want to give you an experience for your personal information. Some time ago, I was talking to a neighbor whose married daughter . . . had been taking Cora B. Miller's headache tablets for some time. She used them for headaches, pains in any part of the body, even for sleeplessness. Several weeks before, she had an ulcerated tooth, and in five days took what was estimated to be over 200 grains of acetanilid—although she did not know it. She had symptoms of acetanilid poisoning. The Cora B. Miller exposure pamphlet, and later the government bulletin on headache remedies caused her to stop at once. She borrowed all the pamphlets I had, had the neighbors read them and even sent the 'Great American Fraud' to her old home. One neighbor threw a bottle of Bromo-Seltzer out at once. I know personally that eight people, who had been using all kinds of 'patent medicines' freely, stopped at once, for good. Just this week, some people who visited them asked to have another copy of the 'Great American Fraud' sent to Kansas. So it must have done some good."

This from a layman in the sparsely settled state of New Mexico. It is not assuming too much to believe that a similar leaven is working throughout the whole of this great country. And if it is, is it any wonder that nostrum venders and quacks are moving heaven and earth to discredit the organization — the American Medical Association — that is responsible for turning on the light?

Medical News

DISTRICT OF COLUMBIA

Personal.—Dr. John B. Nichols has succeeded Dr. Joseph S. Wall, resigned, as a member of the Board of Medical Supervisors.——Dr. Harry S. Lewis has succeeded Dr. Ernest P. Magruder, retired, as superintendent of the Emergency Hospital, Washington.

New Officers.—Medical Society of the District of Columbia: president, Dr. John B. Nichols; corresponding secretary, Dr. Thomas C. Smith.——Section on Eye, Ear, Nose and Throat of the Medical Society of the District of Columbia: president, Dr. Charles M. Hammett; secretary, Dr. George H. Heitmuller.

Board of Charities Assailed.—The District Medical Society and the committee on public health of the Chamber of Commerce, at meetings held January 24, went on record as bitterly opposed to the recommendation of the Board of Charities to Congress providing for the separation of the public and private charities of the district, and the establishment of a municipal hospital with first-aid stations.

Smoker to Local Profession.—An informal smoker was given at the Naval Medical School in honor of the local medical profession, January 26, by Surgeon-General Charles F. Stokes and medical officers on duty in the Navy in Washington. About two hundred guests were present. Dr. Stokes described the newer activities of medical officers of the Navy, with especial attention to the importance of the detection and elimination of errors in the vision of gun-pointers, and also to occupational disabilities. Medical-Director Henry G. Beyer then gave an interesting account, illustrated by lantern slides, of the International Hygiene Exhibition held recently in Dresden.

GEORGIA

New Officers.—Elbert County Medical Society: president, Dr. Claude E. Earle; secretary-treasurer, Dr. Luther P. Eberhardt, both of Elberton.

Fire in Hospital.—Fire in the Macon Hospital, January 30, necessitated the removal of the patients from the hospital to the sanatorium of Dr. Howard J. Williams. This was done by the resident staff, nurses, members of the fire department and general public, without casualty.

Personal.—The governor has named the following physicians as members of the board of trustees of the State Sanatorium, Milledgeville: Drs. J. C. Jarnigan, Warrenton, and Thomas R. Wright, Augusta.——Dr. Kingman P. Moore, for fifteen years a member of the staff of the Macon Hospital, has resigned.——Dr. Obe C. Gibson has been made city physician of Macon, vice Dr. Joseph W. DuGuid.——Drs. John S. Wells, Griffin, and Charles W. Miller, Atlanta, have been appointed members of the state eclectic medical board to fill vacancies.——Dr. William L. Gilbert has been reelected president of the Atlanta Board of Health and Dr. Willard E. Quillian has been elected vice-president.——Dr. Clarence B. Greer, Atlanta, has succeeded Dr. James Edgar Paullin, Atlanta, as pathologist of the state board of health.——Robert. F. Maddox, formerly mayor of Atlanta, has been appointed a member of the state board of health to represent the Fifth congressional district, vice Dr. Willis F. Westmorland, Atlanta, resigned.——Drs. Nicholas Peterson, Tifton, and Frederick D. Paterson, Cuthbert, have been appointed members of the state board of medical examiners, succeeding Drs. John L. Walker, Waycross, and Samuel S. Gaulden, Quitman.

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[1] Ackermann and Kutscher: Ueber das Vorkommen von Lysin im Harn bei Cystinurie, Ztschr. f. Biol., 1911, lvii, 355.

ILLINOIS

Chicago

Personal.—Dr. Henry B. Favill was one of the guests at the dinner given to the President and Mrs. Taft, by the Secretary of the Interior and Mrs. Walter Fisher at Washington on the evening of February 8.

The Ferguson Memorial.—Memorial exercises were held by the Chicago Medical Society, February 7, for the late Dr. Alexander Hugh Ferguson, president of the society last year. Dr. Joseph M. Patton, president of the society, made the introductory address, and eulogistic remarks regarding Dr. Ferguson were made by Dr. Andrew McDermid, who discussed Dr. Ferguson's early history; by Dr. Albert J. Ochsner, who spoke on Dr. Ferguson's place in surgery; by Dr. Edward F. Wells, who considered "Dr. Ferguson—the Man"; by Dr. Reginald H. Brett, Banff, Alberta, who gave a sketch of Dr. Ferguson's medical career in Toronto and Winnipeg; by Dr. Homer M. Thomas, who gave reminiscences of Dr. Ferguson, and by Dr. Liston H. Montgomery, who spoke of the genial friendship of Dr. Ferguson.

KANSAS

State Society Meeting.—At the meeting of the executive council of the State Medical Society, held January 10 in Topeka, it was decided to hold a two-day meeting in May at Hutchinson, with a banquet. Dr. James W. May, Kansas City, was elected editor of the *Kansas Medical Society Journal.*

New Officers.—Shawnee County Medical Association, January 29: president, Dr. Samuel A. Johnson; secretary, Dr. Chester E. Joss, both of Topeka.——Cloud County Medical Society, January 22: president, Dr. Frank A. McDonald; secretary, Dr. Edwin N. Robertson, both of Concordia.——Cowley County Medical Society, January 17: president, Dr. Leon A. Jacobus, Winfield; secretary, Dr. Clifford R. Spain, Arkansas City.——Harvey County Medical Society: president, Dr. Richard S. Haury; secretary-treasurer, Dr. Frank L. Abbey, both of Newton.——Franklin County Medical Society, January 31: president, Dr. John B. Davis; secretary-treasurer, Dr. Willis L. Jacobus, both of Ottawa. At the ninth annual banquet held in connection with this meeting, responses to toasts were made by the wives of the members of the society.

KENTUCKY

Medical Journal Sold.—Dr. John W. Wainwright, New York, has purchased the *American Practitioner and News,* founded in Louisville forty-five years ago by Dr. David Yandell, and will move its headquarters to New York.

New Officers.—Clark County Medical Society, January 16: president, Dr. Ernest Cole; secretary-treasurer, Dr. David H. McKinley, both of Winchester.——Hardin County Medical Society: president, Dr. D. Elmo McClure, Sonora; secretary-treasurer, Dr. Edward J. Strickler.——Kentucky Midland Medical Society, January 11: president, Dr. Charles G. Daugherty, Paris; secretary-treasurer, Dr. Charles C. Garr, Lexington.——Fayette County Medical Society: president, Dr. Claude W. Trapp; secretary, Dr. Lee C. Redmon, Lexington.

Personal.—Dr. Moses L. Murphy, Louisville, sustained cuts and bruises in a collision between his automobile and a street car, February 4.——Dr. L. S. Duncan, Louisville, has been commissioned major in the Medical Corps, N. G. Ky., and assigned to the First Infantry.——Dr. Llewellyn P. Spears, Louisville, has been commissioned captain and Dr. Albert A. Stoll, Louisville, Lieutenant, M. C., N. G., Ky., and assigned to the same command.——Dr. Walter O. Bullock has succeeded Dr. James C. Carrick as president of the board of health of Lexington.

Hospital Notes.—Lexington, which has been paying St. Joseph's Hospital and the Good Samaritan Hospital, each $10,000 a year, for taking care of the sick of the city, is proposing to purchase the building of the Good Samaritan Hospital for $11,500 and to equip in that building a city hospital. It is also proposed to improve the eruptive hospital, near Lexington, by constructing at a cost of $3,000 a number of small buildings for the care of those suffering from tuberculosis and other communicable diseases.——The Louisville Hospital Commission has awarded the contract for the new City Hospital to a Toledo firm for $4,000,000.

LOUISIANA

Antituberculosis League Meeting.—At the annual meeting of the Louisiana Antituberculosis League in New Orleans, Dr. George Farrar Patton was reelected president; Drs. Adolph Henriques and Miss Kate Gordon were elected vice-presidents; Dr. Arthur I. Weil was elected secretary and Dr. George S Brown, treasurer.

Colored Ward for Charity Hospital.—The board of administrators of Charity Hospital, New Orleans, is having plans made for a $32,000 building to be used as a ward for colored females.——The benefit fund of the hospital, for which an active campaign was made in December, it is announced, amounts to more than $40,000.

The State Health Train.—The Louisiana State Board of Health exhibit and demonstration train will start on its second tour of the state of Louisiana, leaving Baton Rouge March 4.——The train was sent to Shreveport, January 17, to be held there awaiting possible developments in the cerebrospinal meningitis situation.

The Honor System at Tulane.—The freshman class of Tulane University, Medical Department, has adopted the honor rule, which is in force throughout the university. A member of the class has been tried recently for violating the honor system during an examination, and the class committee has reported the case to Dr. Isadore Dyer, the dean, with a recommendation that the guilty individual be expelled.

New Officers.—Tangipahoa Parish Medical Association, January 17: president, Dr. Glenn J. Smith, Amite; secretary, Dr. William T. Newman, Independence.——Rapides Parish Medical Society, January 8: president, Dr. Eugene L. Henry, Lecompte; secretary and treasurer, Dr. James A. White, Alexandria.——Orleans Parish Medical Society, January 8: president, Dr. Eugene H. Walet; secretary, Dr. M. Thomas Lanaux, both of New Orleans.——Shreveport Medical Association: president, Dr. J. Ashton Blanchard; secretary, Dr. Jacob M. Bodenheimer.

Health Board Shows Moving Pictures.—Under the auspices of the Louisiana State Board of Health, Dr. Rudolph H. Von Ezdorf, Mobile, Ala., U. S. P. H. and M.-H. Service, delivered a lecture at Shreveport, January 31, on the meningitis epidemic. At this lecture several reels of motion pictures, describing the work of the State Board of Health, were exhibited. A second lecture was given in Shreveport, February 6, at which still other motion pictures describing the work of the board for the improvement of health and sanitary conditions were shown.

Sanatorium Notes.—The Charity Ward Association, Baton Rouge, took over the management of the Baton Rouge Sanitarium, February 1. The sanatorium and hospital, made possible at Monroe by the will of the late Reverend L. Enaut, is to be erected at Wood and Jackson streets. A donation of $10,000 additional has been secured by the Franciscan Sisters from France.——The Lafayette Sanitarium buildings have been completed and turned over to the Sanatorium Association, of which Dr. John E. Mouton is president and Dr. Frederick R. Tolson, vice-president.

Dr. Dowling in Quarantine.—Dr. Oscar Dowling, president of the Louisiana State Board of Health, on his return from an investigation from Dallas, Fort Worth and Waco, where he had been investigating the epidemic of cerebrospinal meningitis, was arrested at the Shreveport Union Depot, kept under guard for three hours, then placed in the detention camp until the mayor ordered his release.——Dr. Dowling reports that the Texas situation is greatly improved and that further spread of the disease is not now feared. He recommends the generous applications of antiseptics, cleanliness of the mouth and nasal passages, immediate quarantine of the patient and complete disinfection of the premises in all cases of the disease.

The Sickles Fund.—The Sickles Fund Commission, at its meeting January 30, adopted the report of the special committee relative to the dispensing of medicine at the headquarters in the Charity Hospital. It was stipulated that no patients at the Charity Hospital should be eligible to receive free medicine from this fund, and the Charity Hospital pharmacopeia was adopted as the standard. It was decided to exclude all patent and proprietary medicines, antitoxins, dressings and appliances of all kinds from the free prescriptions. The applicants for medicine must be bonafide residents of New Orleans and worthy, these facts being certified to by the prescribing physician. The hours for dispensing medicine were fixed at 8 to 10 a. m. and 2 to 4 p. m. daily.

Personal.—Dr. Creighton Wellman, New Orleans, has sailed for Panama, February 3, to make special study of the methods and the results of sanitary measures now in force in the Canal Zone.——Dr. Louis A. Meraux, New Orleans, has been made president of the St. Bernard Board of Health.——Drs. Louis Abramson and James F. O'Leary have resigned as members of the Shreveport Board of Health.——Dr. Stephen L.

Powlett, Hammond, and Dr. Robert F. Brooks, Ruston, are reported to be critically ill at their homes.——Dr. Edith Loeber Ballard has been appointed assistant in clinical obstetrics and Dr. Mary Elizabeth Bass assistant in the department of pathology in the Tulane Medical College. Dr. Robert A. Davis has been appointed clinical assistant in ophthalmology; Dr. Marion E. Brown, assistant in clinical medicine, and Drs. William D. Phillips, M. Thomas Lanaux, Jacob W. Newman and Ephraim D. Friedrichs, assistants in clinical obstetrics.——Dr. Oscar Dowling, Shreveport, has returned from a trip to Cuba.——Drs. Isadore Dyer, Abraham L. Metz and Creighton Wellman, New Orleans, have been elected to the Senior Scholastic Society of Stars and Bars.

MARYLAND

New Officers.—Harford County Medical Society, January 25: president, Dr. Armfield F. Van Bibber, Bel Air; secretary-treasurer, Dr. Charles Bagley, Bagley.

Personal.—Dr. Brice M. Goldsborough, Cambridge, has returned from Florida, restored to health.——The residence of Dr. J. Clement Clark, superintendent of the Spring Grove Hospital for the Insane, Sykesville, was destroyed by fire recently.

State Lunacy Commission.—The state lunacy commission has asked an appropriation of $800,000, one-fourth of which is to be used on the purchase of land and the construction of buildings for the state hospital on the Eastern Shore. Two years ago the legislature appropriated $600,000 to the commission.

Hospital Association Report.—The sixth annual report of the Washington County Hospital Association, Hagerstown, shows receipts of $19,494 and a balance of $2,124. During the year 283 patients were admitted and 220 operations were performed. The mortality for the year was twenty. Of the patients, fifty-four were free. The association has recently purchased Kee-Mar College, which after renovation, will be occupied by the hospital.

Antituberculosis Car.—The Baltimore and Ohio Railroad has fitted up an antituberculosis car for the use of the Maryland Association for the Prevention and Relief of Tuberculosis. This car will visit the towns of Maryland to aid in carrying on an educational campaign looking toward the eradication of tuberculosis. The car is to be at the Mount Royal Station, Baltimore, the week of February 19-24 for inspection by the delegates of the Health Congress, which will be in session at that time in Baltimore.

Bills Introduced in the Legislature.—Two important bills from Baltimore County have been introduced in the legislature and are approved by the physicians of the county. The first provides for a sewerage system and disposal plant, the expense of which is to be borne by those directly benefited, and the second repeals the law providing for health officers, and substitutes therefor one health officer, who shall be a practicing physician, who shall receive a salary of $3,000 per annum, and who shall be required to restrict himself to his duties as health officer.

Baltimore

Book and Journal Club.—The annual meeting of the Book and Journal Club was held February 6. Dr. Charles G. Cumston, Boston, was the guest of the evening and read a paper on "Felix Plater." The club has eighty members and expends its funds for the purchase of current journals for the library of the Medical and Chirurgical Faculty of Maryland. The receipts last year were about $442, and the expenses about $400.

The Finney Dinner.—At the Finney dinner, February 7, Dr. William S. Thayer acted as toastmaster. The committee in charge of the Finney Fund, who are obtaining subscriptions for a memorial to the illustrious surgeon, is composed of Drs. Samuel T. Earle, William A. Fisher, Jr., Harry Friedenwald, Julius Friedenwald, Louis P. Hamburger, George W. Mitchell, Herbert Harlan, M. Gibson Porter, William S. Thayer, Richard H. Follis, Carey B. Gamble, James M. H. Rowland, Charles E. Simon, Henry B. Thomas, Hiram Woods, Jr., and Henry M. Thomas. The subscriptions are not limited to medical men, but are from all friends of Dr. Finney.

Personal.—Dr. Henry Chandlee is spending the month of February in Bermuda.——Dr. Abraham Samuels, on account of ill health, has been obliged to give up practice and has gone to the Adirondacks.——Dr. Lillian Welsh, professor of physiology and hygiene in Goucher College, has been appointed special lecturer on hygiene to the women students of the University of Michigan.——Dr. Herbert Harlan has been appointed surgeon-general of Maryland.——Dr. Henry Barton Jacobs was reelected president of the Endowood Hospital for Consumptives, February 7.——Dr. William S. Thayer was elected president of the Harvard Club of Maryland, February 8.

MICHIGAN

Appropriation to Fight Scarlet Fever.—The city council of Detroit has voted to take $10,000 from the contingent fund to carry on the work against scarlet fever for the balance of the fiscal year.

New Officers.—Michigan Health Officers' Association, January 30-31: president, Dr. Guy L. Kiefer, Detroit; secretary, Dr. Robert L. Dixon, Lansing.——St. Joseph County Medical Society, January 31: president, Dr. Thomas D. Givan, Three Rivers; secretary-treasurer, Dr. Samuel R. Robinson, Sturgis.

Appreciate Entertainment.—As a token of appreciation of the entertainment furnished the State Medical Society at its meeting in Detroit in 1911, Dr. Frederick C. Warnshuis, Grand Rapids, president of the state society, presented the Wayne County Medical Society with a mahogany grandfather's clock, February 5. The gift was accepted on the part of the Wayne County Society by Dr. Henry O. Walker.

Medical Building Doomed.—The Board of Regents of the University of Michigan, at their meeting January 26, voted the razing of the old medical building at Ann Arbor. This is the third time the matter has been voted on by the board, but each time the alumni have protested so strongly that the matter has been reconsidered. The work of demolition of the building will begin in a short time.

Personal.—Dr. William T. S. Gregg, Calumet, has accepted a position on the medical staff of the Calumet-Hecla Company.——Dr. Jason Morse, for twenty-five years a member of the staff of the Pontiac State Hospital, has resigned, and after a trip to the Canal Zone, will locate in Los Angeles.——Dr. Allan M. Wilkinson, Charlevoix, was presented with a seal ring by his Bible class, January 25.——Dr. Robert J. Baskerville, Detroit, was struck by an automobile, January 31, and painfully injured.

MINNESOTA

Sanatorium Soon Ready.—The St. Louis County Sanatorium for Tuberculosis is almost completed and will probably be ready to receive patients March 1.

Hospital Fire.—Cloquet Hospital, Carlton County, was destroyed by fire February 2. The patients were all removed in safety and no casualties occurred.

Gift to University Library.—The University of Minnesota Library has received nearly 15,000 pamphlets and periodicals as a donation from the Ramsey County Medical Association.

Branch Health Laboratory Opened.—A branch laboratory of the State Board of Health has been opened in Mankato, in charge of Dr. Chelsea C. Pratt, who has been connected for six years with the state board laboratory in St. Paul.

Increase in Health Department Appropriation.—The Minneapolis City Council Health and Hospital Committee has approved the appropriation of $140,800 for the health department, about $12,500 more than the amount required for 1911.

Small-Pox in State Hospital.—Small-pox is reported to have broken out at the State Hospital for the Insane, Fergus Falls. Two attendants have been placed in the contagious ward and all precautions possible are being taken to prevent the spread of the disease to the inmates.

Personal.—Dr. John A. McCuen has been elected mayor of Duluth.——Dr. Henry M. Bracken, Minneapolis, secretary of the State Board of Health, has returned from a study of hospitals in the east and will leave for Europe by April 21, to make a special study of municipal abattoirs.

Medical Building.—John Gateley of New York has announced that he is about to erect a ten-story building, designed for offices for physicians and dentists, on Seventh Street, between Nicollet and Hennepin Avenues, Minneapolis. The project is said to have been approved by the Hennepin County Medical Association and construction work will start early in June.

New Officers.—Ramsey County Medical Association, February 5: president, Dr. Thomas W. Stumm; secretary-treasurer, Dr. Charles E. Smith, both of St. Paul.——Blue Earth County Medical Society: secretary, Dr. Gerhard A. Dahl, vice Dr. Jane C. Hughes, resigned, both of Mankato.——Hennepin County Medical Society, January 8: president, Dr. Charles H. Bradley; secretary-treasurer, Dr. Edgar J. Huenekens, both of Minneapolis.——Upper Mississippi Medical Association: president, Dr. Charles F. Coulter, Wadena; secretary, Dr. George H. Lowthian, Akeley.——Southern Minnesota Medical Association, January 16: president, Dr. John H. James, Mankato; secretary, Dr. William T. Adams, Elgin.——Park Region Medical Society, January 17: president, Dr. A. Dair Haskell, Alexandria; secretary-treasurer, Dr. A. Mason Randall, Ashby.——Waseca County Medical Association, January 8: president, Dr. William M. Cory, Waterville; secretary-treasurer, Dr. William A. Meiliche, Janesville.

Free Popular Lectures.—A series of public lectures, free to the public of Minneapolis, is being given under the auspices of the Hennepin County Medical Society at the Minneapolis Public Library. The first lecture was given on January 20 on the "Healthful Citizen in a Healthful Community." The second on January 27 on "Play and Supervised Play; Its Part in the Education and Well-Being of the Child." On February 10, "The City's Vice and Its Vicious Classes," were discussed and a commentary was given on the report of the Vice Commission. The succeeding lectures will be given on February 24 on "Types of Children, Their Care and Training in the Home and School." On March 9, "Why Not Know, or Lessons in the Early Diagnosis of Disease," is to be the subject, and on March 23, the "Hygiene of Sex" will be discussed; a talk to men being given at the Public Library, and on the same day a talk to women on "The Dangers of Womanhood," in the lecture room of the Church of the Redeemer.

MISSISSIPPI

New Officers.—Holmes County Medical Society, at Lexington, January 9: president, Dr. Marquis L. Pollard, Thornton; secretary-treasurer, Dr. Stephen A. Eggleston, Lexington.——Tri-County Medical Society, at Brookhaven: president, Dr. John T. Butler; secretary-treasurer, Dr. Dudley W. Jones, both of Brookhaven.——Attala County Medical Society: president, Dr. John J. Howell, McCool; secretary-treasurer, Dr. John W. Allen, Kosciusko.——Choctaw County Medical Society: president, Dr. William D. Arnold; secretary-treasurer, Dr. Allen R. Nason, both of Ackerman.——Clarke-Wayne County Medical Society: president, Dr. James A. McDevitt; secretary-treasurer, Dr. Albert P. Hand, both of Shubuta.——Harrison County Medical Society: president, Dr. Burl S. Hood, Bond; secretary-treasurer, Dr. Benton Z. Welch, Biloxi.——Jackson County Medical Society: president, Dr. J. I. Evans, Pascagoula; secretary-treasurer-delegate, Dr. Jacob N. Rape, Moss Point.——Jones County Medical Society: president, Dr. William S. Cranford, Laurel; secretary-treasurer, Dr. W. S. Harper, Wisner.——Lawrence-Jefferson Davis Medical Society: president, Dr. George A. Tennisson, Monticello; secretary-treasurer, Dr. Benjamin S. Waller, Silver Creek.——Leflore County Medical Society: president, Dr. H. L. Shannon, Itta Bena; secretary-treasurer, Dr. William B. Dickens, Greenwood.——Marshall County Medical Society: president, Dr. George E. Johnson, Hudsonville; secretary-treasurer-delegate, Dr. William C. Elliott, Holly Springs.——Prentiss County Medical Society: president, Dr. James C. Vandiver, Wheeler; secretary-treasurer, Dr. Josiah S. Wheeler, Booneville.——Tate County Medical Society: president, Dr. Reuben D. Williams, Learned; secretary-treasurer, Dr. William D. Smith, Senatobia.——Washington County Medical Society: president, Dr. Thomas F. Wilson, Arcola; secretary-treasurer, Dr. Joseph J. Ferguson, Greenville.——Yalobusha County Medical Society: president, Dr. Samuel E. Cooper, Water Valley; secretary-treasurer, Dr. Ollie G. Coleman, Coffeeville.

MISSOURI

New Officers.—Kansas City Academy of Medicine, February 3: president, Dr. Samuel S. Glasscock; secretary, Dr. Paul V. Woolley.——Lewis County Medical Society, January 30: president, Dr. Thomas F. McGlasson, Lewistown; secretary, Dr. Paul F. Cole, Steffenville.

College Sues State Board.—The College of Physicians and Surgeons of St. Louis is said to have brought suit against the Missouri State Board of Health for $200,000, because of its action taken in withdrawing recognition from the college, alleging that such action was based on trivial reasons.

Antituberculosis Society Incorporated.—The Buchanan County Society for the Relief and Prevention of Tuberculosis has made application for a pro forma decree of incorporation. The officers named in the application are James H. McCord, president; Dr. Oliver C. Gabhart, secretary, and J. G. Schneider, treasurer.

Hospital Note.—A sub-dispensary under the Kansas City Health Department is to be established in the eastern portion of the city, probably in the Baptist Hospital, principally for the convenience of school children who need medicine and are unable to pay for it and who otherwise would be obliged to go to the City Hall.

Hospital Staff Organizes Society.—The staff of the Swedish Hospital, Kansas City, has organized the Medical-Surgical Society for the purpose of stimulating the scientific productiveness of the members of the staff. Meetings are held on the third Tuesday of every month in conjunction with a dinner served at some restaurant in the city. At the first meeting held January 18, a paper was read by Dr. Francis M. McCallum on "The Most Recent Research on Kidney Function"; Dr. Harold P. Kuhn demonstrated a new "Unit Sterilizer" for use in the operating room, and Dr. Arthur E. Hertzler spoke on the significance of "The Most Recent Research in Cancer." Dr. Isadore A. Anderson is secretary of the society.

MONTANA

New Officers.—Deer Lodge County Medical Association: president, Dr. Owen C. Evans; secretary, Dr. Carroll R. Bancroft; both of Anaconda.——Missoula County Medical Society: president, Dr. Charles Pixley; secretary-treasurer, Dr. George F. Turman, both of Missoula.

State Tuberculosis Hospital.—The Montana State Sanatorium for Tuberculosis will be built this year, at a cost of $100,000. It will be probably located on the west bank of the Bitter Roof River, about 2 miles from Stevensville, a location at an elevation of 4,000 feet. The buildings are to consist of an administration block, including office, treatment and officers' living rooms, superintendent's residence, employees' cottages, twenty-five sleeping shacks, etc.

Personal.—Dr. Charles E. K. Vidal, Great Falls, has been appointed a member of the State Board of Health, to fill the unexpired term of the late Dr. William Treacy.——Dr. Joseph Piedalue, Bozeman, has succeeded Dr. Albert D. Brewer as physician of Gallatin County.——Dr. Thomas J. McKenzie, Missoula, has succeeded Dr. Edwin C. Anderson as health officer of Missoula County.——Dr. Alexander D. McDonald, Kalispell, has been appointed health officer of Flathead County.

NEBRASKA

New Officers.—Jefferson County Medical Association, January 17: president, Dr. Thomas J. Andrews, Fairbury; secretary-treasurer, Dr. Harry E. Potter, Endicott.——Saunders County Medical Society, January 18: president, Dr. Mary A. Quincy, Ashland; secretary, Dr. Frank E. Way, Wahoo.——Dodge County Medical Association, January 22: president, Dr. Anders P. Overgaard; secretary-treasurer, Dr. Sylvester A. Preston, both of Fremont.

NEW MEXICO

New Officers.—Luna County Medical Society, at Deming: president, Dr. Edward A. Montenyohl, and secretary, Dr. I. B. Keller, both of Deming.——Bernalillo County Medical Society installed its new officers, January 3: Dr. Charles A. Frank, president, and Dr. Frank E. Tull, secretary, both of Albuquerque.

Personal.—Col. George E. Bushnell, M. C., U. S. Army, in command of the United States General Hospital for Tuberculosis, Fort Bayard, delivered an address before the Grant County Medical Society, January 27, on "Immunity."——Dr. Robert Smart, formerly of the Medical Corps of the Army, but more recently a practitioner of Albuquerque, has moved to San Diego, Cal.——Dr. Silas G. Sewell after three and a half years' successive administration of the Presbyterian Sanatorium, Albuquerque, has resigned and will devote himself to private practice.

NEW YORK

Vital Statistics for 1911.—Dr. Eugene H. Porter, State Commissioner of Health, has filed his annual report with Governor Dix which shows the lowest death-rate yet recorded in this state. There were 2,092 fewer deaths in 1911 than in 1910, and the urban rate was but little higher than the rural, the death-rate being 15.5 per 1,000 population as against 16.1 for 1910. The births exceeded the deaths by 75,288, the number of births registered being 220,825. There were 90,000 marriages or about 5,000 more than during the previous year. Owing to the epidemic of influenza during the winter of 1910-1911 the winter mortality exceeded that of the summer. Pulmonary tuberculosis caused 14,179 deaths, about the same number as during the previous year. For the entire period of the past twenty-five years consumption has caused 11 per cent. of the deaths in this state. Cancer caused 8,000 deaths during 1911, while in 1891 only 3,000 deaths were attributed to that disease. The death-rate from typhoid fever was the lowest ever recorded, 14 per 100,000 population. There were 1,000 more deaths from accidents and 42 fewer from suicide in 1911 than in 1910.

New York City

Harvey Society Lecture.—The next in the present course of Harvey Society lectures given at the New York Academy of Medicine, February 17, by Prof. R. H. Chittenden of Yale University is on "Current Views Regarding the Nutrition of Man."

Pneumonia Focus.—An epidemic of pneumonia, confined to five blocks of Villa Avenue in Upper New York, is attracting the attention of the health physicians. During the last few days more than eighty cases of pneumonia have been reported in this locality.

Violent Deaths of 1911.—The annual report of the New York board of coroners shows that 5,700 sudden deaths were reported to the coroner's office during the year. Of these, 2,650 were from violence; the homicides numbered 193 and the suicides 430. Of the deaths, ninety were caused by automobiles, seventy-two by surface cars, ten by subway trains and sixty-eight by elevators.

Milk Laboratories Incorporated.—The supreme court has approved the incorporation of the Nathan Straus Pasteurized Milk Laboratories, an association of which Nathan Straus is the head, and which has for its purpose the establishment of milk depots throughout the state and later throughout the world. Physicians are to be employed for the purpose of instructing mothers in the use of pasteurized milk.

Sells Library.—It is announced that Dr. Thomas Addis Emmet has sold his collection of extra illustrated books, most of which pertain to American history. Dr. Emmet is said to have illustrated more books concerning American history and to have used autographs, letters and rare documents more freely than any other collector. Dr. Emmet is 85 years old, and gives this as the reason for disposing of the collection.

Urge National Bureau of Health.—The creation of a national health bureau was the subject under discussion at the Republican Club on February 3. Officers of the health boards of New York, New Jersey, Pennsylvania and Rhode Island and Massachusetts were represented, either by letter or in person. Others who spoke in favor of the creation of the bureau were Drs. Irving Fisher of Yale, Joseph D. Bryant, Louis L. Seaman and William M. Polk, and Senator Robert Owen.

Civil Service Examination.—The municipal civil service commission has directed that an open competitive examination be held for the position of assistant registrar of records in the Department of Health. This position commands a salary of $3,000 a year, and requires that the incumbent be not only a duly qualified physician, but that he shall have had experience and training in statistical work. The time and place of the examination will be announced by the commission in due time.

Janeway Library for Columbia.—At the recent meeting of the Trustees of Columbia University it was announced that Dr. Theodore C. Janeway, Bard professor of the practice of medicine, had presented the trustees with the medical library of his father, Dr. Edward G. Janeway, to be the departmental library of the department of the practice of medicine. The library comprises about 1,500 bound volumes and 2,500 unbound monographs, journals and pamphlets.——It was also announced that Mrs. Russell Sage has given $25,000 to establish the E. G. Janeway library endowment fund at the medical school.

Hebrew Charities Report.—The annual report of the United Hebrew Charities shows that of $40,000 disbursed for relief purposes, 20 per cent., was on account of the ravages of tuberculosis among workers. This is an increase of $8,000 over the amount distributed for the relief of sufferers from tuberculosis, and this organization is of the opinion that this city is not making any headway in the fight against tuberculosis. For two years they have been conducting an experiment whereby they moved thirty-five families into sanitary apartments and bettered their living conditions, and the result has showed that some sufferers from tuberculosis can be cured even in their own homes.

New Building for Hospital.—Plans have been completed for a new building to be added to the Mount Sinai Hospital plant. This building will be the pathologic building for which Adolph Lewisohn gave $130,000 some time ago. The hospital corporation has just purchased two additional lots on the block opposite the Administration Building, where it already owned thirteen. This is to provide for the future needs of the hospital. The hospital has also received a gift of $20,000 for the extension of its social service work from Paul M. and Felix M. Warburg. This gift makes a total of $245,000 that the institution has received during the past year in the form of donations, legacies and bequests.

Health Department Insists on Money for Vaccination.—The Tammany aldermen again blocked the proposal to appropriate $10,000 for the purpose of offering free vaccination to people in the tenements. Dr. Lederle, however, says that he is undismayed, and will persist in making the request until he gets the money, and he now asks for $15,000. Thus far this year there have been nine cases of small-pox reported in Brooklyn, and the Board of Health is of the opinion that the time is ripe for an epidemic of small-pox unless vaccination is generally practiced. In the year 1902, when there was an outbreak of small-pox, and during the years following, the city appropriated $115,000 and made some 810,000 vaccinations. It is stated that in some portions of the city there has been practically no vaccination during the past ten years.

Personal.—Sir Frederick and Lady Treves arrived in New York from Panama, January 31, and sailed for England the next day.——Dr. and Mrs. L. Emmett Holt sailed for the Mediterranean, January 6.——Dr. Philip F. O'Hanlon, who was operated on for diverticulitis six weeks ago, has recovered and resumed practice.——Dr. Carl von Noorden, Vienna, will deliver a series of lectures on problems of metabolism in the New York Post-Graduate Medical School in October.——Dr. Abraham Sophian of the Rockefeller Institute of Medical Research left Texas, where he went to assist in combating the epidemic of spinal meningitis, on February 3. In appreciation of his services, the city of Dallas gave him $2,500 and Waco and a number of smaller towns presented him with $5,000, besides which he received a number of gifts in jewelry from local health departments and private individuals.

OHIO

Personal.—Dr. Edger L. Vermilya has been elected health officer of Fremont.——Dr. John E. Myers, Springfield, has declined to serve again for the board of hospital trustees.——Dr. Frank P. Stafford is critically ill at his home in New Carlisle.

New Officers.—Dayton Medical Society: president, Dr. J. F. Wuist, and secretary-treasurer, Dr. Francis T. Newcomer.——Darke County Medical Society, at Greenville, January 11: president, Dr. William C. Gutermuth, Versailles, and secretary-treasurer, Dr. John E. Hunter, Greenville.——Columbiana County Medical Society, at East Liverpool: president, Dr. Harry Bookwalter, Columbiana, and secretary, Dr. J. Howard Davis, East Liverpool.——Columbus General Practitioners' Medical Society, at Columbus: president, Dr. Albert S. Barnes, and secretary, Dr. John Rauschkolb.——Ashtabula County Medical Association, at Ashtabula: president, Dr. Lee C. Stiles, Austinburg, and secretary, Dr. Mary M. Battles, Ashtabula.——Tuscarawas County Medical Society, at Uhrichsville: president, Dr. Robert S. Barton, New Philadelphia, and secretary, Dr. George Tracy Haverfield, Uhrichsville (reelected).——Greene County Medical Society, at Xenia: president, Dr. Harry O. Whitaker, New Burlington, and secretary, Dr. Clarence G. McPherson, Xenia.——Lake County Medical Society, at Painesville: president, Dr. Henry E. York, Fairport Harbor, and secretary, Dr. Henry W. Grauel, both of Painesville.——Montgomery County Medical Society, at Dayton: president, Dr. Albert H. Lane, and secretary, Dr. Charles C. McLean, both of Dayton.——Trumbull County Medical Society, January 30: president, Dr. Charles W. Thomas; secretary-treasurer, Dr. Frederick K. Smith, both of Warren.

Cincinnati

New Officers.—The Medical Civic Association of Cincinnati organized January 31, and elected Dr. Charles A. L. Reed temporary chairman; president, Dr. Robert W. Stewart; secretary, Dr. Frank B. Cross.——Cincinnati Academy of Medicine, January 8: president, Dr. William D. Porter; secretary, Dr. Charles T. Souther.

Personal.—Dr. William H. Peters has been appointed assistant health officer of Cincinnati, vice Dr. William H. Strietmann, resigned.——Dr. Otto P. Geier has been appointed superintendent of the newly created department of Charities and Corrections and announced the following aids: Dr. Charles E. Howard, physician to the City Infirmary; Dr. Frances M. Hollingshead, physician and assistant surgeon to the House of Refuge; Dr. Herbert A. Brown, physician to the workhouse, and Dr. James W. Miller, physician to the municipal lodging-house. The following consulting staff, without pay, has been appointed: Dr. Wade McMillan, orthopedist, Dr. Edmund Baehr, neurologist, and Prof. B. B. Breeze.——Dr. Charles Jones has been appointed receiving physician to the Cincinnati Hospital, vice Dr. Charles E. Howard, resigned.——Dr. Clyde E. Shinkle has been appointed assistant physician to the Longview Asylum, vice Dr. Emerson A. North, resigned.——Dr. Julius H. Eichberg has been appointed physician to the infectious and contagious service of the Cincinnati Hospital.——Dr. Charles A. Stammel, Jr., has been appointed resident physician to the Industrial School for Boys, Lancaster.——Dr. William Ravine has been appointed chief medical inspector of schools; Dr. George L. Kriedler, district medical inspector for Madisonville; Dr. John H. Walton, district physician for Sayler Park, Delhi and Fernbank; Dr. Harry W. Behymer, district physician for Mount Washington, and Dr. George Weinrich, food inspector.——Dr. George L. Hall has been appointed assistant chief sanitary inspector.——Dr. David I. Wolfstein has been appointed a member of the staff of the Cincinnati Hospital, vice Dr. Frank W. Langdon, resigned. Dr. Horace J. Whitacre has resigned as professor of surgical pathology and principles of surgery in the Ohio-Miami Medical College.

PENNSYLVANIA

Philadelphia

Work of Free Dispensary.—During 1911, the one hundred and twenty-sixth year of the existence of the Philadelphia Dispensary for the Medical Relief of the Poor, more than 100,000 prescriptions were compounded and more than 40,000 patients were treated.

Appeal for Lincoln Memorial Hospital.—The treasurer of Mercy Hospital is making an appeal to Philadelphia to support the Mercy Hospital Memorial to Abraham Lincoln. The hospital, which is for the use of the colored people of the southern section of Philadelphia, is doing good work and deserves generous support.

Examination of School Children.—Forty-five physicians have been appointed members of the medical inspection corps for the schools of Philadelphia, after a competitive examination. Dr. Walter S. Cornell has been elected director of the corps, which has for its object not only the inspection of public school children, but also instruction in child hygiene.

Additions to Hospitals.—The new addition to the Polyclinic Hospital at Eighteenth and Lombard streets was formally opened February 5, when a reception to the corporators, trustees and medical staff and faculty was given by the president, Herbert L. Clark. Started in 1907, the dispensary represents an outlay of $75,000. It is a three-story brick and stone structure, with special provisions for the various medical specialties, having large space in the basement for the orthopedic department and spacious rooms on the other floors for throat, nose, ear, eye, skin and other diseases. Nearly double the former number of patients can now be handled for treatment.——Hospital of the Woman's Medical College, at Twenty-Second Street and College Avenue, is to have three stories added.

School Inspectors Named.—On February 5, Dr. Joseph S. Neff, Director of Public Health and Charities, appointed fifty-six physicians as school inspectors. The list comprises thirty-three names of physicians who were recently appointed provisionally and twenty-three new names to take the place of those who failed to pass the examination. As a result of an examination conducted along civil service lines, 40 per cent. of the provisional appointees failed. All the questions given were practical and such as would be a fair test of the working knowledge of sanitation required of a medical examiner.

Board of Education Makes Appointments.—At a meeting of the elementary schools committee of the board of education, February 7, fifteen additional school nurses were appointed at a salary of $600 a year, to be increased $30 a year until the maximum of $750 is reached.——Dr. Joseph S. Neff applied for more medical inspectors, for clerical assistance and for an appropriation for supplies to get the medical staff organized. The request was granted and it was decided to set aside $200 for supplies and to appoint five additional inspectors at $1,500 a year to supervise the others, each to be responsible for two school districts.

Personal.—Dr. Tom Jays, a medical missionary from equatorial Africa, and one of the secretaries of the Church Missionary Society, has been visiting in Philadelphia as a representative of the Student Volunteer Movement for Foreign Missions.——Dr. Edward F. Walsh, who has been very ill with pneumonia for two weeks, is recovering.——Dr. S. Weir Mitchell celebrated his eighty-third birthday February 15.——Dr. John B. Deaver was the guest of honor at the dinner given by the John B. Deaver Surgical Society of the University of Pennsylvania February 9.——Drs. Edward A. Spitzka, George B. Miller and Frank C. Abbott were badly overcome by ammonia fumes, pouring from a break in the refrigerating plant in the Daniel Baugh Institute of Anatomy of Jefferson Medical College, February 8.

WASHINGTON

New Officers.—Cowlitz County Medical Society, at Woodland, January 10: president, Dr. Clement W. Bales, Kelso.——Chehalis County Medical Association, at Aberdeen, January 17: president, Dr. Clayton E. Bartlett, and secretary-treasurer, Dr. Leon L. Goodnow, both of Aberdeen.——Pierce County Medical Society, at Tacoma, January 2: president, Dr. Wilmot D. Read, and secretary, Dr. Edward D. Sutton, both of Tacoma.——Spokane County Medical Society, at Spokane, January 11: president, Dr. Wilbur W. Mackenzie, and secretary, Charles M. Doland, both of Spokane. It was voted to reduce the dues of the society from $10 to $5.——Yakima County Medical Society, at North Yakima: president, Dr. Edmund S. West, and secretary, Dr. Frank E. Chase, both of North Yakima.

WEST VIRGINIA

New Officers.—Kanawha County Medical Society; president, Dr. Harry H. Young, and secretary, Dr. Patrick L. Gordon, both of Charleston.

Betterment of Hospital.—A number of physicians of the city met at North Wheeling Hospital January 11, to discuss plans for its betterment and enlargement. Dr. Charles A. Wingerter was elected permanent chairman of the organization and Dr. Otis D. McCoy, secretary. It was decided that a staff of twelve physicians and twelve surgeons, including specialists, be appointed, which in addition to its hospital work should give instructions to nurses. It is proposed also that a new wing should be built on the south side of the main building. A committee of seven was appointed to confer with the management regarding these matters. The committee consists of Drs. John A. Campbell, Charles M. Frisell, Gregory Ackerman, S. Edward Bippus, Andrew J. Noome, William S. Fulton and Edward L. Armbrecht.

WISCONSIN

School for Stammerers Opened.—Dr. George P. Barth, chief medical inspector of the Milwaukee schools, announced the opening of the fourth public school class for stammerers in the Twentieth District School.

State Board Meeting.—At the meeting of the State Board of Health, January 31, Dr. William F. Whyte, Watertown, was reelected president of the board, and the appointment of a committee of five graduate nurses to examine applicants for certificates as licensed nurses under the state law was confirmed.

Hospital Staff Reorganization.—The medical staff of St. Mary's Hospital, Milwaukee, was reorganized, January 30. Dr. James A. Bach was elected president; Dr. Arthur T. Holbrook, vice-president, and Dr. Hans A. Reinhard, secretary. It was decided to establish a free out-patient department of the hospital.

State Society Meeting.—The annual meeting of the Wisconsin State Medical Society will be held in Wausau, May 22-24. The proposed entertainments include a reception to the visiting ladies at the Wausau Club, an automobile ride around the city, a smoker for the men and a banquet at Rothschild Park.

Examinations to Be in English.—The Wisconsin Board of Medical Examiners recently adopted a resolution that hereafter all examinations are to be in the English language. The board believes that physicians who have been graduated from foreign medical schools should have been in this country sufficiently long to know the language and to become versed in American laws before becoming eligible to practice in the United States.

Annual Report of Hospital.—The annual report of the Emergency Hospital, Milwaukee, shows that 2,878 patients were treated, with a mortality of seventy-two during the year just closed and that forty-one persons were brought dead to the institution. Dr. Gustave A. Hipke has been elected president of the trustees of the hospital and Dr. Rudolph F. Teschan, secretary; Dr. Curtis A. Evans, president of the hospital staff and Dr. Daniel Hopkinson, secretary.

Personal.—Dr. Daniel R. Freeman, Colby, who has been seriously ill at the Marshfield Hospital, is reported to be convalescent.——Dr. Frank R. Wasielewski has been appointed a member of the board of trustees of Emergency Hospital, Milwaukee.——Dr. Susan Jones, Racine, who was operated on recently in Milwaukee, is reported to be recovering.——Dr. Harry A. Keenan, Edgerton, has been appointed district surgeon for the St. Paul System, between Madison and Janesville.

New Officers.—The Alumni Association of the Wisconsin College of Physicians and Surgeons, at Milwaukee, January 31: president, Dr. Reno Weiss; secretary-treasurer, Dr. E. C. Wetzel, both of Milwaukee.——Milwaukee Society for Sanitary and Moral Education, January 31: president, Prof. Charles McKenney; secretary, Dr. Timothy L. Harrington.——Brown County Medical Society: president, Dr. Thomas Oliver; secretary-treasurer, Dr. Isaac E. Levitas, both of Green Bay.——Jefferson County Medical Society, January 22: president, Dr. L. J. Bennett, Fort Atkinson; secretary, Dr. Carl R. Feld, Watertown.

Against Tuberculosis.—The new Douglas County Tuberculosis Sanatorium, the first to be erected in the state under the law passed by the last legislature providing state aid, is completed and has been accepted by the county board. The sanatorium has accommodation for about thirty patients and has been completed at a cost of $30,000.——At the annual meeting of the Menominee Antituberculosis Association, January 10, Dr. F. E. Butler was elected vice-president, and the treasurer reported a balance of $753.08.——Janesville Branch of the Wisconsin Antituberculosis Association was organized January 10 and Dr. Samuel B. Buckmaster was elected vice-president, and Drs. Wayne A. Munn and Michael A. Cunningham members of the executive committee.——Marinette Antituberculosis Association was organized by Drs. Theodore J. Redelings, George Frederick R. Colter and others.

GENERAL

New Officers.—Fox River Valley Medical Society, February 1: president, Dr. Benjamin T. Phillips, Menominee, Mich.; secretary-treasurer, Dr. William Webber Kelley, Green Bay, Wis.

Personal.—Dr. Samuel T. Darling, chief of laboratory of the Ancon (C. Z.) Hospital, has been elected an honorary fellow of the Society of Tropical Medicine and Hygiene of London, and a corresponding foreign member of the Société Pathologique Exotique of France.

Bequests and Donations.—The following bequests and donations to hospitals have recently been announced:

Mount Sinai Hospital, New York City, $100,000, by Mrs. Mayer Lehman, to extend the work of the hospital along the lines of preventive medicine.

Massachusetts Charitable Eye and Ear Infirmary, $2,000, by the late Catherine M. Lamson, Dedham.

New York Lying-In Hospital, $5,000, the receipts of a costume ball recently given at Sherry's.

Mount Sinai Hospital, $1,000, and Lebanon Hospital, New York City, $500, by the late Moritz H. Rosenstein.

German Hospital, Hospital of the University of Pennsylvania and Jefferson Medical Hospital, each $50,000 in trust, the income to be used for the endowment and maintenance of beds, by the late Anna H. Carver, Philadelphia.

Hitchcock Memorial Hospital, Hanover, N. H., $20,000, by the late Mrs. Emily Hitchcock.

House of Mercy Hospital, Pittsfield, Mass., $50,000, by the late Mrs. Florence de Wolfe Sampson.

United Charities of Chicago, $100,000; Visiting Nurses' Association of Chicago, $25,000, and Lake Geneva Fresh-Air Home, $10,000, by the late Richard T. Crane.

Julia F. Burnham Hospital, Champaign, Ill., $1,000, by Mr. and Mrs. Ervin Dyer, Chicago.

Bushwick and East Brooklyn Dispensaries, the income of $20,000; Brooklyn Home for Consumptives, German Hospital and Brooklyn Hospital, $5,000 each, by the late Henry Batterman, Brooklyn.

For the establishment of a hospital for women in Pittsburgh, the greater part of an estate valued at about $2,000,000, by the late Thomas N. Miller.

Woman's Medical College of Pennsylvania, $10,000, by the late Anne B. Henszey, Wynewood, Pa.

Pennsylvania Hospital and Hospital of the Protestant Episcopal Church, each $20,000; Philadelphia Orthopedic Hospital, $500; Philadelphia Children's Hospital, $1,000, and Pennsylvania Epileptic Hospital and Colony Farm, Oakburne, Pa., $1,000, by the late Mary W. Paul.

Charity Hospital and the Eye, Ear and Nose Hospital, New Orleans, each $100,000; New Orleans Convalescent Home, $10,000, by the late Isaac Delgado.

Bethea Public Hospital, Dixon, Ill., $80,000 real estate and $2,100 cash, by the late Hon. S. H. Bethea.

Ohio Hospital for Women and Children, Cincinnati, $25,000, by the late Mrs. F. A. Sackett.

FOREIGN

Tuberculosis Literature Circle.—A number of physicians in Sweden, Norway, Finland and Denmark, interested in the literature on tuberculosis, have combined and when any one of the 173 enrolled publishes anywhere an article bearing on tuberculosis in any way he sends 173 copies of the reprint of his article to the secretary of the society who forwards one to each member. The secretary is Dr. C. E. Waller, Halahult, Sweden.

The Approaching International Congress of Dermatology and Syphilology.—The date for this congress was postponed from last September to April 8 to 13, 1912; everything is in readiness for a representative gathering that week, to be held in the historic Castel S. Angelo, at Rome, under the presidency of Professor T. de Amicis of Naples. The secretary general is Dr. G. Ciarrocchi, 5 Piazza Grazioli, Rome. The treasurer is Dr. L. Silvestri, 13 Via della Pace, Rome; the membership fee is five dollars, and reduced rates on the Italian railroads are offered to members. Besides the main topic, the treatment of syphilis, the subjects announced for discussion are the results of physical measures in skin diseases, and a general discussion of blastomycosis, sporotrichosis and allied affections. The date is the week before that of the international tuberculosis congress, also at Rome, and April 1 and 2 the second Italian conference on the sexual question (Convegno nazionale per la questione sessuale) is to be held at Milan. The last international congress of dermatology convened at New York in 1907.

The International Sanitary Conference.—The great progress realized in preventive medicine in the last few years is most instructively shown in the sanitary conference which has just been holding its modest sessions in Paris without any limelight publicity. The first conference was held in Paris in 1851, with delegates from eighteen states, the last at Paris in 1903 with representatives of twenty-four states, while the present one, also at Paris, has 102 delegates, representing forty-two states. How the world would have hooted, fifty years ago, at the idea of a solemn international conclave to discuss the rat and the mosquito, and yet that is practically the gist of the proceedings of the present conference. The deliberations are not yet concluded as an intermission of a few weeks was taken for further study of the conclusions before their final adoption. Instead of imposing new burdens on travelers and traffic, some of the old ones are being thrown aside, thus relieving international commerce. The president of the International Office of Public Health naturally has taken a leading part in the proceedings. This comparatively new institution was described in The Journal, Feb. 27, 1909, page 708.

LONDON LETTER

(From Our Regular Correspondent)

London, Feb. 3, 1912.

The National Insurance Act

The profound dissatisfaction of the profession with the national insurance act has culminated in what may be regarded as a declaration of war. At a meeting of the comitia of the Royal College of Physicians an invitation was received from the national insurance commissioners to appoint two members to attend a conference. The point which the commissioners specially desired to discuss related to the selection of the medical members of the advisory committee, by whom the commissioners must be advised in the framing of regulations. The commissioners also expressed a wish to hear the views of those present on other matters or procedure which the representatives of the medical bodies may desire to bring forward in bringing the act into operation. The comitia resolved to decline the invitation but stated that the college would be happy to assist in any steps that might be taken for amending the act for the improvement of public health, provided that the interests of the medical profession are safeguarded. The council of the British Medical Association has declined a similar invitation, intimating that the members of the council must defer deciding whether they would meet the commissioners until they received instructions from the forthcoming meeting of representatives of the association. The Royal College of Surgeons of Edinburgh has also declined the invitation and there is little doubt that the other medical corporations which have been approached will take the same course.

Death of Sir Henry Trentham Butlin

Sir Henry Trentham Butlin, Bart, D.C.L., LL.D., F.R.C.S., consulting surgeon to St. Bartholomew's Hospital, past President of the British Medical Association and of the Royal College of Surgeons, died at his residence in London on January 24, after a long illness, aged 67. Never robust, he had been in failing health for some years and recently was obliged in consequence to resign the presidency of the Royal College of Surgeons before the expiration of his term of office. Notwithstanding his frail constitution, he was one of the hardest workers in the profession. The son of a Cornish clergyman, he received his medical education at Bartholomew's Hospital, where he passed his whole career. In 1871 he was appointed medical registrar and in the following year surgical registrar. Microscopic pathology was then in its infancy and he studied it assiduously, attaining great skill in the making of sections of morbid tissues, from which he made careful drawings. He soon became recognized as an authority on pathology. In

1880 he was appointed Erasmus Wilson lecturer on pathology at the Royal College of Surgeons. His lectures were published in book form under the title "Sarcoma and Carcinoma, Their Pathology, Diagnosis and Treatment." In surgery he devoted special attention to malignant disease and to affections of the throat and tongue. He embodied his experience in several well-known works—"Diseases of the Tongue" (which was published in 1885), "Malignant Disease of the Larynx," "The Operative Surgery of Malignant Disease" (1900). He practiced speaking and debating with great care, and was soon recognized as one of the most accomplished speakers in the profession. His addresses were generally given with the aid of a few notes, but were so polished and perfect in form that it seemed as if they had been previously written and then memorized. He was also an accomplished linguist, reading and speaking with fluency French, German and Italian. He was thus able to play an important part in international medical congresses. As a teacher he excelled, adopting the Socratic method, to the delight of both himself and his pupils. In 1905 he delivered the Bradshaw lecture on cancer at the Royal College of Surgeons. He maintained that "carcinoma is a parasitic disease, not in the limited sense in which the term appears to have been used of late as synonymous with infection, but in the larger and wider sense, in which it used to be, and always should be employed, to express the fact of one organism living at the expense of another organism, each pursuing its otherwise separate and independent existence." In two recent lectures on "Unicellula Canceri, the Parasite of Cancer," delivered before the Royal College of Surgeons last November, he expanded this idea and insisted that the cancer cell is an independent organism, like a protozoon; that it lives a life wholly independent and proper to itself; and that it derives nourishment from its host while doing nothing to repay the latter. He concluded that the cancer cell is a veritable parasite formed from the tissues of its host. Regarding it as an independent parasitic animal, he named it *Unicellula canceri* and was inclined to place it among the protozoa.

In private life he was most courteous and delighted in dispensing hospitality. In the politics of the profession he took a great interest, and in spite of his strenuous work as surgeon did great service. He was treasurer of the British Medical Association from 1891 to 1895. When elected he modestly said that there were men more fitted for the post than he but none who had the interests of the association more at heart. When in 1909 he was elected president, at the time when he was president of the Royal College of Surgeons, it was unanimously felt that, on account of his distinguished position in the profession and zeal for the association, no man so much deserved the honor.

A Murderer Secures His Death Sentence by Insisting on His Sanity

The question of the sanity of a prisoner at the time he committed a murder is often a difficult one and the plea of insanity gives rise to much conflicting medical evidence. But the spectacle of a prisoner repudiating evidence that he is insane and thus securing his death sentence seems to be unique. At Norwich, a printer's reader, aged 29, insisted on pleading guilty to murdering his infant son and attempting to kill himself on the same day. He declined the assistance of counsel offered by the judge, and when the prison doctor gave evidence that he was not in a fit state to plead, the prisoner insisted on cross-examining the doctor to demonstrate his sanity. The physician said that the prisoner was suffering from obsessions, believed that he was morally tainted, and therefore thought it right to kill his son as he believed the taint would be transmitted to him. Having asked the physician what qualifications he had as a brain specialist, the prisoner said: "I am of sound mind; I realize the gravity of this charge; I have offended against the law, and am here to satisfy the law." The judge said: "The insane person believes he is sane, a sane person would try to get off on the ground that he was insane. It is no use pursuing this." The jury decided that the prisoner was fit to stand his trial and the judge said that he could not do otherwise than act on their view. He had only to accept the prisoner's plea and pass on him sentence of death. It was satisfactory to know, however, that the home secretary would direct an inquiry into the prisoner's mind notwithstanding the conclusion the jury had come to.

The Treatment of Leprosy

A government report was issued recently containing a further report by Dr. E. P. Minett, assistant government bacteriologist, on the nastin and benzoyl chlorid treatment for leprosy at the Mahaica Leper Asylum, British Guiana. Dr. Minett's conclusions are that nastin has apparently very little beneficial effect on leprosy. A solution of benzoyl in oil shows a slightly higher percentage of improvement than nastin. Anesthetic cases of leprosy run a definite course, after which the disease seems to die out, leaving the patient no longer infective. These patients recover sensation after a time in areas previously anesthetic, and after self-amputation only scars remain. This is a natural process and takes place without any treatment. It is not, apparently, influenced by either nastin or benzoyl chlorid. Nodular cases do not tend to improve naturally, except in very rare instances; nor do they appear to be affected appreciably by the nastin or benzoyl chlorid. The so-called destruction of bacilli is a natural process, varying considerably, and does not appear to be influenced by nastin or benzoyl chlorid. Variation in the amount of destruction of bacilli observed is of limited value as an indication of the effect of treatment. Benzoyl chlorid in petroleum oil is extremely valuable as a nasal spray or a paint for ulcerating surfaces. It quickly renders the discharge free from bacilli. Its regular use for this purpose is strongly recommended in leper asylums.

Laryngeal Anthrax

An inquest has been held at Bradford on a young woman who died from an unusual form of anthrax. She had been engaged in manipulating different varieties of wool, mostly of the gray and brown Persian kind, which, however, had gone through several processes before it had reached the combing-room, in which she worked. Exactly how the infection occurred is not known, for her sister, who had had anthrax, stated that nothing objectionable had been noticed in the wool which they had been handling. At a necropsy, made by Mr. F. W. Eurich, bacteriologist to the Anthrax Investigation Board, anthrax was found in the larynx, from which general infection of the system had taken place. In his experience a lesion in the larynx is unique and does not appear to have been observed previously. The lungs were not affected. The jury recommended that alpaca, which is not scheduled as a dangerous wool, be sorted for the purpose of eliminating blood-stained pieces. The finding of a suitable disinfectant for infected wool which will destroy all spores, leaving the fabric unimpaired, is still a problem.

Increased Consumption of Tea

With the decline in the consumption of alcoholic beverages in recent years there has been a corresponding increase in the consumption of tea, coffee, cocoa and other nonintoxicants. A great increase has taken place in the popularity of tea. During the past year 276 million pounds of tea were consumed while in the United States the amount was only 111 millions and in Russia 136 millions, although the population of these countries is more than double that of the United Kingdom. In 1895 the amount of tea drunk per head of the population was 5.65 pounds; now it is 6.3 pounds. Contrast this with the decreased consumption of beer. In 1900 the number of gallons of beer drank per head was 30.8; in 1909 only 25.9.

Death From a Wasp Sting and Workmen's Compensation

A claim for compensation by a widow is a new illustration of the difficulty as to what constitutes an accident "arising out of and in the course of" a workman's employment. The husband of the applicant was engaged as a waiter at an entertainment following a wedding in a country district. Wasps were attracted by the remains of champagne and food. When the deceased had stopped work and was eating his lunch in a tent, he suddenly exclaimed, "I am done" and removed a dead wasp from his tongue. He had been stung and died an hour later. The necropsy showed that he suffered from valvular disease of the heart. The coroner's jury brought in a verdict of "heart failure caused by shock consequent on the sting of a wasp on the tongue—accidental death." The judge held that death was due to the accident of the sting and that the fact that the man's condition predisposed him to succumb to such an accident was immaterial, and that the medical view, that death was due to heart disease, put forward in the case could not prevail. He was also satisfied that the accident occurred in the course of the employment of the deceased. This left the question whether the accident arose out of that employment. He had to ask himself whether the accident resulted from a risk reasonably incidental to the employment. He found that the deceased by reason of the work that he had to perform in the tent was exposed to an extraordinary and peculiar danger of being stung by wasps, and that his death was the result of a risk reasonable and peculiarly incidental to his employment.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Jan. 26, 1912.

Possibility of Keeping Alive the Transparent Cornea of the Enucleated Human Eye

Dr. P. Magitot of Paris recently reported before the Académie des Sciences an interesting attempt at transplantation of the human cornea. A glaucomatous eye required to be removed because of the intolerable pain that it caused. Immediately after the enucleation the eye was washed in Locke's solution, then immediately immersed with all aseptic precautions in a jar containing blood-serum from another individual. The container was put in a refrigerator. After some hours the interior pressure of the eyeball fell and the cornea became transparent. The eye was thus preserved in excellent condition for eight days. Then a rectangular piece one-half the thickness of this cornea was carefully excised and implanted in a cavity of the same dimensions made on the cornea of another patient. This patient had received some years before quicklime in the face and in the right eye. The cornea consequently became entirely opaque. The tissue-graft was put in place without sutures and formed a little window about 4 by 5 millimeters. At the end of forty-eight hours the transplanted tissue adhered perfectly and was entirely transparent.

At present, seven months later, the foreign tissue still keeps its transparency and gives the patient a visual acuity of one-tenth normal.

Overtures for the Reopening of the Medical School

M. Guist'hau, minister of public instruction, has received delegations from the first- and second-year students and from the under-graduate societies requesting an early reopening of the Faculté de médecine. He promised to recommend leniency to the council of ministers provided the students would give him a written guarantee of the preservation of order, but he declared that he would listen to no more requests which are accompanied by complaints.

Insane Foreigners in France

At one of the last sessions of the Société internationale pour l'étude des questions d'assistance, Dr. Marie read an interesting paper on insane foreigners in France, of whom there are many in the asylums of the department of the Seine. The native countries of some of these patients will not pay their expenses; and several countries even refuse to receive back patients of their own nationality and thus insane foreigners are a heavy charge on the budget. In Paris alone there is an average of 300 foreigners in the asylums for the insane.

Efforts Against Infant Mortality

In the suburbs of Lille, in the little industrial town of Wasquehal, remarkable efforts are being made to check infant mortality. In most of the weaving and spinning mills of this place, the women employees who have infants at the breast have for their use a special room, well aired and heated, with cribs for babies. Every two hours during the first months of the infant's life, the mother comes to give it the breast. The rest of the time a woman looks after the infants. The working women may thus continue their work without danger for their babies while suckling their infants regularly. In connection with the room just mentioned there is an obstetric consultation, an infants' consultation and a maternity.

A Curious Claim for Damages Against a Physician

An army physician diagnosed the presence of pulmonary tuberculosis in a young soldier who was invalided home on the physician's recommendation. The young man's father, a rich provincial manufacturer, expressed much gratitude to the physician for the care his son had received in hospital, and asked the physician's advice with regard to the treatment which ought to be followed to obtain a complete cure. The physician advised life in the open air, with rest and frequent feeding, etc. The father decided to place his son in a villa in the country surrounded by every comfort. A year afterward the physician received a letter from the minister of war announcing that the manufacturer demanded $1,000 damages. He declared that his son was completely cured and that the cure proved the diagnosis to be erroneous; he therefore held the physician responsible for the useless expense which the alleged erroneous diagnosis had occasioned. Fortunately, the physician had no trouble in proving that he was not in error and the demand for damages failed.

Treatment of Purulent Tuberculous Pleurisy by Simple Repeated Punctures

On January 9, Dr. A. B. Marfan, *agrégé* professor at the Faculté de médecine de Paris and physician of the hospitals, reported before the Académie de médecine a case of a boy of 13 who had a continuous fever accompanied by signs of pleuropulmonary congestion of the left base. Finally, the fever still persisting, a pleural effusion appeared, the liquid being of a serofibrinous character and rich in polynuclears, but without bacteria visible under the microscope or capable of culture in strong media. The polynucleosis was much lower at the second puncture, and it was seen that the effusion was becoming purulent. At the third puncture pus was evacuated and inoculation of a guinea-pig showed that it was a case of purulent tuberculous pleurisy. Marfan refused to treat the patient by pleurotomy because in three similar cases he had observed in this operation a fistula which refused to heal and incurable secondary infections. He therefore employed simple puncture repeated every time the pus accumulated in considerable quantity. He considered the puncture a mere palliative treatment; he thought that the pus would continue to reproduce itself and that a time would come when a complication would carry off the patient. The pleural cavity, however, contracted little by little and the twentieth puncture, made about eighteen months after the onset of the disease, brought away no pus. This favorable result appeared to depend on various factors; in the first place the probable integrity of the subjacent lung, the youth of the subject, the recent date of the infection and the general treatment rigorously followed out. But the principal thing seemed to be the early employment of puncture and its repetition at sufficient intervals, emptying the pleura without delay and renewing the evacuations often enough. The lung thus did not undergo the atrophic sclerosis which crowds it permanently into the costovertebral groove and does not permit it to dilate sufficiently to fill the pleural cavity. In this case the first punctures were from fifteen days to three weeks apart, the last from five to six weeks. Altogether there were nineteen punctures in eighteen months.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, January 26, 1912.

Personal

Both Professor Hess of Würzburg and Professor Axenfeld of Freiburg have declined the appointment for the chair of ophthalmology to succeed von Michel. Naturally these refusals attract serious attention, and the question is raised as to the reason for this surprising circumstance which is somewhat humiliating for Berlin. In the political press the claim is made that the department of education is putting difficulties in the way of the professors nominated by the faculty with the purpose of forcing them to refuse, intending then to select the candidate who has been kept in view as a favorite, namely, Professor Greeff, a pupil of Schweigger. The fact is that Greeff was in marked favor with the deceased Althoff, and especially was appointed to the directorship of the newly established eye clinic in the Charité, which is regarded as competing with the regular eye clinic of the university. According to my information, however, the suspicion mentioned is scarcely tenable but rather it seems to be a fact that the arrangement and equipment of the university eye clinic suffered materially in the last few years under the direction of Michel who was sick for a long time, and that on this account extensive changes are necessary which will require years. Until that time the new professor must work under unsatisfactory conditions and must in addition to this superintend the reconstruction of the clinic. These difficulties, together with the recent disinclination, which is becoming continually more marked, on the part of professors to remove from agreeable situations in the smaller universities to the nerve-racking metropolis, are the essential reasons why three prominent ophthalmologists, one after the other, have declined the call to Berlin. We are for various reasons anxious to learn how this, for us unsatisfactory, play of question and answer will finally end.

Professor Umber, a former pupil of Professor Kraus, and hitherto the director of the internal department of the municipal hospital at Altona, has been elected as successor of the deceased Professor E. Grawitz as director of the internal department of the municipal hospital at Charlottenburg. Professor von Bergmann, the son of the noted surgeon and hitherto assistant at the medical clinic of Professor Kraus in Berlin, has been called as the successor of Umber.

Assumption of the Organized First-Aid Service by the City Administration

Some time ago I wrote of the poorly coordinated condition of the Berlin *Rettungswesen*, the first-aid service, and mentioned that the medical profession was seeking to improve the organization and especially to have the municipal authorities take charge of the service. There are three establishments charged with this work: 1. The *Sanitätswachen*, the sanitary watch, which has been in existence for a number of years, having been founded and supported by citizens and which was originally opened only during the night, and for a part of the time was not supervised by a physician, but later, at least in certain districts of the city, has also given first-aid service in the daytime. 2. The *Unfallstationen*, the accident stations, which were organized by the trades' unions (*Berufsgenossenschaften*) to care for accidents to laborers insured by them, and which without doubt have rendered good service. But as these institutions gradually attracted the entire material of fresh injuries, and thus robbed the hospitals and even the university clinics of material, a very marked opposition made itself felt among the rest of the Berlin medical profession. Particularly under the leadership of the deceased von Bergmann, the medical profession organized a medical first-aid society which secured the establishment, at the municipal hospitals and clinics, of stations for first aid and gradually made a considerable reduction in the activity of the accident stations.

Naturally there arose more or less conflict as a result of three different organizations working in one field. To remove this difficulty it seems necessary to unite the three organizations by merging them in a department under the control of the city. This aim has not been easy to accomplish, on account of the variety of opposing interests. Now the *Magistrat*, the city government, after much deliberation, has finally determined to take the initiative. It has determined to establish a first-aid service to begin April 1 for which the city is to appropriate \$50,000 (200,000 marks) for a period of one year. The establishment is planned on the basis of securing for each station a limited number of salaried physicians who will supervise the work in turn for a definite period amounting to four or five hours per day and eight hours at night. In view of the division of the service and to secure a person responsible to the municipal authorities, one of the physicians for each station is to act as chief. The sum of \$375 (1,500 marks) is suggested as the salary for each physician. The chief is to receive in addition an especial compensation of about \$125 (500 marks). The management of the entire first-aid service is to be vested in a board of nine members, to consist of two members of the city *Magistrat*, four aldermen and three representative citizens. The board, provided the city council agrees to the plan, shall be immediately appointed and begin its work of determining the fundamental arrangements in detail and other necessary measures. Whether the plan in this form will receive the consent of the city council remains to be determined. There will be no lack of objections from various sources. The board of the accident stations requires, as we understand, that at every station there shall be a regular salaried medical director who shall assume the responsibility. The salary of the chief is regarded as too small. All of the physicians who have been for a long time in office at the accident stations must be taken over by the city. If the program of the accident stations includes the hope that the physicians of the accident stations shall secure a dominant position in the new municipal organization, the Aerzteverein der Berliner Rettungsgesellschaft (medical association of the Berlin first-aid society) may register a protest against it. The board of directors of the Aerzteverein requires on its part that all those who have hitherto been employed in the first-aid service shall be received into the new organization, but this would be impossible if the arrangement contemplated by the city government, for a four or five hour alternating service is adopted, for it is evident that no physician even half way occupied can possibly spare five hours from his practice regularly every two or three days. This would result in securing for the first-aid service only very young and inexperienced physicians, who would desert the service as soon as other and better positions offered. After all it may be some time before the plan for municipalizing the first-aid service will be carried into effect.

Annual Meeting of the German Surgical Society

The congress of the German surgical society for this year meets April 10 to 13 and will assemble no longer in its own hall in Langenbeck House but in a concert hall in Köthenerstrasse. This change in the place of meeting is occasioned by the fact that the Langenbeckhaus in the last few years has become insufficient to accommodate the increasing number of participants. At the last session the overcrowding was so great that the management has found itself compelled to adopt this expedient. As I have already mentioned, the Berlin medical society in conjunction with the German surgical society intends to build a Virchow house (Virchowhaus), in which a hall shall be provided of sufficient size for the meetings. But it is necessary for the accomplishment of this plan that the German surgical society shall first sell the Langenbeckhaus which belongs to it. The government is expected to be the buyer as it needs the land on which this building stands for the necessary enlargement of the neighboring university surgical clinic. The negotiations in the matter were begun a long time ago and it is to be hoped will be conducted to a satisfactory conclusion.

Official Report on the Antityphoid Campaign

The present imperial and Prussian authorities are engaged in the task of preparing a volume on the comprehensive campaign against typhoid undertaken of late years with the resources of the empire, which shall give an account of all the measures adopted since 1903 and their results. As at the beginning of the century typhoid was prevalent to an alarming extent in Germany, particularly in the western portion, the imperial government recognized the necessity in common with those federal states which were interested and with the imperial provinces, of undertaking a uniformly directed campaign against the disease. According to a plan matured under the direction of Robert Koch, the eradication of the plague was organized. In 1903 \$37,500 (150,000 marks) and in later years \$50,000 (200,000 marks) were appropriated for the work. This sum was devoted chiefly to the establishment of typhoid stations which were located according to need, in places where a typhoid focus had been ascertained. The management of each station was entrusted to three physicians. In the imperial health council (*Reichsgesundheitsrat*) a typhoid subcommittee was formed to establish central headquarters for thorough discussion of measures to be taken against the disease and their enforcement. The campaign was first inaugurated in the Prussian district of Trier, the Bavarian district Pfalz, the principality of Birkenfeld and the lower Rhine provinces, but it was soon evident that the disease was more extensively distributed than was originally assumed to be the case. The results reached since then in the area above outlined are to be published in the "Arbeiten aus dem kaiserlichen Gesundheitsamt." The report is to be presented to the new Reichstag soon after it assembles.

Training of Nurses for Infants

January 18 a conference of experts was held in the state interior department to discuss uniform principles for the training of nurses for infants. Many prominent pediatricians from the whole of Germany took part in the discussions. The introductory report was made by Professor Langstein, the director of the Augusta Victoria institution for infant welfare. He emphasized the fact that the recent progress in the care of infants necessitated quite different requirements from the nurses than were formerly in vogue, and as a result demanded a different and more thorough training. He insisted on the following requirements: 1. To care for sick infants, the nurses should be trained by a two years' course of instruction, with examination and a diploma. 2. A one year course of instruction, without examination, might also be established from motives of economy. 3. Nurses for healthy children should receive instruction for one year with examination and diploma. 4. Attendants on infants should receive a half year's course. From the discussions it may be concluded that in essentials there is unanimity with regard to the necessity for training nurses and attendants to care for infants, but that from social reasons and on account of the differences, for instance, between conditions in the north and south of Germany, certain differences of opinion exist. In order to secure the most extensive uniformity, a committee was appointed for further discussion.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Jan. 28, 1912.

Public Care of Crippled Children

In a paper read before a medical and lay audience, Dr. Aberle, the assistant of Professor Lorenz, described the charitable institutions available at present in this country for the care of crippled children. There are, altogether, no more than four "homes" for these unfortunate individuals. One is located near Vienna, the Elizabeth Asylum, which accommodates sixty-five children between the ages of 3 and 14, the stay there being free of charge to the patients. The operations, however, are not done there but in the clinic of Professor Lorenz, where the children remain until they can be discharged from the ward. The other three institutions receive only such children as can be treated there, and they can accommodate 360 children. Thus only 425 beds are available for the numerous patients, and if to this number are added the beds in the homes for convalescent in our coast towns, not more than 600 beds can be counted on. This is entirely insufficient, for the majority of cripples require a regular hospital care in bed, with physical treatment (massage, electricity, hot air baths, etc.). Dr. Aberle therefore suggested that public attention be turned to these conditions and that funds be collected for the erection, in each of the Austrian countries, of central institutions for cripples where they should receive not only medical care suited to the individual cases, but also instruction in manual work in order to enable them to earn their living. As a rule the underlying cause of crippling is tuberculous disease, nerve affection or rachitis, in the order mentioned, and if the case is taken in time, the maiming and disfigurement may be averted, as well as the function of the affected part retained.

Strike of Veterinary Students at the Vienna University

The veterinary school of Vienna is officially a branch of the Vienna university; in reality it is a military institute. The graduates of this school are absorbed nearly entirely by the army, and only after six to ten years of military service do they take up private practice. The conditions of teaching are quite medieval, in spite of the excellent teaching staff. The veterinary hospital and out-patient department are quite unsatisfactory as regards outfit and financial standing. The students have to comply with military requirements quite out of date, and the general prospects of a graduate of this school are poor, as he cannot reach a higher position in the army than that equivalent to a captain, and that not before twenty-five years' service. The majority only reach the rank of lieutenant. Repeated petitions by the students have hitherto failed to bring about any improvement of the old grievances. Therefore the veterinary students, who flock to this place from the whole empire, as there is but one school for them, have resolved to boycott the veterinary service in the army and to take up private practice or other appointments at once on graduation from school. This decision is very important; there is always need for a veterinary surgeon in the country districts, and there is no possibility for coercion by the army authorities if the students prefer not to enter the army. Therefore this step will most likely bring about an improvement of the existing conditions.

Poisoning in a Hospital for Insane

In Czernowitz is located one of our largest hospitals for the mentally afflicted, and there occurred a short time ago an outbreak of a mysterious disease. The chief symptoms were gastro-intestinal troubles, fever and prostration. There was a rapid succession of cases, as in Berlin, where the inmates of night shelters were poisoned by methyl alcohol. Not only the patients but also several of the nurses and male attendants, as well as some of the physicians, were affected. At first it was thought that an epidemic of influenza, with gastro-intestinal symptoms predominating, was to be dealt with. Soon, however, a suspicion of metallic poisoning seemed justified, but diligent search for the source of the poison proved absolutely negative. Meanwhile 750 persons were on the sick-list, with nine deaths within four days. The etiology is still unknown; and the cases have gradually decreased in number and severity. Investigation is directed also toward the possibility of foul play, for at present nothing could be found in the hospital itself to explain the incident.

Special Instruction for Military Surgeons

It is interesting to note, from a political standpoint, that the military authorities lay much stress on commanding numerous officers of the army military corps to surgical clinics and hospitals all over the country. They are to learn, chiefly, the treatment of accident cases as well as general surgery. Rumors are rife that war is not impossible, therefore the army doctors must be prepared.

Sick Child Deprived of Medical Aid—Fake Healer Imprisoned

The mental affliction and narrowness of mind resulting in all kinds of humbug is no privilege of the lower classes of the New World, as has been clearly shown in the course of a charge of manslaughter heard recently in the lower court of Vienna. An old woman was charged with having neglected her grandchild by calling in a "prayer-healer," instead of a doctor, when the child showed symptoms of a "bad cold." Both the grandmother and the "prayer-healer" were uneducated persons. The child was given an amulet consisting of some powdered spider-substance wetted in the child's urine to wear on the chest; besides, the child was "prayed on" by the woman, and the cold was not otherwise interfered with. It was proved that in spite of the advice of other friends of the patient, no doctor was admitted. The child died from acute pneumonia and the necropsy ended with the immediate imprisonment of the "prayer-healer." In the course of the hearing the judge remarked that such a state of mind was inexcusable and punishable, as "prayer-healing" was nonsense and any sensible person could understand that to keep away a doctor from a diseased person could mean only death to the patient. Therefore the "prayer-healer" was sent to prison for six years.

Conflict Between a Medical Organization and the First-Aid Society

For about three years the medical profession in Austria has had an organization for upholding its interests, called the Wirtschaftliche Organisation. It has become the regular custom of medical men to negotiate all contracts through this medium, and within the short time of its existence this organization has succeeded in bringing about substantial improvement of the position of physicians in public and private appointments. The Vienna First-Aid Society (Rettungsgesellschaft), mentioned in a previous letter (The Journal, Dec. 23, 1911, p. 2096), naturally has a number of doctors on its staff. As the terms of appointment and service with the first-aid corps were rather inexact and could be interpreted in several ways, the Wirtschaftliche Organisation undertook, about a year ago, the task of bringing about an understanding between the profession and the Rettungsgesellschaft. The latter body is a private organization supported by voluntary contributions; its financial position is good and it is an esteemed and honored body governed by a non-medical board. The organization drew up, at the request of the staff of the First-Aid Society, a regulation which fixed the time of service for each physician, stipulated a certain pay on a sliding scale, provided for old-age pensions, and also for a representative and executive member on the advisory board—in short, codified the rights and duties of the physicians. The board, however, refused to have the medical organization interfere with its internal management. A campaign in the press was opened from both sides, and the unpleasant fact of quarreling between medical organizations—for the First-Aid Society must be regarded as such—was thus made known to the public. The sympathy of the population is with the medical profession. The only medical man of the managing board of the First Aid, Professor Weichselbaum, resigned his position of honor, and now the question is whether or not a boycott by medical men will be instituted. Nevertheless, all the friends of the Rettungsgesellschaft and of the profession hope to find a way for arranging in an amicable manner the serious differences of opinion.

Marriages

Arthur Wellesley Carson, M.D., Ishpeming, Mich., to Miss Winifred H. Johnson of Chicago, at Marquette, January 24.

Joseph Enloe Thomas, M.D., Tirzah, S. C., to Miss Margaret B. Proudfoot of Goderich, Ont., at Baltimore, February 2.

Rudolph Burney Watson, M.D., Ancon, C. Z., to Miss Rachel V. Hicks of Roslyn, L. I., N. Y., at Panama, January 15.

Samuel W. Holloway, M.D., to Miss Martha S. Whittingham, both of Louisville, at Jeffersonville, Ind., January 25.

Raymond Barber, M.D., to Miss Gertrude Gardener Maltby, both of Rawlins, Wyo., in New York City, January 27.

Edgar Dempsey Allen, M.D., Crooksville, O., to Miss Catherine F. McGonagle of New Lexington, O., January 30.

Melvin S. Henderson, M.D., Rochester, Minn., to Miss Mabel Christianson of Marshfield, Wis., February 10.

John U. Day, M.D., Jacksonville, Ill., to Mrs. Bertha Bailey of Ashland, Ill., at Tallula, Ill., January 31.

David Lisle Conway, M.D., Syracuse, to Mabel Cobb, M.D., of Santa Clara, N. Y., January 30.

David Cohen, M.D., Jeffersonville, Ind., to Miss Tillie Strull of Louisville, January 31.

Charles M. Heberton, M.D., Denver, to Mrs. E. B. Criddle, at Kansas City, recently.

Deaths

Joseph, Baron Lister, pioneer in antiseptic surgery; died at his home in London, England, February 11, aged 84.

He was born in Upton, Essex, April 5, 1827, the son of Joseph Jackson Lister, a London merchant, who occupied his leisure with study and work on the microscope. He received his early education at the Friends' School, Tottenham, near London, and later studied at University College. He graduated from the University of London in 1847 with the degree of B.A. During the next five years he studied medicine under the medical faculty of University College and in the University College Hospital. His earliest researches were in the fields of histology and physiology.

On leaving University College Hospital in 1854, heeding the advice of Sharpey to "take six weeks of Syme's clinic," Lister went to Edinburgh and, instead of six weeks, remained six years, as acting resident surgeon to Syme in the Royal Infirmary, and assistant surgeon in the same institution. He here began his career as a teacher, holding the position of extramural lecturer on surgery. During all this time Lister indefatigably pursued his researches in histology and surgical pathology. While in Edinburgh, Lister was married to Agnes, the daughter of his preceptor.

He was made professor of surgery in the University of Glasgow in 1860 and surgeon to the Glasgow Royal Infirmary. His investigations on coagulation of the blood were given to the medical world in the Croonian lecture of 1863, which enunciated the idea that foreign substances hasten the action of coagulation. The advent of Pasteur's work on fermentation immediately associated itself in Lister's mind with the observation of Carlisle, in 1864, regarding phenol (carbolic acid), and in 1865 he made his first application of this theory. His first address on antiseptic surgery was given before the British Medical Association at its Dublin meeting in 1867; in this he stated his belief that the essential cause of suppuration in wounds was decomposition, and that the decomposition in the injured parts might be avoided, without excluding the air, by applying as a dressing some material capable of destroying floating particles. He did did not claim priority in the use of phenol, but on the theory of antiseptics.

Lister, 1827-1912.

In the natural process of evolution, asepsis later succeeded antisepsis and regarding this matter Championnière, the father of asepsis, stated that "aseptic surgery is as much an issue of the discovery of Lister as is true antiseptic surgery."

In 1869, Lister was made professor of clinical surgery in the University of Edinburgh, the chair made vacant by the retirement of his father-in-law from active work, and here he continued his investigations into the bacteriologic and chemical worth of various antiseptics. In 1877, Lister left Edinburgh to become professor in clinical surgery in King's College, London, and here remained as professor until 1893, and as emeritus professor during the remainder of his life.

He was created a baronet in 1883, was made first Baron Lister in 1897; was surgeon extraordinary to the late Queen Victoria and serjeant-surgeon in ordinary to King Edward VII. He was president of the Royal Society from 1895 to 1900 and of the British Association for the Advancement of Science in 1896. He received the honorary degree of M.D. from the universities of Dublin, Würzburg, Bologna, Budapest and Geneva; that of LL.D. from Edinburgh, Glasgow and Cambridge; that of D.C.L. from Oxford, and in addition had conferred on him the Grand Cross of the Order of Dannebrog by the King of Denmark; the Prussian Order of Merit and was made a member of the Privy Council. He was also a member, or an honorary member of medical and scientific societies the world over.

The accompanying picture is from a photograph copyrighted by Elliott and Fry, London.

Hiram Van Sweringen, M.D. Jefferson Medical College, 1876; a member of the Indiana State Medical Association; a member of the medical staff of St. Joseph's, Polk and Lutheran hospitals, Fort Wayne, Ind.; a veteran of the Civil War; a member of the American Pharmaceutical Association and author of an excellent pharmaceutical lexicon; professor of materia medica and therapeutics in the Medical College of Fort Wayne from 1878 until the college ceased to exist; died at the home of his son in Fort Wayne, February 1, from disease of the lungs, aged 67.

David C. Jones, M.D. Memphis (Tenn.) Medical College, 1873; for sixty-six years a practitioner of Texas; for four years assistant surgeon U. S. Army; assistant surgeon of the Fourth Texas Infantry and later brigade surgeon, C. S. Army, during the Civil War; died at his home in Cameron, January 27, from senile debility, aged 79.

Peter H. Latham, M.D. University of Maryland, Baltimore, 1876; for one term coroner of Carbon County, Pa., and for many years visiting physician at the Laurytown Almshouse; local surgeon for the Lehigh Valley Railroad at Weatherly, Pa.; died at his home in that city, January 23, from diabetes, aged 62.

Nelson Gilman Smith, M.D. Eclectic Medical Institute, Cincinnati, 1869; a veteran of the Civil War; for fifteen years a member of the faculty of the Eclectic Medical College of Indianapolis; died at his home in Seymour, Ind., January 20, from cerebral hemorrhage, aged 63.

George Washington Fitzpatrick, M.D. Medical College of Ohio, Cincinnati, 1863; a veteran of the Civil War, who was injured in a street car accident four years ago, died at his home in Kansas City, Mo., February 1, from acute nephritis, aged 76.

Alexander Addison McCrimmon, M.D. McGill University, Montreal, P. Q., 1891; for three years after graduation surgeon on transatlantic steamers; for two years mayor of Rainy River, Ont., for three years coroner of the Rainy River District, and for several years division surgeon for the Canadian Northern Railway; died at his home, January 24, from pneumonia, aged 43.

Warren E. Anderson, M.D. University of Alabama, Mobile, 1882; a member of the American Medical Association and president of the Escambia County (Fla.) Medical Society in 1893; vice-president of the Pensacola board of commissioners and ex-officio mayor of the city from 1893 to 1895; local agent of the State Board of Health; one of the most prominent practitioners of Florida; died at his home in Pensacola, February 1, aged 54.

Thomas P. Oven, M.D. University of Michigan, Ann Arbor, 1876; New York University, New York City, 1877; a member of the American Medical Association; local surgeon for the Burlington system at Brookfield, Mo., for twenty-five years; died at his home in that city, January 25, from pneumonia, aged 63.

Darius Norsleet Barrett, M.D. Memphis Hospital Medical College, 1901; formerly a member of the American Medical Association; formerly surgeon for the Pere Marquette and Michigan Central railways at St. Joseph, Mich.; later professor of nervous and mental diseases in Chattanooga Medical College and a member of the ophthalmologic staff of the Erlanger Hospital; for about five years a specialist on diseases of the eye, ear, nose and throat of Detroit; died in the Augustana Hospital, Chicago, January 27, three days after a cholecystectomy and appendicectomy, aged 42.

Norton Royce Hotchkiss, M.D. University of Maryland, Baltimore, 1891; a member of the American Medical Association and the Association of Military Surgeons of the United States; president of the New Haven Medical Association and formerly surgeon general of the state; attending surgeon to St. Raphael's Hospital and one of the directors of Elm City Hospital, New Haven; medical director of the Mutual Indemnity and Protective Association; died at his home in New Haven, January 30, from leukemia, aged 41.

John J. Williamson, M.D. Tulane University, New Orleans, 1876; for many years a practitioner, an alderman and a member of the school board of Cleburne, Tex.; died at the home of his daughter in San Angelo, January 23, from erysipelas, aged 73. At a called meeting of the Johnson County Medical Society, January 24, a committee was appointed to draft resolutions regarding the death of Dr. Williamson.

George H. Haddy, M.D. Louisville (Ky) Medical College, 1882; a member of the American Medical Association; local surgeon of the Minneapolis, St. Paul and Sault Ste. Marie Railway and formerly local surgeon of the Wisconsin Central Railway; died at his home in Park Falls, Wis., January 27, from cerebral hemorrhage, aged 53.

Olof Page, M.D. University of Pennsylvania, Philadelphia, 1867; afterward in the governmental sanitary service of Venezuela and later a resident of Chili, where he served as surgeon-general in 1891; a pioneer in the development and progress in that country; died recently at his home in Valparaiso.

Edward F. Fornias, M.D. Hahnemann Medical College, Philadelphia, 1880; a native of Cuba and for a time representative of the Republic of Uruguay, and acting vice-consul for Spain in Philadelphia; died at the home of his daughter in Philadelphia, January 22, from heart disease, aged 69.

Adelia E. Sanderson (license, Minnesota, Exemption Certificate, 1883); for nearly half a century a practitioner of Douglas County, Minn., and for eight years chairman of the board of health of Osakis; died at her home in that village, January 17, from cerebral hemorrhage, aged 82.

Oscar August Czarnowski, M.D. Tulane University, New Orleans, 1873; a member of the American Medical Association; a Confederate veteran; notable as a philanthropist and eminent as a physician of New Orleans; died at his home in that city, January 24, from pneumonia, aged 75.

Horace M. Moody, M.D. Geneva (N. Y.) Medical College, 1866; assistant surgeon of the One Hundred and Eighty-Third Pennsylvania Volunteer Infantry during the Civil War; a practitioner of East Smithfield, Pa., for fifty years; died at his home, January 18, aged 73.

Frank L. Sutton, M.D. College of Physicians and Surgeons (Homeopathic), Buffalo, N. Y., 1882; for many years a practitioner of Canisteo, N. Y.; for two terms coroner of Steuben County; died in Port Allegany, Pa., January 7, from organic disease of the heart, aged 57.

Louis W. Morris, M.D. University of Maryland, Baltimore, 1885; a member of the American Medical Association and a member of the staff of the Peninsula General Hospital, Salisbury, Md.; died at his home in that city, February 2, from pneumonia, aged 48.

Clifford Adams Stiles, M.D. Savannah (Ga.) Medical College, 1857; surgeon during the Confederate service throughout the Civil War and afterward a practitioner of North Georgia and Florida; died at his home in Seville, Fla., January 22, aged 76.

H. Karl Schemel, M.D. University of Kiel, Germany, 1882; died at his home in Hoskins, Neb., January 30, from the effects of phenol self-administered, it is believed, with suicidal intent, while despondent on account of ill health, aged 56.

Edwin Robinson Maxson, M.D. Jefferson Medical College, 1845; a member of the Medical Society of the State of New York, and the oldest practitioner of Syracuse; died at his home in that city, January 25, from senile debility, aged 91.

Fred Strong Tabor, M.D. Rush Medical College, 1881; of Spring Valley, Ill.; died recently and was buried February 1, aged 53.

Christian F. Schiele, M.D. Cincinnati College of Medicine and Surgery, 1902; a member of the Ohio State Medical Association; formerly German principal in one of the Cincinnati public schools; died at his home, January 23, aged 38.

Robert McIntyre Sproule, M.D. Tulane University, New Orleans, 1892; of Wallisville, Tex.; formerly presiding elder of the Beaumont District, M. E. Church, South; died at the Norsworthy Hospital, Houston, Tex., January 26, aged 60.

William A. Cross, M.D. Miami Medical College, Cincinnati, 1872; a fellow of the College of Physicians of Philadelphia, and a member of the medical staff of the Jewish Hospital; died at his home in Jenkintown, Pa., January 29, aged 72.

Alfred B. Whayne, M.D. Kentucky School of Medicine, Louisville, 1870; surgeon of the Eighth Missouri Volunteer Infantry throughout the Civil War; died suddenly at his home in Fulton, Ky., Dec. 24, 1911, from heart disease, aged 71.

John F. Genolin, M.D. University of Nashville, Tenn., 1879; a member of the Indiana State Medical Association; died in his office in Bloomington, January 25, it is believed, from the effects of an overdose of chloral and morphin, aged 57.

John Baynton Abercrombie, M.D. Long Island College Hospital, Brooklyn, 1875; a Confederate veteran; formerly a practitioner of Natchez, Miss.; died at his home in St. Petersburg, Fla., January 22, from senile debility, aged 71.

Andrew J. Bradley, M.D. Baylor University, Dallas Tex., 1905; a member of the Oklahoma State Medical Association; died at his home in Albany, January 25, from the effects of phenol accidentally self-administered, aged 37.

Reuben Webb Hill, M.D. Bellevue Hospital Medical College, New York City, 1877; a veteran of the Civil War and a pioneer practitioner of Santa Barbara County, Cal.; died at his home in Carpinteria, January 26, aged 65.

Carl H. Hitzrot, M.D. Western Pennsylvania Medical College, Pittsburgh, 1889; formerly of McKeesport, but later a practitioner of Pittsburgh; died suddenly in that city, January 21, from organic heart disease, aged 56.

Samuel Short, M.D. Long Island College Hospital, Brooklyn, N. Y., 1903; of Harlem, New York City; died in Bellevue Hospital, January 25, from septicemia due to a rusty nail wound received five months before, aged 39.

Joseph E. Wenman, M.D. Eclectic Medical Institute, Cincinnati, 1885; formerly a Baptist missionary in the West Indies; died at his home in New Philadelphia, O., January 22, from heart disease, aged 69.

S. Darwin Smith, M.D. Chicago Homeopathic Medical College, 1896; a member of the Illinois State Medical Society; died at his home in Rushville, Ill., January 20, from heart disease, aged 41.

Floyd G. Donehoo, M.D. Southern Medical College, Atlanta, 1881; for thirty years a practitioner of Blount County, Ala.; died at his home in Oneonta, January 24, from cerebral hemorrhage, aged 57.

Peter F. Thornburgh (license, years of practice, Illinois, 1877); formerly a clergyman of the Methodist Episcopal Church; died at his home in Martinsville, January 23, from senile debility, aged 86.

James Samuel Hickey, M.D. Hahnemann Medical College, Philadelphia, 1892; instructor of anatomy in his alma mater; died at his home in Philadelphia, January 25, from myocarditis, aged 56.

James S. Smith, M.D. University of Buffalo, N. Y., 1862; a member of the Medical Society of the State of New York; died at his home in Buffalo, January 30, from senile debility, aged 79.

Walter W. Johnson, M.D. New York Homeopathic Medical College, New York City, 1887; of Rochester, N. Y.; died in a sanatorium in that city, January 26, from acute nephritis, aged 52.

Charles P. Bradford, M.D. Detroit (Mich.) College of Medicine, 1893; of Chicago; died in Michael Reese Hospital in that city, January 20, from carcinoma of the pancreas, aged 42.

John S. Gowan, M.D. University of Southern California, Los Angeles, 1903; a member of the Medical Society of the State of California; died at his home in Fullerton, January 25.

Edwin E. Richardson (license, Kansas, 1901); for thirty-eight years an eclectic practitioner of the state; died at his home in Hutchinson, January 31, from angina pectoris, aged 73.

William Edward Evans, M.D. University of Virginia, Charlottesville, 1868; Bellevue Hospital Medical College, 1869; died at his home in Boonville, Mo., January 23, aged 65.

Arthur Allen Perry, M.D. Barnes Medical College, St. Louis, 1900; died at his home in Rankin, Okla., January 19, aged 40.

Willey J. P. Kingsley, M.D. New York Medical College, New York City, 1855; mayor of Rome, N. Y., for two terms; died at his home, January 26, from senile debility, aged 87.

Michael James O'Toole, M.D. Baltimore (Md.) Medical College, 1902; a member of the Massachusetts Medical Society; died at his home in Clinton, Dec. 2, 1911, aged 35.

Maxey Smith (license, South Carolina, 1897); a practitioner of Pages Mills, S. C., since 1893; died at his home, January 15, from tuberculosis, aged 42.

John H. Jackson, M.D. Cleveland University of Medicine and Surgery, 1874; died at his home in Peoria, Ill., January 12, from cerebral hemorrhage, aged 62.

Monroe Earl Blackman, M.D. Long Island College Hospital, Brooklyn, 1894; died at his home in Brooklyn, January 20, from heart disease, aged 62.

Dellis Horatio McMasters, M.D. University of Louisville, Ky., 1889; died at his home in Pryorsburg, Ky., January 28, from heart disease, aged 47.

Samuel McCartney Bleakney, M.D. University of Buffalo, N. Y., 1866; died at his home in Worthville, Pa., February 2, from pneumonia, aged 76.

Alice R. Held, M.D. Chicago College of Medicine and Surgery, 1907; of Chicago; died in that city, Dec. 7, 1911, from lobar pneumonia, aged 40.

Peter Demott Rowland, M.D. Harvey Medical College, Chicago, 1904; died in Daly City, San Mateo County, Cal., January 15, from myocarditis.

Francis Edward Archibald, M.D. Hahnemann Medical College, Philadelphia, 1896; died at his home in Philadelphia, January 6, aged 41.

John Harvey Love, M.D. Memphis (Tenn.) Hospital Medical College, 1881; died at his home in Kosciusko, Miss., January 27, aged 60.

Charles G. Snyder, M.D. Memphis (Tenn.) Hospital Medical College, 1894; died at his home in Clinton, Miss., January 27, aged 49.

James B. Cain, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1876; died at his home in Omaha, Neb., January 24, aged 72.

John P. McCullough, M.D. Hahnemann Medical College, Chicago, 1891; died at his home in Paris, Ill., January 22, aged 43.

Miscellany

Errors in Diagnosis.—A. Guérin has an interesting study of this subject in the *Jour. de Méd. de Bordeaux*, 1911, lxi, 835. He has compiled from his own and others' experience a number of errors in diagnosis, some of which might have been avoided if the possibility of syphilis had been constantly borne in mind under all circumstances. He emphasizes that a syndrome suggesting tuberculosis may be a mask for syphilis or actinomycosis. Even under the microscope a syphilitic lesion may simulate tuberculosis or fibrosarcoma. He warns not to assume too hastily the presence of purulent pleurisy when pus is found in a child's thorax; it may come from a retropharyngeal abscess or abscesses from congestion or a dilated bronchus or a tuberculous cavity,—he cites instances of each, and emphasizes the harm done by the assumption of purulent pleurisy in these cases. In other cases serious results may be entailed by the assumption of tuberculosis when the trouble is really from slight dilatation of the bronchi. He warns further against immobilizing a hip joint when the coxalgia is merely a manifestation of hysteria; it is not so many years, he remarks since a woman's leg was removed above the hip joint just for this cause. He adds, that Broca's recent article on this subject (summarized in The Journal, Oct. 7, 1911, p. 1246) should be reread when a puzzling case of hip disease is encountered. Guérin emphasizes further the necessity for testing the pupil reflex and knee-jerk in examining every patient. Superficial pain above the umbilicus may be a sign of a deep lesion of the pancreas. He insists that when a child cries and complains, careful search for an invaginated loop in the bowel should be made, not omitting to palpate through the rectum. Ulceration in the mouth may be a sign of antipyrin in the stomach. In conclusion he warns that during cold weather artificial heat and carbon monoxid poisoning should always be borne in mind, no matter what symptoms may be presented. This latter warning recalls a recent description of the "rolling stoves" of the Paris flats. The stove is mounted on castors, and the short stove-pipe is fitted to an opening in the chimney. When it is desired to heat another room, the stove is pulled away from the chimney, a cover is placed over the open stove-pipe, and a plate fitted into the hole in the chimney, and the stove is merrily trundled out into the other room and backed up to a similar hole in the chimney here. The rolling stove may gather no moss, but it may dispense carbon monoxid, so that Guérin's warning is more needed in France than in this country.

Pharmaceutical Manufacturers, and the Council on Pharmacy and Chemistry.—We are in entire sympathy with the stand taken by some of the largest and most responsible pharmaceutical houses when they emphatically state that they are not only willing but anxious for the Council on Pharmacy and Chemistry to place the stamp of approval or disapproval on all products manufactured. The house that refuses to have its products passed on by the Council is not worthy of the patronage of the medical profession, for it can be definitely stated without fear of contradiction that the houses which object to the work of the Council on Pharmacy and Chemistry are not playing fair. On the other hand, there is absolutely no reason why members of the medical profession should patronize such houses, for as a rule they do not represent integrity and fair dealing. Furthermore, there is absolutely no excuse for the prescribing of any pharmaceutical preparations or biologic products that have not been approved by the Council, for the work of the Council is purely in the interest of honesty in manufacture and honesty in the representation of the products turned out. No reputable firm need have any fear of the Council, for if the representations concerning any product or products are correct, the Council will be sure to give its approval. Of course there may be errors of omission and when so discovered by the Council the firms to whom such omission can be attributed are advised by the Council with the express purpose in view of giving opportunity of making correction. It is only when the corrections are not made and the error is persistently perpetuated that the Council refuses to give its approval and exposes the misrepresentation.—*Jour. Indiana State Med. Assn.*

Microkinematography.—*Nature* gives a summary of the application of the moving picture principle to the illustration of biologic and medical subjects. The range of the kinematograph, it says, has been extended to the representation of objects as seen through very high powers of the microscope. The difficulty of illumination has been met by using the dark-ground method which makes it possible to take on a properly sensitized film photograph of exceedingly short exposure. While the resulting picture shows very little of internal structure, it is surprising, *Nature* says, how much does appear. The nucleus of a cell, for example, is frequently quite distinct and some structures, such as the kineto-nucleus of a trypanosome, can be sometimes seen perfectly clearly and followed as the organisms move about. M. Comandon has made a number of kinematographs of unstained living objects in this way showing the blood in actual circulation in the tail of a tadpole and of the blood in relapsing fever and in some forms of trypanosome sickness. In these latter the parasite is seen distinctly swarming in enormous numbers in a drop of blood. One of the greatest technical triumphs in this line is the films which show the *Spirochæta pallida*, which is difficult to demonstrate even with the use of stains. In the Comandon pictures it appears alive and moving with all its coils clear and sharp. Other uses of the kinematograph besides the representation of these living microscopic organisms are also mentioned in the article in *Nature*. It enables us to see in a few minutes operations, like the growth of tissues for example, which may take hours or days in reality, and conversely, it enables us also to view the progress of alterations which take place in nature otherwise too rapidly for us to observe. The kinematograph may well become a most efficient aid in the teaching of many biologic and especially medical subjects.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

EDWARD J. WOODS

A Fraudulent "Cure" for Alcoholism

Edward J. Woods, 534 Sixth Avenue, New York City, advertises extensively, on both sides of the Atlantic, to cure alcoholism. Sometimes he uses his own name; sometimes he uses the name. Dr. Mary E. Webb, Boston, Mass. Woods, being nothing if not versatile, also sells a cure for bald heads, as well as a preparation to take the "kinks" out of the hair of those members of the colored race who are dissatisfied with the head covering that Nature provided. His trade name in this latter line of endeavor is the "Koskott Laboratory," and is located at 1269 Broadway, New York City. Associated with Woods, both in his cure for drunkenness and his hair-growing establishment, was one William E. Scott.

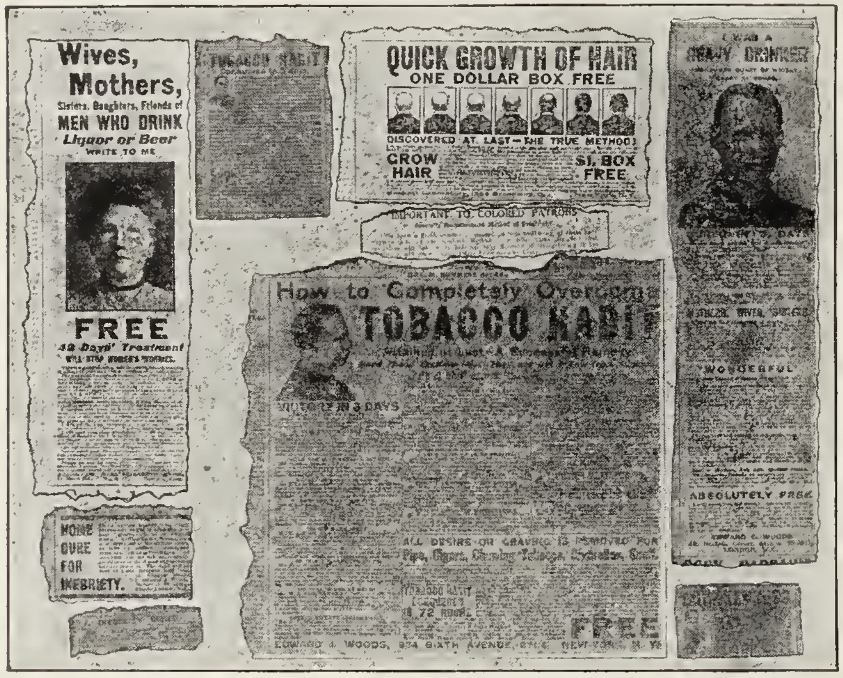

Wives, Mothers,
Sisters, Daughters, Friends of
MEN WHO DRINK
Liquor or Beer
WRITE TO ME
FREE
42 Days' Treatment
TOBACCO HABIT
QUICK GROWTH OF HAIR
ONE DOLLAR BOX FREE
DISCOVERED AT LAST—THE TRUE METHOD
GROW HAIR
$1 BOX FREE
IMPORTANT TO COLORED PATRONS
How to Completely Overcome
TOBACCO HABIT
ALL DESIRE OR CRAVING IS REMOVED FOR
FREE
EDWARD J. WOODS, 534 SIXTH AVENUE, NEW YORK, N. Y.
I WAS A HEAVY DRINKER
WONDERFUL
ABSOLUTELY FREE
HOME CURE FOR INEBRIETY.

Fig. 1.—Here are a few of the advertisements by which Edward J. Woods obtains victims. Woods sells not only cures for baldness, cures for drunkenness, cures for the tobacco habit and cures for "kinky" hair in negroes, but he also dispenses a line of cures for rheumatism, catarrh, asthma, "nervousness" and sleeplessness, to say nothing of a cure for blushing, "complexion wafers", "wrinkle removers" and pile remedies.

We cannot do better than quote from the "Cautionary List" issued by London *Truth* regarding this individual:

> "Scott, William.—A Yankee, whose real name is Skinner. He achieved distinction a few years ago in connection with a swindle named Symond's London Stores, on the smashing of which enterprise he proceeded to Berlin and, as Professor Dana, advertised a cure for asthma, as Professor Pollok, a cure for gout, as Horatio Carter, a cure for debility named 'Amvita,' and a number of other specialties. He was arrested in Berlin on a charge of fraud but decamped, forfeiting bail to the amount of £5,000. His present address is 1269 Broadway, New York, whence he is advertising a new hair-growing treatment under the style of 'Koskott.'"

DR. WEBB—STOOL-PIGEON

Should you read Dr. Mary E. Webb's advertisement, you will learn that she appeals particularly to "wives, mothers, sisters, daughters, friends of men who drink liquor or beer." She has, so run her advertisements, a "42 days' free treatment, of Kotalko" which may be "taken in tablets or dissolved in tea, coffee, milk, etc." You are asked to enclose the inevitable ten cents "to pay part cost of advertising and postage." You write for a free treatment. A letter comes back in skilful imitation of handwriting with certain parts so filled-in as to lead the uninitiated to suppose that it is a personal communication. You are told that Dr. Webb is "interested in your manly letter."

A LETTER IS WRITTEN

The "manly letter" referred to, in at least one instance, was written by a young woman connected with The Journal office and read as follows:

> "Please send me full particulars about your drink cure."

This was the entire letter and was written, in an evidently feminine hand, but Mary E. Webb, M.D., having, apparently, only one style of letter, replied:

> "In view of what you write about your own case and the fact that you show such strong character in your handwriting as well as your statements, and particularly as you have been drinking for so many years, I am not sending you my Kotalko Tablets because you expect a complete cure and my tablets would not accomplish same in your case. I am, therefore, returning your 10 cents in stamps. [Ten cents was not sent, in this instance, so Dr. Webb adds the postscript: "You failed to send stamps, so I am not enclosing any."] Mr. C.——— and I have written about your case, giving my favorable and professional report to Mr. Edward J. Woods, 534 Sixth Avenue, New York City. His is the one and only cure for your case and it will accomplish the result in 72 hours by the clock.
>
> "You will feel like a different man entirely. You will be astounded at the benefit. It is the same treatment as has cured many noted men, including ex-President Grover Cleveland and others of brains and ability. Your letter reveals you to be a man who will do wonderful work when entirely cured of the accursed disease."

And so on, *ad nauseam.* Sure enough, by the next mail came a letter from Edward J. Woods in imitation typewriting, explaining how perfectly simple it was to cure alcohol addiction with "Woods' Remedies." "My price is $10." Accompanying the letter was a booklet entitled "Confessions of a Former Alcohol Slave," in which Woods describes how he became a drunkard and how he was cured by a "learned doctor." Then it was that Woods conceived the idea of "curing" others as he had been "cured." Hence the mail-order business.

ANALYSES—OF COURSE!

It is hardly necessary to say that Woods can produce not only analyses, but also testimonials. Why not? There never yet was a medical fraud but could produce testimonials by the basketful; and anyone with $5 to spare can buy the sort of analyses that Woods uses. "Dr." A. B. Griffiths, a cockney who calls himself an "analytical and consulting chemist," certifies to the wonderful power of Woods' "specific treatment of alcoholism." Again, we remind our readers that Griffiths' analyses cost one guinea ($5) and that represents their total value. It is worth mentioning, incidentally, that when Woods placed his order for an analysis of his cure for drunkenness he also seems to have called for a similar analysis of his Koskott cure for bald heads. Probably Griffiths offers reductions for analyses when ordered in quantities.

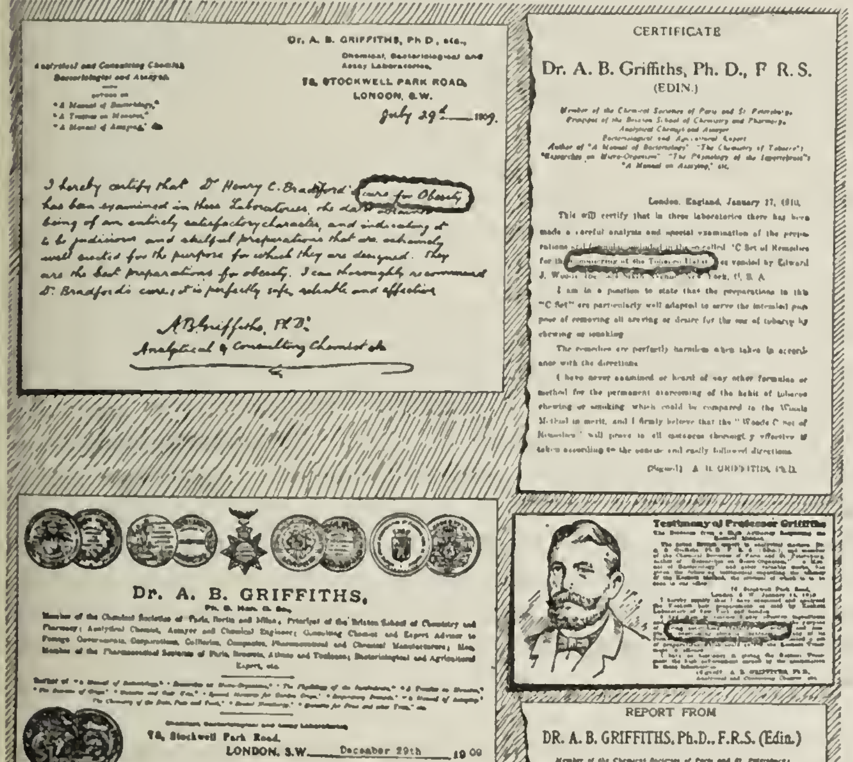
Willard H. Morse, M.D., of Westfield, New Jersey, another "consulting chemist," goes A. B. Griffiths one better and not only praises Woods' nostrum but "guarantees" Woods' "system." Morse, on this side of the Atlantic, and Griffiths on the other side are both members of that serio-comic humbug, the "Society of Science, Letters and Art" of London. Hence they both have the privilege of writing "F.S.Sc. (Lond.)" after their names. This privilege costs one guinea but isn't worth it. In addition to the testimonial of "Dr." Griffiths and Dr. Morse, we have equally flattering comments both from Dr. Mary E. Webb, to whom we have already referred, and from Dr. John L. Corish. Dr. Corish, it may be said, is in the mail-order medical business himself and exploits "Dr. Corish's Okola Method," which is "the original and genuine system for treating eye strain at home."

THE SLIDING SCALE OF PRICES

Like all mail-order medical fakers, when Woods cannot get $10 for his "treatment" he takes less. In this case the price is gradually diminished until it reaches $1.00. It might be laid down as axiomatic that, those who will persist in wasting their money on mail-order medical fakes should make a practice of waiting six months after receiving the first letter. They will then find that, no matter how much is at first demanded, the price will have been reduced to one-fourth or even one-twenty-fifth of the original amount.

As was stated at the outset, Woods advertises on both sides of the Atlantic; in fact, his activity in Great Britain seems to be even greater than it is in this country. The chemists of the British Medical Association recently analyzed Woods' nostrums. The complete "treatment" for "curing drunkenness secretly" consists of sixty powders and sixty-eight tablets. The analyses of these is detailed as follows:

> "The powders had an average weight of 9.9 grains, single ones varying from 7.2 to 11.9 grains. Analysis showed them to contain:
>
> | | |
> |---|---|
> | "Tartar emetic | 3.6 per cent. |
> | "Sugar of milk | 96.4 per cent. |
>
> "No trace of any other substance was found. A powder of average weight would thus contain 0.35 grain of tartar emetic.
>
> "The tablets had an average weight of 1.6 grains. Analysis showed them to contain:
>
> | | |
> |---|---|
> | "Tartar emetic | 13.2 per cent. |
> | "Boric acid | 10.7 per cent. |
> | "Sugar of milk | 76.1 per cent. |
>
> "No trace of any other substance was found. One tablet would thus contain 0.2 grain of tartar emetic, and the daily dose of three powders and three tablets would contain 1.65 grains.
>
> "The estimated cost of materials for 60 powders and 68 tablets is about 1d." (2 cents.)



Analytical and Consulting Chemist,
Bacteriologist and Assayer.
Author of
"A Manual of Bacteriology,"
"A Treatise on Manures,"
"A Manual of Assaying," &c.

Dr. A. B. GRIFFITHS, Ph.D., etc.,
Chemical, Bacteriological and Assay Laboratories,
78, STOCKWELL PARK ROAD,
LONDON, S.W.
July 29th 1909.

I hereby certify that Dr Henry C. Bradford's cure for Obesity has been examined in these Laboratories, the data obtained being of an entirely satisfactory character, and indicating it to be judicious and skilful preparations that are eminently well suited for the purpose for which they are designed. They are the best preparations for obesity. I can thoroughly recommend Dr. Bradford's cure; it is perfectly safe, reliable and effective.

A. B. Griffiths, Ph.D.
Analytical & Consulting Chemist etc.

CERTIFICATE

Dr. A. B. Griffiths, Ph. D., F. R. S.
(EDIN.)

Member of the Chemical Societies of Paris and St. Petersburg,
Principal of the Brixton School of Chemistry and Pharmacy,
Analytical Chemist and Assayer
Bacteriological and Agricultural Expert
Author of "A Manual of Bacteriology," "The Chemistry of Tobacco";
"Researches on Micro-Organisms," "The Physiology of the Invertebrates";
"A Manual on Assaying," etc.

London, England, January 17, 1910.

This will certify that in these laboratories there has been made a careful analysis and special examination of the preparations and formulas included in the so-called "C Set of Remedies for the overcoming of the Tobacco Habit" as vended by Edward J. Woods, [illegible] Sixth Avenue, New York, U. S. A.

I am in a position to state that the preparations in this "C Set" are particularly well adapted to serve the intended purpose of removing all craving or desire for the use of tobacco by chewing or smoking.

The remedies are perfectly harmless when taken in accordance with the directions.

I have never examined or heard of any other formulas or method for the permanent overcoming of the habit of tobacco chewing or smoking which could be compared to the Woods Method in merit, and I firmly believe that the "Woods C Set of Remedies" will prove in all instances thoroughly effective if taken according to the concise and easily followed directions.

(Signed) A. B. GRIFFITHS, Ph.D.

Dr. A. B. GRIFFITHS,

Member of the Chemical Societies of Paris, Berlin and Milan, Principal of the Brixton School of Chemistry and Pharmacy; Analytical Chemist, Assayer and Chemical Engineer; Consulting Chemist and Expert Adviser to Foreign Governments, Corporations, Collieries, Companies, Pharmaceutical and Chemical Manufacturers; Hon. Member of the Pharmaceutical Societies of Paris, Brussels, Athens and Toulouse; Bacteriological and Agricultural Expert, etc.

Chemical, Bacteriological and Assay Laboratories,
78, Stockwell Park Road,
LONDON, S.W. December 29th 1909

I hereby certify that Stuart's Adhesive PLASTER-PADS for the cure of rupture have been practically tested by me, the data obtained being of a most satisfactory character, and indicating them to be a valuable and skilful invention that are well suited for the purpose for which they are designed. They are unique medicinal applicators, and most effective. Their therapeutic action proves them to be the very best remedy for hernia, and renders them perfectly safe and reliable. I can strongly recommend Stuart's Adhesive Hernial PLASTER-PADS.

A. B. Griffiths

Testimony of Professor Griffiths

REPORT FROM

DR. A. B. GRIFFITHS, Ph.D., F.R.S. (Edin.)

Member of the Chemical Societies of Paris and St. Petersburg;
Principal of the Brixton School of Chemistry
and Pharmacy, Analytical Chemist and Assayer; Bacteriological and
Agricultural Expert
Author of "A Manual of Bacteriology,"
"Researches on Micro-Organisms," "The Physiology of the Invertebrates";
"A Manual on Assaying," etc.

London, England, September 30, 1908.

This is to certify that in these Laboratories there has been made a careful analysis and special examination of the preparations included in the [illegible] Treatment of [illegible] of Mr. Edward J. Woods, New York City [illegible]

1. That the remedies in this treatment are perfectly harmless and are exceedingly effective, if taken in accordance with the directions.

2. That the preparations are eminently adapted to successfully combat and banish permanently the craving for alcohol, to eliminate all alcoholic poison from the human system, to strengthen the nerves and muscles, aid in the development of mental power, purify the blood, and in other respects to induce a condition of good health and longevity.

(Signed) A. B. Griffiths, Ph.D.

Fig. 2.—A few of Dr. Griffiths' analyses. Griffiths' price for analyses of quack remedies is $5.

Although Woods advertises to cure drunkenness in 72 hours, it takes about two weeks to consume all the powders and tablets that are sent as one "treatment." At the end of that time, the victim is told to order more.

> "Even if six months are required to accomplish the desired purpose, it is a highly satisfactory reward for the expense, time and effort used."

Nor is Woods content to conduct his fraudulent business at long range. A few weeks ago he was fined $500—the maximum penalty—for practicing medicine in New York State without a license. His success as a mail-order quack seemed to have led him to believe that he was immune to arrest. Fortunately the New York County Medical Society is active in protecting the public from such humbugs and therefore brought suit against Woods, with the result just stated.

Edward J. Woods, then, who is willing to acknowledge that he "was rarely sober in sixteen years," is at present engaged in selling a mixture of tartar emetic and milk sugar under the fraudulent claim that it will cure alcoholism in 72 hours. As an accomplice, he has employed a woman physician who is a disgrace to her profession—a woman, who claims that Woods' nostrums cured Grover Cleveland of alcoholism—an inferential slander of a dead president that makes it easy to classify the concern that stands sponsor for it. By means of lying advertisements and fake analyses, Woods will rob the wives and children of inebriates on the specious claim that his worthless mixture when secretly given will release the father or husband from the thraldom of alcoholism. Week after week money that in many cases should go to purchase the necessaries of life is emptied into the coffers of a man whose past life he admits was a disgrace and whose present existence we believe is a calamity. Knowing that the chances are not one in a thousand that those who are, in their ignorance, trying secretly to cure members of their immediate family of alcoholism, will be willing to risk the publicity that a demand for the return of their wasted money would bring, Woods calmly continues his nefarious trade unmolested and unafraid.

CONVICTIONS UNDER THE FOOD AND DRUGS ACT

A Few More Frauds that the Government has Exposed

HOXSIE'S CROUP REMEDY

"Dr. A. C. Hoxsie's Croup Remedy" was manufactured and distributed by the Kells Co., Newburgh, N. Y. The nostrum was sold under the claim that it would cure diphtheria and consumption as well as croup, whooping-cough, colds, etc. As the federal Food and Drugs Act is now interpreted by the Supreme Court, it is impossible to prohibit such cruel and vicious falsehoods as these. As the Hoxsie nostrum, however, contained over 31 per cent. of alcohol, while the label declared the presence of only 20 per cent., it was not difficult for the government to prove that the stuff was misbranded with regard to its composition. The concern pleaded guilty to the charge and was fined $50. [*Notice of Judgment No. 1218.*]

COCA CALISAYA

Cassebeer's Coca Calisaya, prepared by the Shepard Pharmacal Co., was sold as "an agreeable and efficient tonic" which was said to be capable of "sustaining the strength under extreme physical exertion." It was also asserted to be "peculiarly adapted to persons enfeebled by sickness or debility." The presence of 35 per cent. alcohol was declared on the label. Analyzed by the government chemists, it was found to contain over 42 per cent. alcohol, together with sugar, cocain, quinin and other alkaloids. As the amount of alcohol present was misstated on the label and as the quantity of cocain was nowhere given, the stuff was declared misbranded. The Shepard Pharmacal Co. that sold this vicious mixture pleaded guilty but for some reason, not evident from the government report, sentence was suspended. [*Notice of Judgment No. 1219.*]

MORSE'S CREAM

This nostrum was put out by Hazen Morse, New Rochelle, N. Y. The preparation was said to be a "Cod Liver Oil Cream" which was "artificially digested" and to possess "10 times greater nutritive value than cod-liver oil." Analysis by the government showed this preparation to be an emulsion consisting essentially of 39 per cent. cod-liver oil and 41 per cent. of water with small quantities of alcohol, oil of cassia, sugar and gum, the latter used as an emulsifying agent. The government declared—and proved—that Morse's Cream was an ordinary cod-liver oil, that it was not artificially digested and that it did not contain 67 parts of cod-liver oil. The defendant pleaded guilty and was fined $50. [*Notice of Judgment No. 1221.*]

Correspondence

Obstetrics Among American Indians

To the Editor:—Dr. Shoemaker's article on his obstetric experiences among the American Indians (The Journal, Jan. 6, 1912) recalled to my mind some similar cases which I observed during my service as physician among the Navajoes on the Navajo Indian Reservation, 95 miles from the railroad town of Flagstaff, Ariz. Many of these Indians have never seen a white man and naturally their customs and mode of living are most primitive. Until recently the native medicine-man prospered among this tribe by practicing his art of casting the evil spirits from his ignorant and unfortunate patients. In the last few years, however, the government through the agent and the physician has been discouraging this practice.

One afternoon an Indian policeman called at the agency and requested me to go with him and see his wife, who was in labor. As we approached his hut I heard the chant of the Indian medicine-man. On entering I could not see on account of the smoke from a fire on the ground in the middle of the hut, which filled the hut and irritated my eyes. About twenty Indians, men, women and several children, were seated on the ground on sheepskins in a circle about the fire, chanting.

Within the circle, close to the fire was a woman smoking a cigarette and the medicine-man alongside of her was leading the chant. This woman was my patient. She was sitting with her buttocks in the ground and I noticed a rope hanging by her side which was fastened to some of the timber overhead. This rope was used for the woman to pull on during the severe pains.

I noticed that she had an occasional light pain, during which she would stop smoking, frown and bend forward and remain in this posture until the pain had ceased; then she would straighten up again and resume her smoking. After about a half an hour I decided that there would be no delivery for some time and therefore I left the camp, instructing the Indians to call me if necessary. The following morning I was informed that the child was born some time during the night amid the chant of the audience and as everything progressed favorably I was not called. Under the circumstances I did not regret it. Three days later I was asked by the husband to treat the woman for severe headache from which she had been suffering since the time of labor. When I saw her she had a temperature of 103 with a correspondingly rapid pulse, coated tongue and constipation. I informed the husband of the serious condition of his wife and told him that unless she was taken to the agency hospital immediately where I could treat her without any interference I would have nothing to do with the case. He reluctantly consented. On examination at the hospital, I discovered that a portion of the placenta had remained in the uterus. After curettage and the usual care that these cases require, she recovered.

The next case is that of an adherent placenta with an hour-glass contraction of the uterus in a Hopi Indian woman, aged about 30. This was her fourth child, as I learned later, and on all three former occasions the white physician had to be called to remove the afterbirth.

One evening about 9:30 a Hopi asked me to see his wife, who had given birth to a child that morning. I found my patient lying on a pallet on the floor in one of the native adobe houses. I found that the cord was hanging out of the vagina, the uterus was enlarged and above the symphysis pubis: no fever. The end of the cord outside of the vagina was fastened around a portion, about six inches in length, of a branch of a tree. On inquiry I was told that this was for the purpose of preventing the cord from slipping back into the uterus. After assuring them that there was no danger of that occurrence, and discarding the stick, I gave her one dram of the fluid extract of ergot by mouth and practiced the Credé method of expression for some ten minutes, but without any success. I left one dram of the ergot with instruction to give it in four hours and notify me in the morning if the membranes had not been discharged by that time.

The following morning my Indian friend came to tell me that no change had occurred in his wife's condition during the night. Taking with me what I thought would be required, I rode down to the village again. I found that no change had occurred. I spread a clean towel on the floor in a convenient spot within reach of my right hand, as I had no assistant to call on to hand me any article. On this towel I laid some sterile gauze, a hypodermic syringe loaded with ergotin, a long dressing forceps and a vaginal speculum. I anticipated hemorrhage and wished to be prepared for it.

Then I cleansed the vulva as best I could under the circumstances and gave a vaginal irrigation of mercuric bichlorid 1-5000. I washed my hands with soap and water and then soaked them in a bichlorid solution for a few minutes, passed my left hand into the vagina and then gradually worked my way into the uterus; my right hand was placed on the abdomen over the fundus to steady the organ during my manipulations. The os was rather contracted and I experienced some difficulty in dilating it. My finger encountered another constriction and I then discovered that I had to deal with an hourglass contraction of the uterus.

After passing this second constriction I worked my fingers very carefully between the mucous membrane of the uterus and the placenta, separating the two as I progressed. I finally succeeded in breaking the adhesions and freeing the afterbirth.

By traction on the cord with my free hand I pulled the placenta out and as I was about to withdraw my hand from the uterus I noticed that quite a profuse hemorrhage from the organ had occurred. With my left hand still in the uterus, I injected ergot and began massage of the fundus through the abdomen, at the same time keeping up a rotatory movement of my closed hand within the uterus. Feeling the organ contracting, I gradually withdrew my hand but still continued the external massage. The uterus contracted down to the size of a billiard ball and the hemorrhage ceased. After applying a binder in the usual manner I waited an hour before I left to ascertain that there would be no recurrence of the hemorrhage. The patient developed a slight septic condition with headache, some fever and a foul discharge. These symptoms cleared up after rest in bed, irrigations and quinin internally, and finally terminated in complete recovery.

These two cases show that the Indian woman, like her white sister, at times has difficulty and complications during labor and requires the assistance of the medical man.

Emil Krulish, M.D., Galveston, Tex.,
Passed Asst. Surgeon, U. S. Public Health and Marine-Hospital Service.

Medical Education in Obstetrics

To the Editor:—Dr. J. Whitridge Williams' paper on medical education and the midwife problem (The Journal, Jan. 6, 1912, p. 1), is a frank and fair statement of the facts concerning the teaching and practice of obstetrics in this country. These facts explain to a large extent the cause of the high infant mortality at birth and during the first few weeks of life. It is to be hoped that thoughtful medical men, interested in this side of surgical practice, will consider well the significance of such an investigation.

Dr. B. B. Browne, in his letter (The Journal, Jan. 27, 1912, p. 296) emphasizes rightly the necessity for more practical experience for every medical student in the teaching of obstetrics, but fails to give due emphasis to the equally important duty of a professor in a university medical school —that of advancing the science and art of his branch.

It has been my peculiar good fortune to see the obstetric work of Johns Hopkins from what may be considered three different points of view: As an outsider, trained in another school and a larger clinic; as an insider, while obstetric house officer at the Johns Hopkins Hospital; and as one of the community serving on a committee to investigate the midwife situation in New England, thus appreciating the great need of the community for better and more intelligent obstetric care.

As an outsider, with a previous hospital experience of perhaps 200 cases, including a fair amount of operative experience, and a year of study and observation in the clinics abroad, I came to Johns Hopkins with the appointment of obstetric house officer. I was first struck with the lack of responsibility (one of our best teachers) allotted to student and house officer, the greater part being carried by resident and assistant resident physicians; then, with the absence of the specially trained obstetric head-nurse; again, with the limited number of cases, which gave each student the chance to see, but not to deliver, only five or six cases in the ward, while giving him the opportunity to deliver perhaps an equal number on the outside service. The student was fortunate if he saw a single operative case. Two positions were open for one year as house officer, but even in this position little or no operative experience was obtainable, as this was reserved for resident physicians and staff.

As an insider, after working for a few weeks in the clinic, other things came to my attention which I had at first not noted. 1. The care with which the pelvis was studied was most satisfying. Every pelvis was measured internally and externally, first in the dispensary, later in the ward before and after labor; thus three or four men checked up the measurements. The child's head was measured immediately after birth and again three days later. 2. Prenatal care in the dispensary was a new experience for me and one of the most instructive and valuable of my service. I believe that the student, the coming practitioner of obstetrics, should share the advantages of this training, if this could be arranged. 3. Toxemic, nephritic and other pathologic pregnancies and labors were studied and treated with special attention. 4. The arguments for and against pubiotomy were being tested. 5. The handling of the cases of the district by the house officer, with the assistance of a student and nurse, gave opportunity for teaching and learning which was marred only by the few cases handled. Thus it may be seen that all cases both in the ward and on the district were used to their utmost for teaching. 6. Fortnightly conferences of the house staff were held, when the history of each of the difficult cases was read and fully discussed. Owing to Dr. Williams' interest, encouragement and enthusiasm, instead of being a perfunctory ceremony, this was a most stimulating exercise. Here particularly was opened to me Dr. Williams' keen appreciation of the practical problems.

The lay point of view has been brought home to me since leaving Hopkins. Sociologic and charitable societies are asking, quite properly, why infant mortality, particularly in the first few weeks of life, is so high. Prominent above other causes stands poor obstetric care, owing to the poorly-trained physicians and midwives—the sign of economic depravity and ignorance in a community. For example, in 1910, in New York City, over 50,000 women were delivered by midwives, while at the same time Dr. Edgar says there are not sufficient cases in the hospital clinics to properly instruct the medical students and nurses. A similar condition exists on a smaller scale in Baltimore. Do we not find the same inconsistency in every large community? Are there not sections of our cities in which many needy women are to be found to whom the teaching clinics should be capable of giving proper care? Is the obstetric knowledge of these communities used to anything like its capacity? Would it not be possible to determine the growing need of our community and meet this by an ever enlarging system of dispensary care to the advantage of all concerned?

To recapitulate: Dr. Williams' article has directed attention to the grossly inadequate teaching, throughout this country, of obstetrics, that branch of surgery most vitally important to the healthy growth of the community, by which its women are exposed to great dangers in the months of childbearing. Dr. Browne's letter emphasizes the dissatisfaction with such training.

Taking the Johns Hopkins Obstetric Department as an example, we find lack of sufficient means and facilities for anything like adequate practical teaching in the care of even the normal case for the large number of students. We find, however, that Dr. Williams, although realizing all this, has dared to perform the even greater function of a real university professor by stimulating and carrying on research work and investigations looking to the advance of the science and art of obstetric practice, the substantial results of which are shown by his text-book, his many monographs, as well as by the interest, enthusiasm and encouragement with which he has inspired many men to the highest ideals in obstetrics.

While we may regret the lack of means to teach every student the large amount of practical knowledge necessary to insure the proper care of the normal case, and are planning to meet this lack of efficient service to the community, we must not lose sight of the even wider sphere of usefulness, the work of training advanced students and stimulating progressive investigation in the science of obstetrics in our large medical schools.

Arthur B. Emmons, M.D., Boston.

The Army Canteen

To the Editor:—The opponents of Dr. Keen's canteen policy are, in my opinion, rather severe on him, and also fail to recognize his point. This, in a nutshell, is that we must choose the lesser of two evils. Like Dr. Keen, I am decidedly in favor of the lesser, the canteen. The British regular army numbers 260,000 men, or almost five times the number in the U. S. Army. The former maintains the canteen and drunkenness decreases yearly; the U. S. Army abolished the canteen, drunkenness has increased and barracks (take, for instance, those at Plattsburg, N. Y.) have become surrounded by saloons. In the British army with its canteen the cases of syphilis have decreased in number; in the U. S. Army they have gone up very high, and then down, but are still higher than in 1903. Do not these facts prove that the canteen was a wiser policy than the no-canteen? Is it not the lesser evil? Which do Drs. Johnston and O'Neil prefer, the greater or the lesser, impractical theory or practical practice?

Arguments in favor of improving the recruiting standards are theoretical and not practical. In some years it has been almost impossible to obtain recruits, in fact impossible in some regiments. Even now it is difficult to maintain the Army at decent strength. The National Guard has an establishment of 200,000; but is with difficulty maintained at half that strength. Is it therefore wise or unwise to demand further requirements of recruits? In our northern neighbor, Canada, the military spirit is much stronger, the militia numbering 55,000 to a population of 8 millions. In proportion this is six times as large as our National Guard. The organization is better but the men are of the same various classes as the National Guard. Every small city has at least one complete regiment. As a comparison, my own city, Akron, has two companies and the band of the Eighth Ohio Regiment. Hamilton, Ont., with the same population, has a squadron of cavalry, a field battery, a field troop of engineers, two regiments of infantry, a company of army service corps, two companies army medical corps, and some guides. Each year new regiments are organized. Even with such strong military spirit the abolition of canteens at camps has been a cause of complaint. The men are not bums and the camp is not an orgy; but they believe that a man should be able to have a beer if desired after six hours' drill in the sun. If unable to obtain it in the camp he goes into town, gets more than one, and there are more drunkards than in the canteen days. In the Canadian regular army (permanent force) of 5,000 men the canteen has wisely been retained and no better-behaved men are found than Canadian soldiers in garrison cities.

Former zealous anticanteenists now demand its reestablishment in the camps. Thus we have, for comparison, the results in Great Britain, the United States and Canada.

The man who wants a drink will get it somewhere. Is he to get it in the canteen or to go to a joint and get cheap poison slop? I do not approve of booze, but give me the canteen system. As to my qualifications to judge, I had fifteen years' service in the Canadian militia, retiring in 1907 with the rank of captain. During the South African war I served with the 2nd Battalion Royal Canadian Regiment Infantry. World-famous generals, like Field-Marshall Earl Roberts, Gen. Sir H. S. Smith-Dorrien, and Lieut.-Gen. Sir F. Forestier Walker, pronounced this the equal of any army regiment in the world. The smallest man in it was 5 feet, 7 inches, but few were that small, over 50 per cent. being "six footers," the balance 5 feet 11 inches and 5 feet 10. Few were temperance men, but this regiment drove every enemy before it. Canada's army is the only one in the world never defeated in war and Canadian troops the only ones that have not surrendered. Canada has the canteen where her soldiers may drink beer if they choose. The model fearless, law administrating Royal Northwest Mounted Police of Canada have canteens in their barracks. The "Rough Riders" were not blue-ribbon men but they receive (rightly or wrongly) the credit for Santiago. These remarks are not irrelevant but prove that even beer in peace can fight in war. Though now retired, my interest in military matters is as keen as ever. Surely I am able to judge after theoretical and practical experience with many armies in four continents, as well as my former British comrade, P. J. H. Farrell. Booze in war and the canteen in peace are different questions. The subject under discussion is not war booze but the army canteen in peace. Like Dr. Keen, I am temperance in sympathy but I vote with him for the canteen.

A. S. McCormick, M.D., Akron, O.,

Late Captain, Third Regiment, "Victoria Rifles of Canada."

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE BASS-WATKINS TYPHOID TEST

To the Editor:—Please tell me the diagnostic value of the Bass test in typhoid fever. Also, how soon is it present?

William H. Smith, Goldsboro, N. C.

Answer.—The Bass-Watkins quick macroscopic typhoid agglutination test, according to the authors, has exactly the same diagnostic value as has the standard Widal reaction; it appears and disappears at the same time as does the Widal. The value of the test lies in the fact that it may be made at the bedside in one to three minutes, without the aid of a microscope or other laboratory equipment and without laboratory training. This is accomplished by employing a very concentrated suspension of dead typhoid bacilli and, of course, a correspondingly concentrated dilution of the patient's blood to be tested. As a result of the concentration, agglutination occurs in less than two minutes and the clumps of agglutinated bacilli are large enough to be seen plainly with the unaided eye.

The Widal, or the Bass-Watkins test, is positive in only a small number of cases of typhoid before the end of a week or ten days. It is positive in 70 to 80 per cent. of all cases by the end of the second week. Over 90 per cent. give a positive reaction at some time during the course of the disease. About 5 per cent. never give a positive reaction.

The original article on this subject, by Bass and Watkins, appeared in the *Archives of Internal Medicine*, December, 1910, page 717. In the *Southern Medical Journal* (February, 1911, page 160), Bass summarizes the reports of 128 physicians who had tried out the test as follows: "Two men report three cases of positive Widal and negative macroscopic reaction. Of the 652 cases tested by these physicians to date, which can be tabulated, 363 were on cases the subsequent histories of which proved that they were typhoid, and 289 were on non-typhoid cases. Of the 363 typhoid cases, 322 gave positive reactions and forty-one negative. Of the 289 non-typhoid cases, thirty-two were thought to be positive. A few of these were diagnosed as continued malarial fever or as having had typhoid fever previously."

NATIONAL BOOK COMPANY

To the Editor:—What do you know about a concern calling itself the National Book Company?

H. C. Minor, Toronto, Ohio.

Answer.—The National Book Company of Milwaukee, Wis., (but incorporated in Arizona) is supposed to issue the "National Medical Register," whatever that may be. It seems to be a subsidiary concern of the National Mercantile Rating and Credit Agency of Milwaukee, whose alleged business is to obtain information regarding the financial and general standing of firms and individuals. It seems to do business chiefly with physicians who, after signing a contract, are said to become "confidential agents" for the concern. Such physicians have to subscribe for five shares of stock in the National Book Company at $2 a share. The contract states that it may be terminated by either party on thirty days' notice and that when terminated, the National Mercantile Rating and Credit Agency shall be given the "right and option to purchase" the shares of stock owned by the physicians signing the contract at the price previously paid for it, plus interest at 6 per cent. The impression may thus be given that the physician who wishes to terminate his contract may, at any time, by giving thirty days' notice, get his money out of the concern. A more careful reading, however, shows that the buying back of such stock by the company is purely optional. On the face of it then, it seems that this concern gets the use of the physician's money while the physician in return gets a pretty stock certificate and the privilege of calling himself a "confidential agent" of the National Mercantile Rating and Credit Agency.

NORWEGIAN AND DANISH MEDICAL JOURNALS

To the Editor:—Kindly give the addresses of the more important Norwegian and Danish medical journals, together with any other information concerning them.

F. A. Olson, St. Paul, Minn.

Answer.—Some of the periodicals you wish are as follows:

Hospitalstidende; publisher, Jacob Lunds Boglade, Pilestræde 6, Copenhagen, Denmark. Editor, T. Rovsing. Weekly; price, $8.25 a year, plus postage.

Ugeskrift for Læger; publisher, Den alm. danske Lægeforenings Bureau, Gl. Strand 44, Copenhagen, Denmark. Editors, H. Mygind, V. Schcel and H. Maag. Weekly; price, $5.35 a year, plus postage.

Norsk Magazin for Lægevidenskaben; publisher, Steen'ske Boktrykkeri, Christiania, Norway. Monthly; price, $5 per volume, plus postage.

Tidsskrift for den Norske Lægeforening; publisher, Centraltrykkeriet, Christiania, Norway. Editors, P. Aaser and R. Hansson. Price, $4.05 a year, including postage.

By keeping watch over the above, as listed in our Department of Current Literature, a good estimate of the contents of the periodicals can be obtained.

MORO'S TUBERCULIN TEST

To the Editor:—Will treatments by hypodermic injections of tuberculin emulsion over quite an extended period cause Moro's cutaneous ointment to give positive reaction? I do not know the strength of the emulsion used or the length of time the treatment was carried on.

J. Hartman, M.D., Crete, Neb.

Answer.—Moro's tuberculin test by means of tuberculin ointment is a very sensitive one, almost as sensitive as von Pirquet's cutaneous reaction, and consequently it would be exceedingly difficult, if not impossible, to determine whether, in a given case, a positive reaction was dependent on an old obsolete tuberculous focus or on recent sensitization through hypodermic injections of emulsion of tubercle bacilli. Theoretically, injections of bacillary emulsion might well sensitize to such an extent that a cutaneous tuberculin reaction could be obtained.

KOSSEL RECEIVED NOBEL PRIZE IN MEDICINE

To the Editor:—Who was the Nobel prize man in medicine in 1910? Where can I secure some information in regard to the work on which the prize was awarded?

John E. Brown, Columbus, O.

Answer.—The Nobel prize for medicine was awarded in 1910 to Professor Albrecht Kossel, Geheimer Hofrat and director of the Physiologic Institute at Heidelberg. He has been a pioneer in physiologic chemistry as an important part of biology and theoretical medicine and as a science independent of organic chemistry. The latter aims more for synthesis, while physiologic chemistry seeks to isolate the active elements in the body tissues and fluids and analyze them; synthesis is merely the final test for the accuracy of its findings. It is in the application of these principles that Kossel has preeminently distinguished himself. An interesting review of his works and what he has accomplished was given in the *München. med. Wchnschr.*, Dec. 13, 1910, page 2644.

QUADRANT LIGHTING OF SCHOOLROOMS

To the Editor:—The report of the Committee on School Inspection (The Journal, Nov. 25, 1911, p. 1756) says: "Unilateral or quadrant lighting has come to stay as the standard. With it has come the standard of not less than twenty or more than twenty-five square feet of floor space as the lighting area." What is meant by quadrant lighting, and by twenty or twenty-five square feet of floor space? Certainly the average schoolroom of 24 by 32 feet requires more than twenty or twenty-five square feet of lighting. Does it mean 20 or 25 per cent. of the floor space for windows?

George H. Heitmuller, Washington, D. C.

Answer.—These questions were referred to Dr. George L. Leslie, of the committee, who says: "There seems to have been a mistake in the original report of Mr. Chancellor, superintendent of schools at Norwalk, Conn., as published in the 'Proceedings of the American School Hygiene Association' for 1909, page 194. That the window surface should be not less than 20 per cent. nor more than 25 per cent. of the floor space is the commonly accepted fact with regard to the matter.

"Unilateral or quadrant lighting means windows on one side of the schoolroom only. I believe in windows both at the side and the back of the rooms wherever possible. I summarized Superintendent Chancellor's report, as given in the 'Proceedings of the American School Hygiene Association' because as a whole it was excellent."

TREATMENT OF ASTHMA AND THE VALUE OF THIS DEPARTMENT OF THE JOURNAL

To the Editor:—Some time ago I wrote you, asking information relative to the treatment of asthma. As the matter was entirely for my own personal benefit, I enclosed a self-addressed and stamped envelope for reply, it being rather more than I could expect that you should devote any considerable amount of your valuable space to answer a question of one subscriber. You can imagine my surprise, therefore, when I found more than half a column devoted to answering my queries. I soon realized, however, that it was not I alone who was being benefited by your response to me, for I have since received thirteen letters from physicians in different parts of the country, offering suggestions gathered by their years of experience in treating asthma in its various forms, and all this, mind you, without solicitation on my part and without hope of reward. Most of them, I might add, were themselves asthmatic.

When men go to the trouble to write long letters to total strangers, detailing their experience in treating a disease like this, and that from the goodness of their hearts alone, it makes me feel that the milk of human kindness is not entirely dried up, and, further, that medicine is to-day, as it always has been, "the noblest and greatest of all professions."

I thank you for your kindness in this matter and take this means of thanking the many physicians who so kindly contributed their part to the general fund of knowledge on the subject.

M. H. Farmer, Virden, Ill.

The Public Service

Medical Department, U. S. Army

Changes during the week ended Feb. 9, 1912.

Suggs, Frank, M.R.C., granted one month and seventeen days' leave, and relieved from active duty, to take effect at expiration of absence.

Perley, Henry C., colonel, granted leave of absence for two months on surgeon's certificate of disability.

Lauderdale, Clarence E., dental surgeon, will proceed to the Walter Reed General Hospital, D. C., for observation and treatment.

Feely, J. F., acting dental surgeon, left Fort Hancock, N. J., en route to Fort Wadsworth, N. Y., for temporary duty.

Stone, Frank P., dental surgeon, reports for temporary duty at Fort McPherson, Ga.

Ireland, M. W., lieut. col., ordered to attend the eighth annual educational and legislation conference of the American Medical Association, Chicago, Feb. 26, 1912.

Long, C. J., dental surgeon, February 6, resignation accepted this date.

Stuckey, H. W., M.R.C., ordered to Philippines; amended so as to sail March 5 instead of April 5, 1912.

Stallman, G. E., dental surgeon, left temporary duty at Fort McIntosh, Tex., en route for temporary duty at Fort Sill, Okla.

Long, C. J., dental surgeon, left Fort Andrews, Mass., en route home, to Rock Island, Ill., his resignation having been accepted February 6.

Feely, James F., acting dental surgeon, reported for temporary duty at Fort Wadsworth, N. Y.

Medical Corps, U. S. Navy

Changes during the week ended Feb. 10, 1912.

Payne, J. H., A. A. surgeon, detached from the marine recruiting station, Boston, and ordered to the marine recruit depot, Norfolk, Va.

Rodman, S. S., surgeon, detached from the *Rhode Island* and ordered to the *Minnesota*.

Seaman, William, surgeon, detached from the *Minnesota* and ordered to the *Rhode Island*.

Hayes, Oscar, A. A. surgeon, resignation accepted from Feb. 12, 1912.

U. S. Public Health and Marine-Hospital Service

Changes for the week ended Feb. 7, 1912.

Cofer, L. E., asst. surgeon general, directed to proceed from New York to Providence, R. I., for conference relative to maritime quarantine at the port of Providence.

von Ezdorf, R. H., P. A. surgeon, directed to return to Mobile, Ala., from Houston, Tex., stopping at Shreveport, Alexandria, Baton Rouge and other points in Louisiana, on the request of the president of the state board of health, to lecture on cerebrospinal meningitis.

Billings, W. C., P. A. surgeon, granted one month's additional leave from Feb. 16, 1912.

Lloyd, B. J., P. A. surgeon, directed to confer with the health commissioner of the State of Washington, and to proceed to Tacoma, Wash., if found necessary, for conference relative to campaign against rats in the City of Tacoma.

de Valin, Hugh, P. A. surgeon, relieved from duty in plague work and directed to report to the medical officer in command at the Marine Hospital, San Francisco, for duty and assignment to quarters.

Kearny, R. A., asst. surgeon, relieved from duty at the Marine Hospital, San Francisco, and directed to proceed to Juneau, Alaska, and report to the commanding officer of the Revenue Cutter *Rush* for duty.

Stiles, C. W., professor of zoology, detailed to address the Association of Elementary Schools of South Carolina on the subject of school sanitation, March 30, 1912.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Connecticut: Regular, City Hall, New Haven, March 12-15. Sec., Dr. Charles A. Tuttle; Homeopathic, Grace Hospital, New Haven, March 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Grace, New Haven, March 12. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

Maine: City Council Rooms, Portland, March 12-13. Sec., Dr. Frank W. Searle, 776 Congress Street.

Massachusetts: State House, Boston, March 12-14. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Wyoming: Riverton, March 13-15. Sec., Dr. Albert B. Tonkin.

Pennsylvania Single Board of Medical Examiners

By the new medical practice act in Pennsylvania, a single board, the "Bureau of Medical Education and Licensure," was created Jan. 1, 1912. This displaced the three separate boards, regular, homeopathic and eclectic, which formerly had in charge the examination and licensing of physicians. The new board has seven members, two of whom, the superintendent of public instruction and the commissioner of health, are members ex officio. The remaining five were appointed by the governor, one from each of the regular, homeopathic and eclectic state medical societies. The two remaining members are not to represent the same school of practice. Two members were appointed for a term of one year, two for two years, and one member for three years. Hereafter all members will be appointed for three years.

The ex-officio members are Superintendent of Public Instruction Nathan C. Schaeffer and Commissioner of Health Samuel C. Dixon. The other members are John M. Baldy, M.D., president, Philadelphia; Daniel P. Maddux, M.D., Chester; Gustave A. Mueller, M.D., Pittsburgh; Calvin L. Johnstonbaugh, M.D., Bethlehem, and Adolph Koenig, M.D., Pittsburgh. The secretary is Nathan C. Schaeffer, Superintendent of Public Instruction, Harrisburg.

At a meeting of the board held January 12, work was begun toward registering all the medical practitioners of the state as required by the practice act. The medical schools of the state, seven in number, are to be inspected by representatives of the board. A resolution was adopted requiring that after Jan. 1, 1913, every applicant for license to practice medicine in Pennsylvania must show evidence of having attended at least six maternity cases before graduation. The next examination of applicants for license was fixed for May 20-23, 1912.

New Site for Albany Medical College

It is reported that the Board of Supervisors of Albany County, New York, have decided to transfer a part of the old penitentiary grounds to the trustees of the Albany Medical College as a site for a new medical building which, according to the terms of the resolutions, must be built within three years. It is also provided that the college shall maintain as a part of its course of instruction medical and surgical clinics for the free treatment of poor patients who are residents of the county. The new campus will bring the Albany Medical College in close proximity to the Bender Laboratory and the Albany General Hospital.

Additional Endowment for McGill University

A letter from W. Vaughan, secretary of McGill University, Montreal, states that the following subscriptions have recently been received for the Medical Faculty:

For the endowment of the chair and department of anatomy, $100,000 from Mr. and Mrs. Robert Reford.

For the maintenance of the laboratory of pharmacologic research, $10,500 from Mr. David Morrice and Mr. R. B. Morrice, in memory of Edward McDougall Morrice, and also a sum of $1,000 from Dr. A. D. Blackader.

To found a research fellowship in pathology, $25,000 from Dr. James Douglas of New York.

Maryland December Report

Dr. J. McPherson Scott, secretary of the Maryland Board of Medical Examiners, reports the written examination held at Baltimore, Dec. 12, 1911. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 43, of whom 27 passed and 16 failed. Seven candidates were licensed through reciprocity and one by special examination. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Howard University, Washington, D. C. (1908) 76;	(1911)	79
Georgetown University	(1910)	87
College of Physicians and Surgeons, Baltimore	(1910)	79, 87; (1911) 75, 76, 77, 78, 81, 82.
Maryland Medical College (1909) 76; (1910) 75;	(1911)	78, 78, 81.
Johns Hopkins University (1908) 82; (1909) 82;	(1910)	92; (1911) 79.
Baltimore Medical College	(1911)	75
University of Maryland (1910) 82;	(1911)	83, 83
University of Pennsylvania	(1911)	78
University of Nashville	(1907)	75
University of Virginia	(1902)	86

FAILED

College	Year Grad.	Per Cent.
Georgetown University	(1911)	69
Howard University	(1911)	67
University of Maryland (1905) 61; (1910) 71;	(1911)	69, 71
Baltimore Medical College (1908) 71;	(1911)	71, 72
Maryland Medical College (1906) 65;	(1910)	54, 60
Baltimore University	(1902)	20
Woman's Med. College of Pennsylvania (1910) 59;	(1911)	71
Meharry Medical College	(1911)	53

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Louisville	(1907)	W. Virginia
Baltimore Medical College (1893) W. Virginia;	(1910)	Michigan
University of Maryland	(1903)	Virginia
Maryland Medical College	(1909)	Maine
College of Physicians and Surgeons, Baltimore	(1893)	W. Virginia
Jefferson Medical College	(1911)	Delaware

LICENSED BY SPECIAL EXAMINATION

College	Grad. Year
University of Pennsylvania	(1907)

The following questions were asked:

ANATOMY

1. Describe the occipital bone. 2. Name the carpal bones. 3. Name varieties of articulations; give example of each. 4. Give origin and distribution of great sciatic nerve. 5. Give origin, insertion and nerve-supply of quadratus lumborum, brachialis anticus, orbicularis palpebrarum and sartorius. 6. Describe the epithelium of the pharynx. 7. What glands are in the small intestines and where located? 8. Describe a villus. What is its function? 9. What arteries form the circle of Willis? 10. What and where is the pituitary body?

PHYSIOLOGY

1. What is meant by the physiologic effect of a drug? 2. Into what general classes are foods divided? Give examples of each. 3. What effect has starvation on the proteids? 4. (a) What is animal heat? (b) What relation exists between the temperature of the body and the pulse? (c) What is the difference between warm and cold blooded animals? 5. What is meant by nerve cells and nerve fibers? (b) Define afferent, efferent, trophic, inhibitory, motor and vasomotor nerve fibers. 6. What is meant by diffusion and osmosis? 7. What is meant by absorption and nutrition? 8. Which organs of the body secrete and which excrete? 9. Describe the method of producing artificial respiration. 10. What is the composition of saliva, gastric juice, blood and urine?

CHEMISTRY

1. Define: (a) reagents, (b) valence, (c) crystalloid, (d) colloid, (e) atom. 2. Give the chemical name and composition of "laughing gas"; how is it obtained and what are its properties? 3. Give one chemical antidote for each of the following: (a) antimony, (b) lead acetate, (c) cocain, (d) morphin, (e) phenol. 4. Describe in detail the examination of a sample of urine for the detections of bile, sugar and albumin. 5. (a) What are metals? (b) What are non-metals? (c) What are amalgams? (d) What are indicators? 6. Give the chemical formula of each of the following: (a) nitric acid, (b) boric acid, (c) sodium bromid, (d) zinc oxid, (e) calomel. 7. What is glycerin? What is its source in nature? How is it obtained and what are its properties? 8. (a) What is an alcohol? (b) What is an alkaloid? (c) What is a salt? (d) What is a hydrocarbon? 9. Give the "law of constancy of composition." 10. Complete the following equations: $NH_3 + HCl =$ ———. $MgO + H_2SO_4 =$ ———. $2KOH + H_2SO_4 =$ ———. $NaOH + HCl =$ ———. $Na_3PO_4 + 3AgNO_3 =$ ———.

PATHOLOGY

1. Ascaris lumbricoides. Describe briefly life cycle and characteristics. Mention two or more dangerous conditions brought about by infection with this parasite. 2. Mention at least four varieties of ulceration seen in the gastro-intestinal wall. Describe the gross appearance of an amebic ulcer. 3. What are the dangers inherent to diseased tonsils? 4. What is meant by active congestion? Passive congestion? Give an example of each. 5. Trace the probable course of events which follow chronic obstruction of the urethra. 6. Given a slide supposed to be smeared with gonorrheal pus, how would you proceed to establish the fact? 7. On what principle does vaccination against typhoid depend? How is the vaccine prepared? 8. Describe the process of repair in an uninfected fracture of bone. 9. Describe the exudate in an pneumonic lung in the stage of red hepatization. 10. Define, explain and give examples of exudate and transudate.

PRACTICE

1. Define: (a) Von Graefe's sign, (b) uremia, (c) arteriosclerosis, (d) cirrhosis of the liver, (e) angina pectoris. 2. Define: (a) dysphagia, (b) hematuria, (c) hemoptysis, (d) laryngismus stridulus, (e) pertussis. 3. What diseases most commonly occur in the right inguinal region? 4. Differentiate neuritis and rheumatism. 5. Differentiate diphtheria and acute follicular tonsillitis. 6. Differentiate rubella, rubeola and scarlatina. 7. Differentiate intestinal colic, uterine colic and renal colic. 8. Give treatment of angina pectoris. 9. Give treatment of lobar pneumonia. 10. Give treatment of acute dysentery.

SURGERY

1. Name the varieties of fractures of vault of cranium. Prognosis and treatment. 2. Name the different varieties of fractures, their etiology, symptoms and complications. 3. Give a classification of dislocations with the etiology, predisposing cause and anatomic peculiarity of each. 4. Give indications for operative treatment of fractures. 5. Give the early diagnosis of exophthalmic goiter. 6. Differentiate between obstruction of common and cystic ducts. 7. Describe glaucoma. Give signs and treatment. 8. Define hematoma, aneurysm, thrombus and embolus. 9. Indications and contra-indications for salvarsan in treatment of syphilis. Technic of your method of administration. 10. Causes and treatment of acute otalgia.

THERAPEUTICS

1. Give therapeutics of hypodermoclysis and method of administration. 2. Write a prescription in Latin, without abbreviation, containing four ingredients which you would use for an acute bronchitis, and give directions for using same. 3. Write a prescription in Latin, without abbreviation, containing three ingredients which you would use for diarrhea, and give directions for using same. 4. Give the therapeutics of eserin and usual method of administration. 5. Give therapeutic uses of three zinc salts and name antidotes for zinc poisoning. 6. Name the official preparations of oxygen and give their therapeutic uses. 7. Give the therapeutics of three preparations of ammonium and name them. 8. What is meant by "gastric tonic" or "stomachic"? Give indications for use and mode of action. 9. Give the therapeutics of H_2O, hot and cold. 10. Give the physiologic action and therapeutics of aconitum.

MATERIA MEDICA

1. Iodin: (a) how obtained; (b) the official preparations. 2. (a) What is black wash? Yellow wash? (b) What are wines? (c) What is the difference in the preparation of lozenges, tablets and triturates? Name some of the official lozenges. 3. (a) What is the difference between anesthetics and anodynes? Name some of each most generally used. (b) What is the difference between liniments and lotions? Name some of the official. 4. Give the average dose of tincture of aconite, tincture of nux vomica, tincture digitalis, tincture opium, tincture veratrum. 5. To what class of drugs does bismuth belong? What are the official preparations and doses? 6. What is the difference between irritants and counter-irritants? Name the most important. 7. Name six preparations of iron and their doses. (b) What are the incompatibles of iron? 8. Write a prescription containing iron, arsenic, strychnin and quinin, using the official terms, and state when best administered. 9. Write a prescription containing tincture aconite, sweet spirits of niter, spirit of Mindererus, using the official terms. 10. Silver, its official preparations and doses. What are the incompatibles of silver?

OBSTETRICS

1. Name the sutures of the fetal head. 2. What precautions should be taken against septic infection during labor? 3. Indications for use of forceps and mode of application. 4. What are the objections to the use of ergot and stimulants in labor? 5. How would you prevent perineal tears during labor and delivery? 6. What are the varieties of placenta prævia? 7. Outline the care of the navel. 8. Describe some of the best substitutes for mother's milk. 9. What are the different forms of endometritis? 10. Mention the varieties of vaginitis and their treatment.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

MEDICAL CIVICS

A movement which gives promise of filling a distinct need in the present situation has been inaugurated in Cincinnati in the Medical Civics Association. On the night of January 31, about 200 men, about equally divided between physicians and laymen, launched this new association. Dr. Charles A. L. Reed was made temporary chairman. In taking the chair Dr. Reed said, in part:

> Most important civic movements could be promoted by bringing the people and the physicians in closer contact with each other. Nearly every great civic activity in the interest of health and efficiency of the people is but an effort to make practical application of the great discoveries of medical science.
>
> The great antituberculosis campaign already being crowned with success; the crusade against other preventable diseases, such as typhoid fever, diphtheria and scarlet fever; the medical inspection of schools; the protection of the newly born from blindness; the fight for pure food and drugs; the social science work, and the activities represented by the Red Cross are but examples of organized efforts to apply the truths of medical science in a broad way to the betterment of the people. The sanitation of existing tenement houses and the construction of new ones on hygienic lines is a question of first social importance. The ethical relations between the medical profession and society need to be better understood by both parties.
>
> The future of medical education in this community depends on a popular appreciation of its civic importance.
>
> The organization that is contemplated here to-night is to be an open court, where every subject embraced under the title of medical civics may have the benefit of every viewpoint. One point I must make particularly clear, and that is that this proposed organization is not antagonistic to any other organization devoted to any of the objects that I have indicated, but, on the contrary, seeks in an educational way to help all of them.

WHAT THE AMERICAN MEDICAL ASSOCIATION STANDS FOR

The objects of the association, as set forth in the constitution, are to promote the establishment of a national department of health; to promote and protect necessary health legislation in municipality, state and nation; to sustain and perfect state and national laws for the protection of purity in food products; to advance the status and scope of medical education; to encourage scientific research and disseminate knowledge relative to the nature, causes and prevention of diseases; to cultivate ethical relations between the medical profession and the public; to do such other things as may tend to promote the health, longevity and efficiency of the people, and to cooperate with any or all civic organizations devoted to these or similar objects.

Membership is open to members of the medical profession and to those of the laity who are in sympathy with the declared objects of the association.

The following standing committees are provided for: national department of health; meetings, lectures and methods of popular instruction; health legislation; food and drug legislation; antituberculosis crusade; medical education, university extension and scientific research; milk commission; municipal health administration and medical inspection of schools; social science work and ethics; cooperation with other civic bodies and the Red Cross. Special committees on other subjects will be appointed from time to time.

POSTGRADUATE COURSE

Sixth Month—Fourth Weekly Meeting

PSEUDOLEUKEMIA, HODGKIN'S DISEASE[1]

PATHOLOGIC ANATOMY: Lymph-nodes. Chains usually involved, gross appearances, size, density, periadenitis, infiltration. Microscopic changes, lymphadenoma.

Spleen: Microscopic changes. General distribution of lymphomata. Changes in bone marrow and liver. Relation of pathologic changes to malignant disease and to tuberculosis.[2]

SYMPTOMS: Enlarged glands, location and rate of growth. General symptoms of anemia. Hemorrhages. "Chronic relapsing fever." Mechanical effects. Circulatory and nervous symptoms. Gastro-intestinal disturbances. Cutaneous symptoms. Blood changes.

ADDISON'S DISEASE[3]

PATHOLOGY: Usual lesion of suprarenal bodies, gross and microscopic. Other morbid changes occasionally found. Abdominal sympathetic, changes in cells and fibers. Deposit of pigment.

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1. Karsner: Archives of Internal Medicine, August, 1910.
2. Harris. California State Jour. of Medicine, March, 1909.
3. Progressive Medicine, June, 1911.

Diagnosis: (1) Pigmentation of skin and mucous membranes, (2) anemia, (3) asthenia, (4) feeble heart's action, (5) gastric disorders.

Differentiate from pigmentation of: (1) abdominal growths, (2) hepatic disease, (3) pregnancy, (4) "vagabond's disease," (5) melanotic sarcoma, (6) exophthalmic goiter, (7) syphilitic discoloration.

Monthly Meeting

The Early Diagnosis of Exophthalmic Goiter.[1]
The Regeneration of Blood.[2]
The Clinical Diagnosis of the Leukemias.

Book Notices

Where Is the Truth? A Review of "Patent Medicines," Prophylactic and Cosmetic Remedies Advertised in Newspapers and Pamphlets. By Dr. Sokoloff. Edition 3. Paper. 81 pp. Price, 75 kopecks. Published by the author, Dr. Sokoloff, Tchernishevsky per., dom. 20, Moscow, Russia.

The object of this book is to expose the dangers and harms of remedies advertised in the lay press. The Russian government decreed in 1907 that a "patent-medicine" vender must obtain a special permit for advertising his remedy and must give its composition and mode of preparation. Such action on the part of the government became urgent on account of the enormous number of fake remedies that appeared on the market during the two years after the official censorship of the press was abolished. The advertisements during these two years became so numerous, so fantastic and so impudent that it was necessary to put some restrictions not only on domestic, but also on imported "patent medicines." Thanks to the energetic action of the Russian government, the number of advertised "patent medicines" decreased considerably, because some were not allowed to be advertised at all, and in the case of those which were permitted the composition and method of preparation had to be given. It became thus possible to use the official data for explaining to the public the dangers and harm of the drugs. Sokoloff classifies the numerous morbid conditions for which cures were advertised as follows: (1) nervousness and general weakness: Spermin (Pöhl) and its imitations, Hartman's Cardialin, Phytin, Glycerophosphates, Sanatogen, Somatose, Hommel's Hæmatogen, Albukol and Pholaxfer; (2) obesity: Antipositin, Marconi's Powders, Marienbad Pills, Iodothyrin, Iodirin; (3) constipation: Cascarins (Leprince, Barber, Midy), Ara Pills (containing rhubarb, aloes, cardamon, sodium and magnesium sulphate), Regulin (cascara sagrada and agar-agar), Purgen (phenolphthalein), Scavulin (cascara, phenolphthalein and rhubarb), and Califig; (4) sexual impotence: electric belts, gold pastor apparatus, erectors, Muracetin, Amrita (contains quinin, iron and cantharidin); (5) pregnancy: preventive devices such as condoms, pessaries, sponges, etc.; (6) syphilis: (treatment of syphilis without mercury), Indian balsam; (7) gonorrhea: (injections of midi, matico); (8) skin diseases; (9) rheumatism, fakir's ring; (10) ear diseases, alcoholism, asthma, colds, etc.: bromids and sodium bicarbonate and milk sugar and numerous other remedies for piles, neuralgia (baume Bengué, consisting of menthol, methyl salicylate and lanolin).

In the second part, Sokoloff speaks of cosmetic remedies advertised in the newspapers, such as Odol (mouth-wash consisting of salol, alcohol, water, saccharin), remedies to promote hair growth (he explains the uselessness of such remedies), remedies for different diseases of the hair, for developing the breasts (for which Marbor Pills are recommended containing pyrophosphate of iron, sodium iodid, dextrin, nuts and extract of quassia with other indifferent drugs), for developing beautiful necks and full round shoulders (pills of iron and quinin, forming so-called Bella Forma Pills).

The subject is well covered. Some remedies, such as Pöhl's Spermin and cosmetic massage of the face, are discussed at length. Sokoloff always gives scientific reasons against the use of the various preparations discussed.

The book has had a tremendous success in Russia, the first edition being exhausted within one month after publication. The work of Dr. Sokoloff is similar to that of the Council on Pharmacy and Chemistry of the A. M. A., but it is rendered much easier by the energetic cooperation of the Russian government.

Bedrägliga Läkemedel och Läkemetoder. Jämte Redogjörelse för Några I Värt Land Utbjudno Läkemedel. Nr. 1 af Smaskrifterna Utgivna Av Byrån För Uplysning om Läkemedelsannonser, Upsala, Sweden. Edition 4. Pp. 126. Paper. Price, 50 øre. Lund, Sweden: Gleerupska Univ.-Bokhandeln.

This is the first of a series of pamphlets published by the Central Bureau of Medical Advertising in Sweden. The author, Professor Thunberg of Lund, devotes some fifty pages to a plain talk to the public, attempting to prove, by a popular interpretation of certain physiologic and chemical phenomena, the absurdity of patent medicines and the ready-made diagnosis. He then exposes some 160 well-known frauds, among which the most successful seem to be American—the Kidd Dope, California Fig Syrup, Haig's Goiter Cure, and many others. The fact that American medicinal fakers have met such success in Sweden is not so strange when one considers that country's large contribution to American immigration and the glowing colors in which American civilization has been depicted in the letters sent home every year by the prosperous relatives in the New World. This must necessarily have a great influence on the minds of the Swedish public and it no doubt lends weight and distinction to everything American. Among information of especial interest in this pamphlet may be mentioned a report of the death of a child who accidentally swallowed two of Dr. Kidd's tablets; and also the mention of a homeopathic attack on the medical profession, in an open letter from a clergyman to the government, an episode that shows that our Swedish confrères also have their troubles. On the whole, however, this pamphlet gives one the impression that—in spite of all rustic ignorance and feudalistic legislation—the medical problems in Sweden are far less complicated than those in larger countries. The movement, of which this pamphlet is the first product, will surely eradicate the dope-evil, provided it follows the path pointed out by Professor Thunberg in this pamphlet, namely, popular education.

Diseases of the Ear, Nose and Throat. For the Family Physician and the Undergraduate Medical Student. By Henry Ottridge Reik, M.D., Associate in Ophthalmology and Otology in the Johns Hopkins University. Assisted by A. J. Neilson Reik, M.D., Surgeon in the Baltimore Eye, Ear and Throat Hospital, Baltimore. Cloth. Price, $3. Pp. 374, with 81 illustrations. New York: D. Appleton & Co., 1911.

This work is intended to meet the needs of the physician and the undergraduate student. The author recognizes the fact that it is essential that the general practitioner should have sufficient knowledge of the so-called special branches to enable him to make a diagnosis, to be able to treat the simpler affections of the special organs, to realize his limitations in these special fields and to know when to advise the assistance of a specialist. The author has solved this question, as far as suitable text on the ear, nose and throat is concerned, in this new work which should appeal to both student and physician, since it is eminently practical as a text-book for the former and a valuable reference work to the latter.

Hygiene for Nurses. Theoretical and Practical. By Herbert W. G. Macleod, B.Sc., M.D., M.S. Edin. Cloth. Price, $1.50 net. Pp. 233, with 49 illustrations. New York: William Wood & Co., 1911.

This book is not likely to be of so much practical value to nurses on this side of the Atlantic as to those of Great Britain. The subjects of ventilation and sanitation are considered in relation to British houses which differ materially from American buildings in construction and heating arrangements. Excerpts from acts of parliament—"Infectious Diseases Prevention Act;" "Infectious Diseases Notification Act;" "Vaccination;" "Children's Act;" "Care of School Children;" "Midwives Act," etc.—make the book valuable as a reference work.

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[1] Mayo: Surgery, Gynecology and Obstetrics, August, 1910. Werelius: The Journal A. M. A., July 17, 1909. Jackson and Mead: Boston Med. and Surg. Jour., March 12, 1908; The Journal A. M. A., Oct. 12, 1907.

[2] Morris: Archives of Internal Medicine, iii, 93.

Medicolegal

Annulment of Marriage for Alleged Misrepresentations as to Health Refused—Physician not Chargeable with Knowledge of Condition of Own Health

(Gumbiner vs. Gumbiner (N. Y.), 131 N. Y. S. 85)

A special term of the Supreme Court of New York, Kings County, in dismissing the plaintiff's complaint asking an annulment of her marriage with the defendant, says that over a year before the marriage she heard from a friend that the defendant had some pulmonary trouble. In September, 1904, she mentioned this to the defendant. She testified that he replied: "No; I had a cold. I have nothing the matter with me. I am perfectly well." She also added: "At the time he looked well to me. He told me there was no such thing as pulmonary trouble; that he was well and in a fit condition to marry." His health continued apparently good, and fourteen months later, or Nov. 6, 1905, they were married by a civil ceremony. As the young husband could not then provide a home, his wife continued to live with her mother. In 1907, his prospects having improved, a further religious ceremony was solemnized, after which they lived together. The defendant was apparently outwardly in good health, and the married life was unclouded until August, 1910. He then had a cold, which grew into grippe, with pleurisy and fever, so that he had to go to the country for three months. It also transpired at the hearing, although it did not appear when the plaintiff learned thereof, that the defendant had a serious illness when a medical student in 1902. In that spring his sputum had blood, and an affection of the lungs was feared. No test was made for the distinctive bacilli of tuberculosis, but the physician sent him for two or three months to a sanitarium. Thence, in the fall of 1902, he went to Los Angeles for eighteen months, where he was much benefited. On his return to New York his symptoms had disappeared. Even six years after this alleged representation, and on his first illness after his marriage, when pleurisy had developed, the diagnosis of his condition was uncertain. About the end of November, 1910, a physician pronounced his ailment tuberculosis, but could not say with certainty if it was of long standing.

It was urged that the defendant, being a physician, was chargeable with knowledge of the true condition of his health. But, in view of his good health that, except for usual colds, appeared to have been uninterrupted for six years, how could scienter (knowledge) be found in 1904, and consequent concealment? Looked at on the narrow basis of a contract merely, the elements of fraud (which are never presumed) were not established. Matters of general bodily health and other qualities and circumstances as to the fortune and position of the intending parties do not go to the fundamental and essential elements of the marriage relation. In England hardly any fraud, however gross, can make voidable a marriage by persons who intelligently took part in the marriage ceremony. Although it is said that this state (New York) looks on marriage "in no other light than a civil contract," yet, even in a marriage like this, without issue, the public is concerned. Marriage obligations once entered on, and more solemnly repeated in a second ceremony, after full means of inquiry and with ample time for deliberation, are not lightly to be dissolved. The plaintiff had no actionable grievance in the husband's failing health, first manifested six years after the alleged representation of fitness to marry, and following on three years of actual consortium.

Privilege Waived by Bringing of Action for Malpractice—Evidence of Defense by Medical Society not Admissible

(Terier vs. Dare (N. Y.), 131, N. Y. S. 51)

The Third Appellate Division of the Supreme Court of New York reverses a judgment recovered by the plaintiff for malpractice, and orders a new trial. The court says that the plaintiff fell from the steps of his house, and struck on his shoulder and was treated for the injury by the defendant. The plaintiff's evidence went to show that his shoulder was dislocated, and that he was not properly treated for a dislocation. The physician had treated him for a considerable time before the injury for a chronic infectious disease, and his theory was that the shoulder was not dislocated, but bruised, and that infection from the contagious disease attacked the shoulder joint following the bruise, and he treated him accordingly and informed him fully as to his condition. The plaintiff did not substantially deny taking the medicine prescribed for the chronic disease, or that the defendant informed him that his trouble was caused by such disease. The court thinks that the judgment in the plaintiff's favor was not fairly sustained by the evidence.

The court also thinks that a ruling was prejudicial and called for a reversal of the judgment, which excluded evidence as to the nature of the disease for which the defendant had previously treated the plaintiff as a privileged communication between patient and physician. It was evident that the defendant could not by experts show to what extent the plaintiff's condition might be due to a chronic disease unless he was able to show what that disease was. By bringing an action against his regular physician who had been treating him for a disease, claiming that the subsequent treatment was malpractice, the plaintiff waived the professional privilege, and the defendant was permitted to show any facts he knew bearing on the present condition of the plaintiff.

After suit brought, the defendant wrote a letter to the plaintiff, saying, in substance, among other things, that the medical society of the state defended its members in actions for alleged malpractice. This letter was offered in evidence and received over the defendant's objection and exception. Perhaps, standing alone, this erroneous ruling might not call for a reversal, but, as a new trial was to be had, the error would not occur again.

The reexamination with reference to the letter developed the fact that by reason of membership in the society the member was entitled to be defended by the attorney of the society in such actions, and to that extent the defendant was insured or indemnified. The letter was not evidence on any subject before the jury, and it could only tend to prejudice the defendant's case by making the jury believe that the medical society in some way must bear a part of the burden of the defense. Perhaps the jury reasoned that, if the defense cost the defendant nothing, its verdict against him would not be a very serious burden.

The court thinks that the familiar rule in negligence cases excluding evidence that the defendant is insured against liability applied in principle to this case. The letter could not be said to be an admission of the defendant's guilt, as the suit was already pending, but it was an unwise attempt by the defendant to frighten the plaintiff from further prosecuting the case, not by a false statement, but by a statement which as matter of fact rested on a substantial basis.

Gauze Alleged to Have Been Left in Abdomen

(Zilke vs. Johnson (N. D.), 132 N. W. R. 640)

The Supreme Court of North Dakota apparently reluctantly reverses a judgment recovered by the plaintiff for malpractice, and orders a new trial, on account of error in an instruction which in effect told the jury to disregard all statements made by counsel in argument. The allegations were that the defendant had negligently failed and refused to procure necessary professional assistance in performing an operation on the plaintiff in 1906, and had left some gauze in the wound, which remained there until removed by another operation, by others, in 1908.

The court holds that there was no merit in an assignment of error because the plaintiff had been permitted to show the pain suffered by her before establishing the acts of negligence charged, as that objection merely went to the order of proof, which is left to the discretion of the trial court. Nor was it error to permit the plaintiff, a married woman, to testify to her inability, after the operation, to perform her usual household work, it appearing that such testimony was offered merely to show the extent and character of her injuries, and not for the purpose of augmenting the damages on account of loss of services. It was also proper to permit the plaintiff to show that she had unconditionally obligated herself to pay another physician and surgeon for performing the operation for the purpose of removing the gauze.

Testimony as to the reason the 1906 operation was performed at the plaintiff's home, instead of elsewhere, and the physician's knowledge that the surrounding conditions at that place were not the most favorable, was immaterial, as it had no tendency to throw any light on the issue of the defendant's alleged negligence in leaving the gauze in the plaintiff's abdomen, or on his alleged negligence in performing such operation without proper assistance. While the complaint charged, as one of the acts of negligence, that the defendant performed the operation without proper assistance, there was nothing to show that such alleged negligence in any manner directly contributed to the injury complained of, but it might be proper to show such fact as a circumstance of some evidentiary weight bearing on the particular negligent act relied on.

The defendant positively swore that at the 1906 operation he did not make an incision entirely through the abdominal wall, but merely penetrated "the aponeurosis of the recti muscles," and that the operation was outside of the peritoneal cavity, in which he was to some extent corroborated by the nurse. He also swore that at neither the 1906 operation nor one in 1905 did he use any packing, but used a dressing and sponging. The plaintiff conceded that there was no direct testimony showing that the defendant left the gauze in her abdomen at the 1906 operation, but contended that the circumstantial evidence was wellnigh conclusive that such was a fact. She also called attention to the fact that in the nature of the case direct proof could not be furnished. She was under the influence of an anesthetic at the time of such operation, and the only other persons present were the defendant, his wife and the nurse. The court holds that the evidence was sufficient to require its submission to a jury.

Society Proceedings

COMING MEETINGS

Missouri Valley Medical Society, Colfax Springs, Ia., Mar. 21-22.

PHILADELPHIA COUNTY MEDICAL SOCIETY

Meeting held Jan. 10, 1912

The President, Dr. C. B. Longenecker, in the Chair

Symposium on Correlation of Special Diseases and General Systemic Affections

Certain Infections and Intoxications and Their Ocular Symptoms

Dr. G. E. de Schweinitz: The various types of ocular disorders depend on diseases of nutrition, particularly those which have relationship to the various types of chronic rheumatism, ostitis deformans, arthritis deformans and gout. It is important to make a differential diagnosis and to recognize the value of bacterin in the treatment of gonorrheal inflammations of the uveal tract. In the case of the so-called intoxications which produce optic nerve diseases, especially the toxic amblyopias, the lesions depend not alone on the evil influence of the abuse, for example, of tobacco and alcohol, but on the effects of these drugs in creating chronic intestinal catarrh, which in turn is influential in fostering the optic nerve disease. I wish to emphasize the value of thorough analyses from the standpoint of physiologic chemistry, and of thorough study of the metabolism in determining the etiologic factors which are potent in bringing about certain relapsing and chronic uveal tract diseases which modern tests show are not due to the usual infections, namely, syphilis and tuberculosis. Analogous to this are the infections which pass through the tonsils and the pharyngeal ring, creating in distant portions of the body adenitis, arthritis and obscure abdominal affections. Similar infections pass through these areas and cause ocular diseases. In this connection we must recognize the importance of disease of the gums and caries of the teeth in their relation to eye affections. I wish to plead for a more thorough study, particularly of the relapsing uveal tract diseases and optic nerve affections. The duty of the doctor to his patient is not performed unless the same care in investigation is given to these ocular diseases as the internist gives to any obscure general condition, and we must insist on the necessity in any case of doubt, of calling in the aid of the internist, the rhinologist, the physiologic chemist or the dentist, as the case may require.

DISCUSSION

Dr. Aaron Brav: There are certain cases of affections of the uveal tract in which we cannot find the cause even with repeated examinations. We have sometimes to rely on empirical treatment. The word "auto-intoxication" is not always wisely used. The conditions we ascribe to auto-intoxication are often pre-albuminuric in nature, and repeated urinary examinations are essential. If, on examination, we find albumin or casts and indican, we should think of nephritis. The therapeutic test is not always final. There are some diseases that follow a certain course, no matter what therapeutic agent is employed. They will proceed until the acme of the disease is reached and then decline without being influenced by any special remedy. We have sometimes cases of diabetes in which the only symptom is paralysis of the external ocular muscles. In a case at present under my care there is a total paralysis of the oculomotor nerve associated with paralysis of the abducens, there being no other symptoms, while the urine in repeated examinations showed a large amount of sugar.

Dr. S. Lewis Ziegler: These infections are not always of one specific character. I have seen a case of mixed infection, tuberculous and syphilitic, in which the lesion existed for nine months before yielding to tuberculin injections. We must not forget that there are perversions of metabolism localized in the internal secretions, that there are produced irritating substances which are distributed through the system. These conditions must be met and their proper treatment instituted.

Relation of Ear Diseases to Systemic Affections

Dr. B. A. Randall: Ear diseases are common, constituting 2 per cent. or more of those met in general practice. More than half are chronic, yet the treatment is not in most cases beyond the powers of the family physician, nor do the results justify any pessimistic attitude. General disorders underlie a large proportion of these affections and must be treated as well as the local conditions; and their frequent relation to influenza and the exanthems must oftener be forestalled by hygiene, such as protective covering of the ears before they suffer involvement. Extreme deafness is often caused by meningitis, syphilis or toxemias. Arteriosclerosis, lithemia or auto-intoxications underlie many cases; and assumptions of heredity may only cloak imperfect study. Extensions from the ear cause many intracranial and septicemic disorders; the bronchopneumonias and bowel infections of children are often associated with or due to tympanic infections; and tuberculosis may have its primary focus, surgically removable, in the ear. Typhoid, diphtheritic and other germs have been found in the ear-discharges of even otherwise indeterminate cases and endanger the spread of these diseases, especially by the light cases. Forming 2 to 5 per cent. of mortality, ear-disease should receive 1 per cent. of the time of the medical curriculum—forty hours of the 4,000 as now allotted.

DISCUSSION

Dr. James H. McKee: The fact that the aurist sees so many of the chronic affections shows that many of the more acute cases have been unrecognized, untreated or mistreated. The pediatrician places grip as probably the most frequent cause of otitis media and next to this pneumonia. In many of the cases of epidemic influenza the pneumococcus is found in the discharge from the ear.

Dr. Henry W. Cattell: I should like to ask Dr. Randall whether he has had any experience in deafness following the use of salvarsan. I should also like to ask whether along with hexamethylenamin he has used any of the vaccines for the treatment of ear lesions in which the streptococcus, pneumococcus and other organisms, which produce this condition, are to be found.

Dr. B. A. Randall: I have so far not seen a case in which the use of salvarsan caused deafness. The syphilitic cases of the ear are very sad ones. They may yield nicely to treatment for a time, but all too soon they relapse and the outcome is very bad, generally from neglect of treatment. This is true of both inherited and acquired cases. As to mumps, we all know that cases of deafness follow this affection, but they can be counted on the fingers, even by men of large experience. I recall a girl of 16 whose nearly total deafness followed mumps and internal ear disease was found, but close scrutiny revealed syphilitic stigmata. Small-pox has given me very instances of otitis media. The vaccines, other than the tuberculous, I have not made much use of, and I am in doubt whether we shall get a polyvalent serum of much value. Thus far they have failed me entirely.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Annals of Surgery, Philadelphia

January, LV, No. 1, pp. 1-184

1 *Surgical Aspects of Membranous Pericolitis. L. S. Pilcher, Brooklyn.
2 *Surgical Treatment of Colitis. C. L. Gibson, New York.
3 *Surgical Treatment of Acute Pancreatitis. W. Körte, Berlin, Germany.
4 *Incision for Lumbar Exposure of Kidney. W. J. Mayo, Rochester, Minn.
5 *Epigastric Hernia, Cause of Chronic Diarrhea. F. Cobb, Boston.
6 *Sprain-Fracture. G. G. Ross and L. F. Stewart, Philadelphia.
7 *Dressing for Fracture of Clavicle. H. D. Collins, New York.
8 Fracture of Floor of Acetabulum. P. G. Skillern and H. K. Pancoast, Philadelphia.
9 Clamp for Lining Up Fractured Long Bones. W. Bartlett, St. Louis.
10 Fracture of Sesamoid Bones. G. P. Müller, Philadelphia.

1. **Membranous Pericolitis.**—As a result of personal observations, it has seemed to Pilcher that these right-sided pericolic adhesions and membraniform crippling veils and bands form a fairly distinct pathologic entity deserving of recognition as a well-defined surgical condition. In all cases they are a source of ill health and suffering. In some cases they are a positive menace to life. In most instances they can be relieved by procedures that are attended with a minimum of operative risk. He cites a number of cases.

2. **Surgical Treatment of Colitis.**—Gibson believes that there still remains some sphere of usefulness to the operation of valvular colostomy in these cases of colitis, although he thinks it is unwise, if not impossible, to attempt at present to formulate any indications for the employment of this measure. It is fair to say that certain forms of colitis can be cured by it. It may be objected that such cases are of the milder variety that would yield to the orthodox treatment. To Gibson it seems that the results have been more direct, progressive and prompt than are attained by the non-operative measures. With regard to the therapeutic agents that may prove of value Gibson relies principally on the mechanical cleansing by flushing the bowel with an appropriate bland solution, such as the normal saline, used as a continued irrigation, escaping through a rectal tube, or the colon may be filled to moderate distention, say three quarts, and subsequently evacuated. The frequency should be established by the tolerance of the bowel and the urgency of the symptoms. At the beginning, if well borne, Gibson prefers to repeat the irrigation at regular intervals of eight or twelve hours, possibly oftener. Agents destined to exert a direct influence on the ulcerating surfaces will naturally act better after the preliminary cleansing. They should be introduced separately from the saline, or after it has been evacuated. The bowel should be flushed with plain water prior to the use of substances such as silver nitrate, which combine with the saline. The required therapeutic agents will also vary somewhat with the nature of the colitis. The patient should be on an appropriate, chiefly protein, diet.

3. **Surgical Treatment of Acute Pancreatitis.**—The scope of Körte's paper is so far reaching and the material contained therein is so rich in valuable data that it is impossible to abstract it in the limited space at our disposal.

4. **Incision for Lumbar Exposure of Kidney.**—Beginning at a point 2 to 2½ inches lateral to the dorsal spines near the outer region of the erector spinæ muscle; Mayo makes a longitudinal incision 2 to 3 inches in length through the skin, superficial fascia and posterior layer of the lumbodorsal fascia (vertebral aponeurosis) which covers the erector spinæ muscle. The incision lies behind the twelfth rib from the angle, if present, nearly to the head, and reaches downward to a point ½ inch below the angle. From this point the incision passes obliquely downward and forward along the interior margin of the quadratus lumborum muscle to a point an inch above the crest of the ilium, and there turning runs forward parallel to the iliac crest as far as necessary. The posterior superior lumbar triangle (Kelly) just beneath the twelfth rib is then exposed by cutting an opening through the external and internal oblique, transversalis and latissimus dorsi muscles, exposing the transversalis fascia in its lumbar portion. This fascia is then opened freely, exposing the perirenal fat. The ilio-inguinal and iliohypogastric nerves are identified and retracted out of harm's way and the lower part of the incision completed. The twelfth rib is then cleared in its posterior portion upward and backward nearly to the articulation of the rib with the transverse process of the twelfth dorsal vertebra, and the pleura pushed upward. By retracting the erector spinæ muscle, on the one hand, and the costal margin, on the other, a wide exposure is accomplished at the point of previous inaccessibility. As a rule, the kidney can readily be drawn through the incision to the surface with but little traction. The incision is easily closed and there is little or no danger of hernia. The incision varies from the ordinary lumbar incision only in relation to the exposure above and behind the curve or angle of the posterior half of the twelfth rib. In operating on kidneys which are not greatly altered in size, or in which the alteration in size is due to fluid contents which can be evacuated, Mayo prefers the lumbar incision. For those tumors of the kidney which present themselves as a distinct abdominal mass the anterior transperitoneal incision is best.

5. **Epigastric Hernia.**—Cobb reports a case of chronic diarrhea yielding to no form of medical treatment, but cured by operation on an epigastric hernia.

6. **Sprain-Fracture.**—Of the 135 cases studied by Ross and Stewart, forty-six were in the ankle; twenty-five the wrist; twenty-five the elbow; twenty-three the shoulder; fifteen the knee; nine the hand; and two were in the anterior foot region. With the ankle and wrist cases the tarsal and carpal bones have been respectively included. Twenty-eight of the ankle fractures were of the malleoli, and of these twenty-four were of the external malleolus; being within one of the number of sprain-fractures found at the wrist and over 16 per cent. of this series. Thirty-three of these patients were old (aged 3 weeks or more). All of these patients suffered as a result of either being treated as a sprain or receiving no treatment. Most of these cases were caused by indirect violence; a few were caused by direct violence. In the experience of the writers it has been possible to diagnose clinically 77 per cent. of the sprain-fractures shown up by Roentgen-ray. Of the remaining 23 per cent., one was diagnosed osteoperiostitis, one luxation and the rest sprain, or contusion. In a small percentage of cases that the Roentgen-ray did not demonstrate to be sprain-fractures, the diagnosis of sprain-fracture was made. They hold that a history of sufficient injury, with a sharply localized area of swelling and acute tenderness over a region of ligamentous or tendinous attachment, means sprain-fracture, and that about 15 per cent. of all fractures are sprain-fractures. That condition, formerly called severe sprain, they term sprain-fracture, reserving the term strain for the condition resulting from stretching of soft parts. They believe that sprain-fracture is probably a part of the pathology of every dislocation and if in doubt as to whether or not sprain-fracture has occurred, they would treat it as a sprain-fracture.

7. **Dressing for Fracture of Clavicle.**—The material used by Collins consists of heavy moleskin adhesive plaster, which is nonirritating. The lines of force are the same as those of the Sayre dressing. A lacing joins this elbow piece with the shoulder cap in front and another is placed behind. The front and back lacings between the elbow sling and shoulder cap permit the injured shoulder to be raised or, by tightening one lacing more than the other, the elbow may be brought forward or back as desired.

Kentucky Medical Journal, Bowling Green

January 1, X, No. 1, pp. 1-55

11 *United We Stand, Divided We Fall. J. G. Carpenter, Stanford.
12 Practical Lessons from Eight Months' Operation of Our Vital Statistics Law. W. L. Heizer, Bowling Green.
13 Typhoid as Seen and Treated by Country Practitioner. V. A. Stilley, Benton.
14 Typhoid, Statistics and Prophylaxis. P. Hansen, Bowling Green.
15 Differential Diagnosis Between Glaucoma, Iritis and Conjunctivitis. H. G. Reynolds, Paducah.

11.—Abstracted in The Journal Nov. 18, 1911, p. 1719.

Journal of American Public Health Association, Columbus, O.

December, I, No. 12, pp. 869-948

16 *Counting Apparatus for Litmus Plates with Cold Counting Plate for Use with Gelatin Plates. S. H. Ayres, Washington, D. C.
17 Report of Minneapolis Vice Commission. G. F. Butler, Chicago.
18 Method Employed at New York Quarantine for Detection of Cholera Carriers. R. H. Creel, Ellis Island, N. Y.
19 *Decolorization Test for Detecting Cholera Carriers. A. J. Bendick, New York.
20 Modern Practice in Disposal of Refuse. R. Hering, New York.
21 Beriberi. M. G. Lebredo, Havana, Cuba.
22 *Liver Broth. D. D. Jackson and T. C. Muer, Brooklyn.
23 *Classification of B. Coli Group. D. D. Jackson, New York.

16. **Counting Apparatus for Litmus Plates.**—Ayres has designed a counting apparatus for the determination of acid-producing colonies on litmus plates. The apparatus consists of a wooden box 7 inches long, 7 inches wide and 6½ inches high. The top of the box is covered by a piece of ground glass over which is placed an ordinary square counting plate. The front of the box is open so as to admit light which is reflected to the counting plate on the top by means of a plane mirror placed in the box at an angle of 45 degrees. A shield of wood, 14 by 7 inches, is attached to the front of the box 1 inch below the top. This shield is to protect the eyes from the light which is used in conection with the apparatus. A laboratory electric arc lamp, gas lamps, or an acetylene gas bicycle lamp may be used. The ordinary incandescent electric lamp is of no value for use with this apparatus, since it gives a yellow instead of white light. A yellow light so changes the blue color of the plate that acid-producing colonies fail to show the red coloration. When this apparatus is in use, the counting plate is illuminated by a bright white light and on account of the ground glass no images are reflected from the mirror. The acid-producing colonies on the litmus plate, as it rests on the illuminated counting plate, show very distinctly in contrast to the dense blue. When differential counts are made, using litmus as an indicator, it has been found that when using the illuminated counting plate the acid-producing colonies are increased from 25 to 50 per cent.

19. **Detecting Cholera Carriers.**—Bendick adds saccharose and sodium carbonate to the Dunham's peptone solution until the medium is alkaline, phenolphthalein being added as an indicator. If a moderate number of cholera vibrios are introduced together with other organisms, the culture becomes decolorized after five to eight hours' incubation. The cholera vibrios ferment the saccharose, the acid produced unites with the sodium carbonate and the medium becomes neutral, hence the red color of the phenolphthalein disappears. As a minimal number of cholera organisms introduced with a maximal number of other organisms do not readily decolorize the culture, the cholera vibrios should be enriched by preliminary incubation in Dunham's peptone solution.

22. **Liver Broth.**—For those observers who desire to determine the presence of all gas-formers (fermenting dextrose) at 37 C., and *B. coli* to the highest degree to which it is actually present, the authors have devised a medium giving quicker and higher results than dextrose broth, even after rejuvenation in nutrient broth. Its composition is as follows:

	Gm.
Beef liver	500.0
Peptone	10.0
Dextrose	10.0
Potassium acid phosphate	1.0
Water	1000.0

The medium is prepared in the following manner: Chop 500 gm. of beef liver into small pieces and add 1,000 c.c. of distilled water. Boil slowly for two hours in a double boiler (starting cold), stirring it occasionally. Make up loss by evaporation and strain through a coarse wire strainer. To the filtrate add 10 gm. of peptone, 10 gm. of dextrose, and 1 gm. of potassium acid phosphate. After warming this mixture in a double boiler and stirring for a few minutes to dissolve the ingredients, titrate with $\frac{n}{20}$ sodium hydroxid, using phenolphthalein as an indicator, and neutralize with normal sodium hydroxid. Boil vigorously for thirty minutes in a double boiler, and five minutes over a free flame with constant stirring to prevent caramelization of the dextrose. Make up loss by evaporation and filter through cotton flannel and filter paper. Tube, and sterilize in an autoclave for fifteen minutes at 120 C. (15 lbs.). It is very important that liver broth should not be exposed to the high temperature attained in the autoclave any longer than fiften minutes, as prolonged heating above the boiling point causes caramelization of the carbohydrates, rendering the medium less delicate for bacterial development. The addition of small pieces of liver tissue, which have been sterilized in the autoclave, improves the rejuvenating properties of the medium. They should be added to the tubes after sterilization.

23. **Classification of B. Coli Group.**—The fermentative reactions have been chosen by Jackson as a means of classification, not only because of the ease with which these organisms are thus separated from those of other groups, but because of the facility with which each variety may be separated from the others. He recognizes four species: *B. communior*, (Durham.); *B. communis*, (Escherich); *B. aerogenes*, (Escherich); *B. acidi-lactici*, (Hueppe). The first two species are separated from the second two by their gas production with dulcite and the first species of each of these two groups may be separated from the second by its gas production with saccharose. Each of these species may be separated into four possible varieties in accordance with their gas production with mannite and raffinose. Two varieties of the third and three of the first and fourth species are now known.

Ohio State Medical Journal, Columbus

January, VIII, No. 1, pp. 1-54

24 Relation Between General Arteriosclerosis and Increased Tension in Eyeball. W. H. Snyder, Toledo.
25 Roentgen-Ray Diagnosis of Carcinoma and Other Deforming Lesions of Stomach. S. Lange, Cincinnati.
26 Practicability of Freud's Psycho-Analytic Therapy in Treatment of Psychoneuroses. H. H. Drysdale, Cleveland.
27 Resection of Tarsal Cartilage and Retrotarsal Fold in Advanced Trachoma. J. H. Williams, Cincinnati.
28 Treatment of Diffuse Suppurative Peritonitis: Report of Cases. U. K. Essington, Newark.
29 Melanotic Sarcoma of Chorioid. F. W. Alter, Toledo.
30 Duties of State and Municipalities in Prevention of Infant Mortality. C. L. Patterson, Dayton.

Yale Medical Journal, New Haven, Conn.

December, XVIII, No. 4, pp. 153-292

31 *Clinical Manifestations of Tumor Metastases in Bones. G. Blumer, New Haven, Conn.
32 Lateral Sinus Thrombosis. W. E. McClennan.
33 Surgical Treatment of Goiter. J. B. Boucher, Hartford, Conn.
34 Importance of Early Operations for Tumors of Breast. G. N. Bell, Hartford, Conn.
35 Intestinal Obstruction, with Special Reference to Intussusception in Infants. O. O'Neil Willimantic.
36 Peritoneal Tuberculosis. D. Sullivan, New London.
37 Two-Stage Operation for Acute Intestinal Obstruction. E. R. Whittermore, New Haven.

31. **Tumor Metastases in Bones.**—There are certain types of malignant neoplasms that are especially liable to give rise to metastases in the bones. This is especially true of certain malignant tumors of the breast, the prostate, the adrenal, the kidney and the thyroid. The clinical picture produced by these metastases is very variable. They may simulate pri-

mary bone tumors and may be excised without the true primary growth having been discovered. They may cause fracture and be treated for fracture without a primary growth having been suspected. They may lead to lesions of the central nervous system, the true nature of which is overlooked. They are occasionally mistaken for aneurisms, especially when they involve the sternum or the cranium. Their recognition is important from a prognostic point of view, but mainly on account of its bearing on the desirability of radical surgical interference. Blumer emphasizes that a diagnosis of primary bone tumor should never be made without very careful examination of the abdomen, the mammary glands, the prostate and the thyroid. Any fracture of a long bone occurring as the result of trivial injury should suggest the possibility of bone metastases and lead to careful search for a primary new growth. In all cases of painful paraplegia or quadruplegia a malignant neoplasm should be suspected.

The bone metastases from cancer of the breast are in autopsied patients most frequent in the ribs, the vertebræ, the femur and the humerus. They are much less frequent in the cranium and face than is the case in the other forms of growth, especially the thyroid metastases. Of Leutzinger's cases with bone metastases 14.5 per cent. showed signs of spinal metastases, 7.6 per cent. of metastases in the extremities and only 2 per cent. of skull metastases. More modern collected statistics show 25 per cent. with vertebral involvement, 20 per cent. with metastases in the femur, and 18 per cent. with metastases in the ribs. The thyroid tumors which give rise to bone metastases present some very marked peculiarities. While some of them are very evidently malignant, judged from their clinical manifestations alone, others show none of the ordinary evidences of malignancy. An analysis of sixty-two cases from the literature shows that two-thirds of the thyroid metastases occur in women, and 90 per cent. of the cases between the ages of thirty and seventy. No obvious clinical involvement of the thyroid is present in at least 25 per cent. of the cases; when enlargement occurs it is often apparently an ordinary goiter which may have been present as long as thirty years before metastases appeared.

It is important to note that metastases may not appear until three or four years after the surgical removal of the gland. Clinically, two-thirds of the metastases are of the solitary type and even at post mortem multiple metastases are the exception. So far as distribution of the thyroid metastases is concerned, 38 per cent. of them occur in the bones of the cranium or face, 16 per cent. in the vertebræ, 10 per cent. in the femur, 9 per cent. in the pelvic bones, 7 per cent. in the sternum and 5 per cent. in the humerus. Spontaneous fractures occur in 9 per cent. of the cases and the spinal type in 10 per cent. The type of kidney tumor *par excellence* which tends to metastasize to bone is the so-called hypernephroma or Grawitz's tumor.

As regards the special peculiarities of their bone metastases Blumer has analyzed histories of forty-five cases. Sixty-two per cent. of these cases occurred in males. The bone tumors were clinically solitary in 51 per cent. of the cases and appeared most frequently less than a year after definite symptoms were apparent. Spontaneous fractures occurred in 24 per cent. of the cases and spinal symptoms in 13 per cent.; 20 per cent. of the metastases are in the femur and an equal number in the cranium or face, 17 per cent. of these being in the cranium. The vertrebræ are involved in 14 per cent. of the cases, the ribs in 16 per cent., the humerus in 10 per cent., the tibia and pelvis in 4.3 per cent., the clavicle and the sternum in 2.9 per cent., and the scapula, hand and foot each in 1.4 per cent.

Journal of Tennessee State Medical Association, Nashville

January, IV, No. 9, pp. 343-389

38 Symptomless Gonorrhea in Women. H. L. Faucher, Chattanooga.
39 Treatment of Congenital Talipes in Infants. R. W. Billington, Nashville.
40 Syphilitic Indurating Edema, Report of Case. C. F. Anderson, Nashville.
41 Diet in Typhoid. K. S. Howlett, Franklin.
42 Treatment of Chronic Alcoholism. G. E. Petley, Memphis.
43 Psychoses of Alcoholism. J. P. Schell, Nashville.
44 Some Eponymic Diseases. W. B. St. John, Bristol.
45 Chronic Indigestion. L. E. Burch, Nashville.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

January, III, No. 3, pp. 205-377

46 Physiologic Action of Cystin, Active Alkaloid of Laburnum (Cytisus Laburnum). H. H. Dale and P. P. Laidlaw, Herne Hill, London.
47 Influence of Sodium Iodoxybenzoate and Sodium Cyanid on Allergic Reaction of Inflammatory Character. S. Amberg and J. H. M. Knox, Baltimore.
48 *Alcohol and Caffein: Study of Antagonism and Synergism. J. D. Pilcher, Cleveland.
49 *Physiologic Studies in Anaphylaxis. W. H. Schultz, Independence, Mo.
50 *Two Crystalline Pharmacologic Agents Obtained from Tropical Toad, Bufo Agua. J. J. Abel and D. I. Macht, Baltimore.

48. **Alcohol and Caffein.**—Alcohol produces narcosis, varying from sleepiness with small doses, to light coma from moderate and deep coma with large doses. Caffein in non-fatal doses produces wakefulness and increased irritability; fatal doses more or less excitement. The alcohol narcosis is lessened somewhat when small or moderate doses of alcohol are combined with small or moderate doses of caffein (antagonism by algebraic summation of action); intensified when moderate doses of alcohol are combined with large doses of caffein; or large doses of alcohol with caffein in all doses (synergism by reversal of caffein action). Alcohol depresses reflexes and incoordination, increasing with the dose; the reflexes are abolished by large doses. Caffein exaggerates reflexes, increasing with the dose. Convulsions are only produced by fatal doses of caffein. They are not prevented by moderate doses of alcohol. The two drugs are always synergistic and the fatality is greater than simple summation. Death results by combining "small" doses of alcohol with "large" doses of caffein and "moderate" doses of caffein with "moderate" doses of alcohol, but not by combining "small" doses of caffein with "large" doses of alcohol. In other words, the synergism is one-sided, alcohol increasing the toxicity of caffein, while caffein does not increase the toxicity of alcohol. The death is always cardiac, suggesting that alcohol renders the heart more susceptible to caffein poisoning (one-sided synergism by increased susceptibility). With fatal doses of alcohol caffein acts only deleteriously; with half fatal doses, moderate doses of caffein may decrease the narcosis and hasten recovery; large doses are dangerous. With small doses of caffein, alcohol lessens the psychic effects; with large doses, alcohol adds to the danger. The danger of cardiac death is increased by agents which alone have relatively little direct depressant effect on the heart. This would engender caution in the use of caffein in heart disease.

49. **Physiologic Studies in Anaphylaxis.**—The most important facts ascertained by Schultz are as follows: (1) Horse serum causes constriction of the pulmonary arteries, coronary arteries, and of the systemic arteries, and also acts directly on the heart-muscle. (2) In both normal cats and in cats sensitized with horse serum there is a fall of blood-pressure, following an intravenous injection of 0.0010 to 0.0025 c.c. of horse serum per gram body weight. (3) The action of the serum is peripheral, since destruction of the brain and spinal cord does not materially alter the end results. Furthermore, perfusion studies as well as other studies with excised organs yield results that show smooth muscle and cardiac muscle to be the most important tissues involved in causing the gross symptoms of anaphylactic shock observed in the cat and dog. (4) The abdominal blood-vessels play at best only a secondary part in causing the low blood-pressure since a fall of blood-pressure is obtained when all abdominal vessels are clamped off. (5) Atropin sulphate may or may not influence the circulatory phenomena. It is only very large doses of atropin that seem to have any influence on the action of serum when the protein is intravenously injected in doses of 0.0010 to 0.0025 c.c. per gram body weight. (6) Horse serum kills cats by its action on the cardiopulmonary system and not by vasodilatation of the systemic blood-vessels alone, the distention of the large abdominal and thoracic veins being for the most part passive. The rate of injecting the serum into the jugular vein, as well as the total amount injected at once, greatly influences the blood-pressure and cardiac phenomena, large doses rapidly injected being more certainly fatal.

50. **Crystalline Principles from Bufo Agua.**—From the secretion of the parotid glands of the tropical toad, *Bufo agua*, the authors have isolated two distinct, physiologically active crystallin principles. It was shown by chemical reactions and by analyses, by polarimetric observations and by qualitative and quantitative physiologic experiments that one of these substances is identical with dihydroxy-methyl-amino-ethylol-benzene (epinephrin, adrenalin, suprarenin). It is calculated that the crude venom contains nearly 7 per cent. (6.72 per cent.) of this amino-alcohol. By means of chemical reactions and analyses it has been shown that the venom also contains a crystallin principle which the authors have named bufagin. Bufagin is dextrorotatory (+11°), "neutral" in character, slightly soluble in water and readily soluble in a number of organic solvents. Its melting point is 217-218 C. Its elementary composition and molecular weight are represented by the formula $C_{18}H_{24}O_4$. Its behavior toward bromin shows that it does not contain an unsaturated carbon linkage of cholesterin. The marked action of bufagin on the heart, cardio-inhibitory center and musculature of the blood-vessels leads them to class this drug with the most efficient members of the digitalis series. Its action on the heart muscle is especially noteworthy. It increases its tonicity the strength of its contractions and the ventricular volume output. Small doses of the drug cause a marked diuresis. Bufagin does not appear to have a cumulative action and it may be administered hypodermically. The toad, *Bufo agua*, is not at all immune to dihydroxy-methyl-amino-ethylol-benzene, but is relatively immune to bufagin. The pharmacologic properties of bufagin, its chemical purity and the consequent ease with which it lends itself to exact dosage are facts that urge a trial of this substance in therapeutics. The successful use of toad skins in the medicine of an earlier day also lends support to the suggestion.

Northwest Medicine, Seattle, Wash.

January, IV, No. 1, pp. 1-34

51 Some Problems of Medical Profession. F. W. Taylor, Provo, Utah.
52 Congenital Stenosis of Pylorus. R. C. Smedley, Salt Lake City, Utah.
53 Surgical Treatment of Congenital Hypertrophic Stenosis of Pylorus. R. T. Richards, Salt Lake City, Utah.
54 Gastric Ulcer from Surgical Standpoint. E. F. Tucker, Portland, Ore.
55 Diabetes Mellitus in Childhood. W. Gellhorn, Seattle, Wash.

Journal of Kansas Medical Society, Kansas City

January, XII, No. 1, pp 1-40

56 Open Perineal Prostatectomy. J. T. Axtell, Newton.
57 Lane Operation for Cleft Palate. M. T. Sudler, Lawrence.
58 Contract Practice. J. N. Davis, Independence.
59 Significance of Early Diagnosis of Uterine Cancer. E. F. Day, Arkansas City.
60 Serotherapy. H. G. Shelly, Mulvane.
61 Blastomycosis. C. W. Longenecker, Kingman.

Lancet-Clinic, Cincinnati

January 27, CVII, No. 4, pp. 77-110

62 *Action of Some Heart Stimulants. F. C. Askenstedt, Louisville, Ky.
63 *Unique Biliary Fistula, Absence of Common Duct and Gall-Bladder. J. F. Baldwin, Columbus, Ohio.
64 *New Method of Separating Saccharose from Dextrose, Pentose, Levulose, Lactose, Maltose and Invertin when Present in Urine, Saliva or Other Body Fluids. L. K. Hirschberg, Baltimore.
65 John L. Richmond, Western Pioneer Surgeon. O. Juettner, Cincinnati.

February 3, CVII, No. 5, pp. 111-142

66 Pathology of Cholecystitis and Its Complications. H. M. Richter, Chicago.
67 Symptomatology and Diagnosis of Toxic (Non-Infectious) Cholecystitis. B. Holmes, Chicago.
68 Medical Treatment of Cholecystitis. W Engelbach, St. Louis.
69 Surgical Treatment of Cholecystitis. L. Frank, Louisville. Ky.
70 Anteantiseptic Ovariotomy. A. G. Drury, Cincinnati.

62. **Action of Some Heart Stimulants.**—The power of strychnin, atropin and digitalis to contract blood-vessels and increase the blood-pressure, commonly observed in experiments on animals, was not manifest in any of the cases in which Askenstedt made use of these drugs. The absence of increased blood-pressure after the clinical use of these remedies has also been noticed by other observers, and it has been thought that the increased heart action caused a corresponding relaxation of the arteries through vasomotor inhibition, thereby maintaining a vasomotor balance. If this hypothesis be true and the vasomotor action of, for example, strychnin is inhibited by the greater blood-supply to the vasomotor centers as a result of improved heart action, then, he says, an accidental reduction of the blood-pressure below the vasomotor balance would prove the most favorable condition for observing the constrictive action of a remedy on the blood-vessels. The action of a vasodilator as nitroglycerin would therefore be actively antagonized by the tonic effect of a vasoconstrictor until the vasomotor equilibrium is reached.

To put the vasomotor tonic action of strychnin to a test, strychnin and nitroglycerin were employed in such a way as to compare their combined action with that of nitroglycerin alone. Strychnin, gr. 1-30, was given by hypodermic injection in each case and thirty-seven minutes later in one case and one hour and three minutes later in the other, 1-50 gr. nitroglycerin was administered. On the following day 1-50 gr. nitroglycerin was used alone in each case and a comparison of the combined action of the drugs with that of nitroglycerin alone showed that the loss of tension was as great when strychnin and nitroglycerin were combined as when nitroglycerin alone was used. But the failure of strychnin, atropin and digitalis in this series of experiments to raise the blood-pressure, where by disease it had been reduced, is worthy of notice.

63. **Unique Biliary Fistula.**—The post-mortem in Baldwin's case showed that there had been an abscess, starting probably in the gall-bladder, but which had involved that entire region and which had resulted in the complete destruction of the gall-bladder and of the common duct. Not a trace of either of these organs could be found. The abscess had then burrowed to the right around the edge of the liver and in this way reached its upper surface, after which it penetrated the diaphragm and discharged through the lung. There had been no abscess of the substance of the liver.

64. **Separating Saccharose from Dextrose, Pentose, etc.**—Hirshberg places the suspected liquid, if sterile, in an incubator for twenty-four hours, or, if in a hurry or fearing bacterial fecundity or other contaminations boils the secretion for forty-five minutes with equal quantities of decinormal solution of sodium hydroxid. Dilute solutions of sodium hydroxid easily affect dextrose, mannite, maltose, mannose, lactose, levulose, galactose, or invert sugar; complete decomposition occurs. Saccharose is absolutely unaffected; it remains perfectly aggregated in its original molecules and may then be detected easily by the polariscope.

New Orleans Medical and Surgical Journal

January, 64, No. 7, pp. 491-568

71 Treatment of Hypospadias. F. W. Parham, New Orleans.
72 Arteriosclerosis. J. B. Elliott, New Orleans.
73 Splanchnoptosis. A. Eustis, New Orleans.
74 Origin of Torticollis: Case Showing Professional Dyskinesia. T. A. Williams, Washington, D. C.

Western Medical Review, Omaha, Neb.

January, XVII, No. 1, pp. 1-56

75 Operation in Acute Mastoiditis. D. C. Bryant, Omaha.
76 Acute Head Injuries, with Special Reference to Nervous Symptoms. F. E. Coulter, Omaha.
77 Hospital and Home Care of Sick. H. W. Orr, Lincoln.
78 Pyloric Obstruction Due to Gall-Stones. F. A. Brewster, Beaver City, Neb.
79 American Work in Surgery and Medicine. M. Strong, Omaha.
80 System in Diagnosis and Treatment. C. E. Remy, Omaha.

Bulletin of Lying-In Hospital of City of New York

June, VIII, No. 1, pp. 1-44

81 *Cesarean Section. A. B. Davis, New York.
82 *Case of Interstitial Pregnancy. J. W. Markoe, New York.
83 *Bacteriology of Puerperal Infection. W. L. McFarland, New York.
84 Work of Babies' Class During Year Ending Oct. 1, 1911. E. L. Coolidge, New York.
85 Medical Statistics, Lying-In Hospital, 1911. R. McPherson, New York.

81. **Cesarean Section.**—The total number of women delivered in the combined indoor and outdoor services of the Lying-In Hospital of the City of New York from Jan. 18, 1890, to July 28, 1911, totals 72,832. In this number Cesarean section was performed 298 times, or once in 244.40 cases. Of these mothers 264 recovered and thirty-four died. Of the

total number of children delivered by Cesarean section twenty-six died and nineteen were still-born. Davis has performed up to July 28, 1911. 104 Cesarean operations on eighty-nine women, of whom fifteen died, a maternal mortality of 16.83 per cent. If the mortality is based on the number of operations it is 14.43 per cent. In this series of cases twins were delivered twice, making a total of 106 in the number of children. Of this number seven (6.6 per cent.) were still-born, and twelve (11.11 per cent.) subsequently died in the hospital. The presentations were as follows: Ninety-six vertex, eight breech and two face. The infant mortality in the series was 17.92 per cent. (including still-births). Still-births resulted in six cases, one of which was a twin pregnancy, making a total of seven children.

82. **Interstitial Pregnancy.**—Five years ago Markoe's patient was admitted to the hospital for what was believed to be an incomplete abortion. A curettage was done but no fetus discovered. After remaining in the wards for some time she left against advice but returned in a few days in a condition of marked collapse with rapid pulse and high fever. At the time a diagnosis of ruptured ectopic gestation was made and it was believed that this had become infected because of the result of some latent tubal disease. At the time of admission the patient's condition was so bad that it was not deemed advisable to operate. The patient gradually improved under conservative treatment. Sept. 28, 1911, the woman again applied for treatment. She stated that three years ago she was delivered with instruments of a very large child at term which was still-born. Temperature and pulse were normal, likewise the blood-count. The urine showed a faint trace of albumin with acetone and diacetic acid present but no casts. The vaginal examination disclosed a slighty bloody discharge containing some pus. A bi-manual examination showed a tumor about the size of a goose egg on the right side of the uterus and apparently connected with it. This mass was extremely tender and slightly movable. According to the patient's statement her last menstruation had taken place on July 10, 1911, so that a provisional diagnosis of a two months ectopic gestation was made. A partial hysterectomy was easily acomplished. In reviewing this case, Markoe says it would seem that the patient's illness five years previously was most likely a ruptured ectopic pregnancy on the left side in which the hemorrhage was not very marked and where the products of conception were eventually absorbed, leaving behind the dense adhesions which were found at the last operation. The fact that during the interval an intrauterine pregnancy had occurred, is of interest and showed that the conditions which prevailed to bring about the two ectopic gestations did not prevent one ovum from lodging in the normal mucous membrane of the uterine cavity.

83. **Bacteriology of Puerperal Infection.**—The present article affords a brief review of the literature on puerperal infection. Later articles will include discussions of culture media and methods of making cultures, reports of bacteriologic findings, analyses of results and such experimental work as is considered of sufficient value for publication.

Journal of Iowa State Medical Society, Clinton

January 1, No. 7, pp. 341-396

86 Materia Medica and Therapeutics. F. Hornibrook, Cherokee.
87 Is Council on Pharmacy and Chemistry of American Medical Association Proving Its Worth to Medical Profession? C. S. Chase, Iowa City.
88 Surgery of Thyroid. Van B. Knott, Sioux City.
89 Disloyalty to Medical Ethics Responsible for Small Societies. P. R. Wood, Marshalltown.
90 Recent Burlington Epidemic. C. Stutsman, Burlington.
91 Tuberculosis Treated with Carl Spengler's Tuberculosis Immune Blood. G. N. Ryan, Des Moines.

Boston Medical and Surgical Journal

February 1, CLXVI, No. 5, pp. 155-194

92 Diagnosis of Diseases of Stomach and Intestines by Roentgen Ray. E. A. Codman, Boston.
93 Past and Present Methods in Practice of Medicine. A. Worcester, Waltham, Mass.
94 *Blood-Pressure in Toxemias of Pregnancy. R. M. Green, Boston.
95 Infiltration Anesthesia in Submucous Resection of Nasal Septum. I. Sobotky, Boston.
96 Cases from Skin Department of Massachusetts General Hospital. J. H. Blaisdell, Boston.
97 Case of Myiasis. H. B. Heart, East Dennis, Mass.

94. **Blood-Pressure in Toxemias of Pregnancy.**—To the twenty cases previously reported Green adds six. He cites one case to show the value of the ammonia coefficient as a diagnostic and therapeutic indication in that form of toxemia of pregnancy which is characterized by pernicious uncontrollable vomiting in the early months of pregnancy. That this is a true toxemia is, he says, evidenced by the pathologic changes found in the liver of cases which have come to autopsy and by the disturbance of metabolism indicated by the change in the normal relations of ammonia to urea nitrogen. Blood-pressure in this type is of little value and significance, though in the illustrative case it rose slightly in the final stage of the disease. The coefficient of ammonia, however, seems to have been of some importance as an indication, since it rose and remained at a definitely higher level during the more severe stage. To the groups recorded in the first paper, Green adds two more. 1. Post-partum eclampsia, which is a condition of cumulative toxemia in which the resistance of the patient's central nervous system prevents outbreak of symptoms till after labor. 2. Cases of pernicious vomiting, with fairly normal blood-pressure, in which the condition progresses to a fatal result, with rising ammonia coefficient, unless the uterus is emptied.

Medical Record, New York

February 3, LXXXI, No. 5, pp. 201-250

98 Importance and Prevalence of Occupational Diseases. W. G. Thompson, New York.
99 State Control of Occupational Diseases. L. W. Hatch, Albany, N. Y.
100 Occupational Diseases Due to Use of Metallic Poisons and Measures Needed for Their Prevention. M. A. Starr, New York.
101 Occupational Diseases of Skin. J. A. Fordyce, New York.
102 *Salvarsan in Syphilis of Nervous System. B. Sachs and I. Strauss, New York.
103 Syphilis. E. H. Griffin, New York.
104 Sexual Neurasthenia and Prostate. G. F. Lydston Chicago.
105 Blood-Pressure and Patient. W. H. Sheldon, New York.

102. **Salvarsan in Syphilis of Nervous System.**—The authors maintain that salvarsan has no curative effect in tabes and general paresis; that it seems to influence favorably some of the symptoms, particularly the vesical and sexual functions, and that under its use some of their cases remained stationary, and that none of them exhibited any unfavorable symptoms attributable to the drug itself; that in these two diseases it accomplishes as much as, but not any more than, was achieved in former years by the use of mercurials. In brain and spinal-cord syphilis the administration of salvarsan is followed by improvement in many of the symptoms, and it seems to accomplish at least as much as mercury did in these diseases. In the acute and subacute forms of brain syphilis, particularly in those associated with convulsive seizures and with chronic headaches, the drug has exercised a distinctly beneficial influence. There is no doubt, however, that the good effect of this treatment may be made more lasting by the additional use of mercury and the iodids. In spite of these rather negative impressions, the authors do not lose sight of the fact that the drug may prove most efficient in the prevention of parasyphilitic and metasyphilitic diseases of the nervous system. General paresis, and probably tabes, run a more slowly progressive course, and, on the whole, a milder course than they did in former years.

Journal of Medical Association of Georgia, Augusta

January, I, No. 6, pp. 197-239

106 Therapy of Pulmonary Tuberculosis. L. C. Roughlin, Atlanta.
107 Plea for Isolation of Criminal Insane. W. A. Ellison, Milledgeville.
108 Fifty-Seven Consecutive Operations for Fibroid Tumors of Uterus. E. G. Jones, Atlanta.
109 Business Affairs of Physician. L. C. Allen, Hoschton.
110 Osteosarcoma of Pelvis. S. T. Barnett, Atlanta.
111 What Has Been Done in Georgia in Fight Against Uncinariasis. A. G. Fort, Atlanta.
112 Diphtheria. D. Williams, Folkston.

New Mexico Medical Journal, Las Cruces

January, VII, No. 4, pp. 107-142

113 First Treatment of Open Wounds by Surgeon: Its Influence on After-Treatment and Recovery. C. P. Brown, El Paso, Texas.
114 Tonsils. E. R. Carpenter, El Paso, Texas.
115 Gonorrhea in Female. E. Fisher-Frisbie, Albuquerque.
116 Gastric Ulcer. E. C. Prentiss, El Paso, Texas.
117 Conservative Surgery. J. Vance, El Paso, Texas.

Journal-Lancet, Minneapolis

January 15, XXXII, No. 2, pp. 29-56

118 *Carcinoma of Alimentary Tract. E. H. Beckman, Rochester, Minn.
119 Esophageal Obstructions, with Special Reference to Carcinoma. H. S. Plummer, Rochester, Minn.
120 *Carcinoma of Gastro-Intestinal Tract. W. J. Mayo, Rochester, Minn.
121 New Public Health. H. W. Hill, Minneapolis.
122 Routine Examinations of Gastro-Intestinal Tract. T. W. Stumm, St. Paul.

118 and 120. Abstracted in The Journal, Nov. 18, 1911, p. 1717.

Ophthalmology, Seattle, Wash.

January, VIII, No. 2, pp. 143-302

123 Ocular Leprosy. F. M. Fernandez, Havana, Cuba.
124 Use of Radium in Ophthalmology. G. S. Ryerson, Toronto.
125 Intestinal Sepsis in Ocular Affections. S. D. Risley, Philadelphia.
126 Crystalline Lens as Figured in Text-Books and as Seen in Eye. L. Howe, Buffalo.
127 Bilateral Papilledema with Central Scotoma from Sinusitis. F. J. Parker, New York.
128 Acute Plastic Iritis Markedly Benefited by Antistreptococcus Serum. A. A. Bradburne, Manchester, England.
129 Ocular Complications in Case of Impetigo Contagiosa. H. F. Hansell, Philadelphia.
130 Thrombosis of Cavernous Sinus, with Report of Case. H. H. Martin, Savannah, Ga.
131 Eye-Strain Among Public School Children. E. Bates, Ogden, Utah.
132 Iridectomy and Sclerotomy in Glaucoma. C. Abadie, Paris.
133 Idem. F. Lagrange, Bordeaux.
134 Medical and Surgical Treatment of Trachoma. Jacovides, Alexandria.
135 Sliding Flap in Cataract Operations (Van Lint's Method). L. W. Fox, Philadelphia.

American Journal of Urology, New York

January, VIII, No. 1, pp. 1-58

136 Common Sources of Error in Diagnosis of Renal and Ureteral Calculus. H. Cabot, Boston.
137 Posterior Urethra with Cysto-Urethroscope. L. Buerger, New York.
138 Tumors of Bladder. C. M. Harpster, Toledo, Ohio.
139 Phosphaturia and Oxaluria. F. E. Sondern, New York.
140 Cause of Hypertrophied Prostate. F. R. Charlton, Indianapolis, Ind.
141 Foreign Body (Cork) in Bladder. D. A. Sinclair, New York.

Long Island Medical Journal, Brooklyn

January, VI, No. 1, pp. 1-40

142 Dishonest Claims and Medical Testimony in Suits for Damages. C. A. Palmer, Brooklyn.
143 Uterine Deviations; Their Influence on Uterus and Their Correction. G. K. Dickinson, Jersey City, N. J.
144 Postoperative Mechanical Obstruction of Bowel Occurring Shortly After Operative Procedure. A. M. Judd, Brooklyn.
145 Tribute to Sewell Matheson. R. E. Coughlin, Brooklyn.

Journal of Ophthalmology and Oto-Laryngology, Chicago

January, VI, No. 1, pp. 1-34

146 Civic Medical Inspection of School Children, with Special Reference to Diseases of Eye, Ear and Throat. S. C. Ayres, Cincinnati.
147 Some Mastoid Experiences. C. M. Miller, Richmond, Va.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

January 20, I, No. 2664, pp. 113-168

1 Operative Cure of Ascites Due to Liver Cirrhosis. R. Morison.
2 *Recent Methods for Radical Cure of Hernia. H. H. B. Macleod.
3 *Case of Perforated Peptic Ulcer of Esophagus Complicated by Pyopneumothorax. J. Miller.
4 *Case of Typhoid Complicated with Cholecystitis. J. McMillan.
5 Case of Fibromyoma of Stomach. D. G. Cheyne.
6 *Method of Treating Damaged Intestine Without Resection. H. B. Angus.
7 *Solid Carbon Dioxid in Treatment of Hemorrhoids. H. G. Anderson.
8 Case of Ruptured Liver and Right Kidney: Operation: Recovery. G. R. Girdlestone.
9 *Acetyl-Salicylic Acid in Typhoid. G. Chambers.
10 Passage of Cast of Bladder per Urethram. J. M. Barlet.
11 Correction of Errors of Refraction for Microscope Work. W. B. Leishman.

2. **Radical Cure of Hernia.**—The most suitable cases for his omentopexy, Morison says, are those of alcoholic cirrhosis in patients otherwise sound and whom repeated tapping has failed to cure. None of these cases have, in his experience, been failures. The reason probably is similar to that of the cure of dropsy from heart failure following persistent overstrain. In both, the chief predisposing cause of the dropsy can be removed, in the case of the heart by rest, in the case of the liver by abstinence from alcohol. This explanation seems probable, because, though Morison has operated patients in good condition with ascites due to syphilitic cirrhosis, none of them have been cured. The most unfavorable cases are those which at their commencement simulate an abdominal emergency and suffer from pain and tense tympanites preceding the development of ascites. Except for the fact that Morison now makes the abdominal incision above the umbilicus to avoid the development of a ventral hernia, the operation is the same as that he originally suggested.

3. **Perforated Peptic Ulcer of Esophagus.**—The most typical and constant symptoms of this condition are: Pain, which is severe and comes on immediately after food, the site of the pain being at the lower end of the sternum and a little to the left of it. Pain is also felt between the shoulders. Vomiting is the next most constant symptom. Dysphagia is present in more than half the cases. It is due to reflex spasm of the muscle of the esophagus from pain, and it is the main diagnostic point between the condition and gastric ulcer. Hematemesis is also a very common symptom. Perforation has occurred in eight cases, thrice into the right pleural cavity, once into the left (author's case), once into both (in each case with pneumothorax), one each into the aorta, pericardium, and lesser omental sac. The ulcer is usually single. It may extend into the stomach and independent ulcers may occur in the stomach or duodenum (author's case). The situation is usually close to the cardiac orifice and the right posterolateral wall appears to be the commonest site. The condition is usually found in middle life. As regards sex, of forty-five cases in which the sex was specified thirty-one were males and fourteen females. Miller's patient had an ulcer of the lower part of the esophagus perforating into the left mediastinum and left pleura; pyoneumothorax; old tubercle at both apices; chronic ulcer of duodenum; recent fibrinous pericarditis; cloudy swelling of organs.

4. **Typhoid Complicated With Cholecystitis.**—The more important points in McMillan's case were: The presence of almost continuous constipation throughout the whole course of an ordinary typhoid illness; the development of inflammation of the gall-bladder during convalescence, about the eighth week of illness; the development of peritonitis in connection therewith, forming adhesions between the gall-bladder and the colon; the presence of *Bacillus typhosus* in pure culture, and the presence of a few gall-stones, consisting of cholesterin and mucin.

6. **Treatment of Damaged Intestine.**—The following has been found useful by Angus in many cases in which resection appeared to be the only resource, but the patient was old and feeble, exhausted, or suffering from severe shock. Where there is a perforation—for example, from a bullet wound—a suture or two of chromicized catgut passing through all the coats approximates the edges of the rent; then with Pagenstecher's thread the adjacent sides of the damaged area of intestine are brought together by means of Lembert suture, either continuous or interrupted, thus enclosing the weak spot. At first sight it appears as though obstruction would result from the kinking of the bowel, but this complication has not ensued after repeated trials.

7. **Treatment of Hemorrhoids.**—This treatment by means of solid CO_2, Anderson says is only suitable for small, uncomplicated internal hemorrhoids. It is only a remedy to be applied in selected cases.

9. **Acetyl-Salicylic Acid in Typhoid.**—Chambers endorses the use of acetyl-salicylic acid in small doses, 3 to 5 grains every four hours, combined with tepid or hot sponging, in typhoid as an effective means of lowering the temperature. The exhibition of the drug in this dosage to typhoid patients does not alter the blood-pressure or produce any appreciable ill effects. The skin remains moist, and in some cases there is profuse sweating. The greatest effect on the temperature is obtained by sponging the patient about half an hour after the administration of a dose of the drug, in this way combining the antipyretic actions of the medicinal and hydrotherapeutic agents. Chambers has been especially impressed with the marked diaphoretic and antipyretic actions of the drug. Three grains every four hours had frequently considerable effect and

in most cases 5 grains at the same periods produced profuse diaphoresis. In only one case was he compelled to increase the dose above 5 grains. In two cases 5 grains every four hours appeared almost too active, as the temperature charts showed a fall in temperature of 9 and 10 degrees, respectively, during the exhibition of the drug; there was no untoward effect during the fall of the temperature. In giving acetyl-salicylic acid to typhoid patients, it is desirable, therefore, to commence with a dosage of 3 grains every four hours; if this should not be sufficient, the quantity should be gradually increased until the desired effect has been obtained. Chambers suggests as the reason why acetyl-salicylic acid is more effective as an antipyretic in typhoid than in most other fevers, that probably the fever of typhoid is frequently labile in character. This theory also affords an explanation of the undoubted value of hydrotherapy in the treatment of the disease, because it is found that the more readily the temperature can be reduced by a bath or sponge the better the prognosis.

Lancet, London

January 20, I, No. 3, pp. 139-210

12 Examples of Resources of Surgery in Certain Emergencies. C. A. Ballance.
13 *Sensory Disturbances from Cerebral Lesions. H. Head and G. Holmes.
14 Salvarsan in Syphilis. W. Evans.
15 Practical Results of Recent Advances in Diagnosis and Treatment of Syphilis. J. H. Sequeira.
16 Intestinal Myiasis. E. A. Cockayne.
17 Double Coxa Vara with Other Deformities Occurring in Brother and Sister. L. E. Barrington-Ward.
18 *Functions of Tonsils and Appendix. K. H. Digby.

13. **Sensory Disturbances from Cerebral Lesions.**—In this paper the authors discuss the sensory disturbances produced by lesions of the cerebral cortex. Their conclusions are as follows: A cortical lesion may reduce the accuracy of response from the affected part to graduated tactile stimuli. The form assumed by this defective sensibility differs from that produced by lesions at other levels of the nervous system. The affected part may respond to the same graduated hair as the normal hand; but this response is irregular and uncertain. Increasing the stimulus may lead to no corresponding mprovement and even the strongest tactile hair may occasionally evoke less certain answers than a hair of much smaller bending strain. Moreover, a touch with the unweighted esthesiometer may be as effective at one moment as the same nstrument weighted with 30 gm. at another. In such cases no tactile threshold can be any longer obtained. This irregularity of response is associated with persistence of the tactile sensation and a tendency to hallucinations of touch. Where the sensory defect is not sufficiently gross to abolish the threshold, persistence, irregularity of response, and a tendency to hallucinate may still disturb the records. In all cases in which tactile sensibility is affected, whether a threshold can be obtained or not, fatigue is induced with unusual facility. Although the patient may cease to respond to tactile stimuli over the affected part in consequence of fatigue, his answers will remain as good as before from the normal parts. The fatigue is local and not general. With stationary cortical esions, uncomplicated by states of shock or by diaschisis, sensibility to touches with cotton-wool may produce a sensaion which seems "less plain" to the patient, and his answers may show the same inconstancy so evident when he is tested with graduated tactile stimuli. A pure cortical lesion leads o no change in the threshold to measurable painful or uncomortable stimuli. Nor does the patient express greater dislike o these stimuli on one side than on the other. A prick may be said to be "plainer" or "sharper" on the normal than on he affected side, but this is due to a defective appreciation of he pointed nature of the stimulus and bears no direct relaion to the painfulness of the sensation evoked.

Whenever thermal sensibility was disturbed the following hanges were found: The neutral zone, within which the timulus was said to be neither hot nor cold, was considerably enlarged in comparison with that observed on similar normal parts of the same patient. The patient complained hat, although he recognized correctly the nature of the timulus, it seemed "less plain" than over normal parts. His nswers were less constant and less certain; a temperature recognized without difficulty at one time seemed doubtful at another. The power of discriminating the relative coolness of two cold stimuli or the relative warmth of two hot tubes may be diminished. Thus 20 C. may be said to be the same as ice, although both are uniformly called cold, and 40 C. may seem as warm as, or even warmer than, 48 C. The faculty of appreciating the relation to one another of two temperatures on the same side of the scale is disturbed. In all their cases the disturbance in the faculty of recognizing posture and passive movements was greater towards the peripheral parts of the affected limb. When a patient with unilateral disturbance of these faculties attempts to point to some part of his body, defective knowledge of its position causes greater error than want of recognition of posture and movement in the hand with which he points. When testing the patient's power of appreciating passive movement the answers are frequently uncertain and hallucinations of movement may occur. And yet the patient may be remarkably consistent and accurate when normal parts are tested.

The power of localizing a stimulated spot is not commonly lost as a consequence of cortical lesions. This faculty is independent of the power of recognizing the position of the affected limb; appreciation of posture may be lost, although localization is not in any way disturbed. If the power of localization is lost the patient will be unable to recognize not only the position of a spot touched, but also the position of a prick. When localization is defective the patient does not habitually localize in a particular direction, but ceases to be certain where he has been touched or pricked. The condition of tactile sensibility and the accuracy of the simultaneous compass-test are closely associated; a raised tactile threshold is usually accompanied by a raised threshold for the appreciation of two points simultaneously applied. Should the power be preserved of recognizing two points when the compasses are applied consecutively, localization will be found to be intact. The patient's appreciation of the two points when they are separated by an interval of time is due to the recognition of the separate locality of the two spots touched. The power of estimating the relative weight of two objects of the same size and shape is readily disturbed by cortical lesions. The appreciation of size, shape, and form, suffers like all tests which imply a relation.

18. **Functions of Tonsils and Appendix.**—The hypothesis advanced by Digby is that these particular lymphatic structures protect the body against chance infection by a process of continual auto-vaccinations. Any bacteria in the vicinity are attracted by positive chemotaxis through the overlying epithelium into the lymphatic nodule. The bacterial attack, having been invited in a region most favorable to the defensive mechanisms of the body, is nearly always repulsed. In accordance with that over-production which is so characteristic of biologic response, specially trained lymphocytes and a great excess of specific bacteriolysins and antitoxins are produced. These enter the general system and lessen the risk of a successful bacterial infection at a more vulnerable part. Thus, more or less immunity against organisms is acquired by the individual without his obviously suffering from disease. On rare occasions the lymph node is overcome and the disease develops; but the body has meanwhile become better able to withstand a general invasion.

The facts given in favor of this hypothesis are as follows: Position, structure and distribution of the subepithelial glands. The subepithelial glands bear the brunt of the attack in faucial and intestinal infections. Scarlet fever, typhoid fever and appendicitis are sound examples. In infantile enteritis the Peyer's patches are swollen and infected. The subepithelial glands are largest and most active in young children at a period when individuals are acquiring immunity to the various common infections. In old age all lymphatic structures tend to atrophy. The subepithelial glands hypertrophy as a result of repeated infectious diseases. Whooping-cough, scarlet fever, measles and "colds" (especially if associated with deficient exercise or unhygienic surroundings) lead to enlargement of tonsils and adenoids. General increase of lymphatic structures signifies prolonged bacterial assaults and may be accompanied by a toxin-weakened heart, the so-called status lymphaticus. It is often observed during scarlatinal epidemics that a person may apparently secure immunity by a very mild tonsillitis which is unaccompanied by rash, malaise, or other signs of general injury. In culminating infections, where septicemia is early and fatal, the lymphatic reaction is poorly developed. Paraffin sections of the faucial tonsils repeatedly show bacteria passing through the covering of stratified epithelium and entering the lymph-nodes. A larger number of mitoses are seen in the lymph-nodes of subepithelial glands in certain infections. The lymphocytes are formed in lymph-nodes. In faucial and intestinal infections these cells are increased in number in the blood. A lymphocytosis accompanies polynuclear leukocytosis in pyogenic inflammation and occurs alone, or predominantly, in scarlet fever, measles, variola, infantile gastro-enteritis, some cases of diphtheria, pertussis, rickets and syphilis. In enteric fever, although there is a diminution of the total number of white corpuscles, yet the lymphocytes are increased in number. The almost constant presence of lymphocytes about an infected area seems to indicate that these cells play an antibacterial part. In connection with the greater activity of the lymphatic tissues in children, it is interesting to note that a lymphocytosis is more easily provoked in early life.

Dublin Journal of Medical Science

January, No. 481, pp. 1-80

19 Recent Legislation in Its Bearing on Infant Life. A. J. Horne.
20 Relapsing Fever Due to Rat-Bite. J. O'Carroll.
21 Medical Inspection of Schools and School Children. J. B. Story.

Malaya Medical Journal

October, IX, No. 4, pp. 1-57

22 Acetifying Air and Rice Bacteria Cause of Polyneuritis Gallinarum. J. H. F. Kohlbrugge.
23 Beriberi in Christmas Island. W. MacDougall.
24 Periodicity in Beriberi. G. E. Brooke.

British Journal of Children's Diseases, London

January, IX, No. 97, pp. 1-48

25 *Purpura in Infective Diarrhea. H. D. Rolleston and J. B. Molony.
26 Mortality and Morbidity in Hereditary Syphilis. C. F. Marshall.
27 Case of Myatonia Congenita. J. R. Charles.
28 Diphtheria of Esophagus. J. D. Rolleston.
29 *Case of Acute Purulent Arthritis in Child of Ten Months, with Radiograph. J. Burfield and A. J. Cleveland.
30 Retrospect of Otology, 1911. M. Yearsley.

25. **Purpura in Infective Diarrhea.**—The authors are of the opinion that symptomatic purpura in infective diarrhea mainly occurs on the abdomen and chest of infants under the age of 1 year. It is usually a terminal phenomenon in prolonged cases. The prognosis in these cases is extremely grave.

29. **Acute Purulent Arthritis.**—The appearance and history of this patient suggested a periosteal hemorrhage due to scurvy rickets and it was decided to put the limb at rest as far as possible and alter the diet. The child, however, got rapidly worse, so he was given an anesthetic and *x*-rayed. The radiograph showed two important features very clearly. (1) There was no destruction of the bones. (2) The head of the femur was at an abnormal distance from the acetabulum. This proved that the case was one of acute arthritis of the hip, and not an acute epiphysitis or osteomyelitis, or a periosteal or epiphysial hemorrhage. At the operation a quantity of thin pus escaped from the distended joint, but they could find no trace of bone disease. The child did remarkably well up to a certain point. The temperature became normal and it seemed to have quite recovered, when about a month later the skin wound seemed to get re-infected. An extensive cellulitis followed, from which the child died.

Journal of Laryngology, Rhinology and Otology, London

January, XXVII, No. 1, pp. 1-72

31 Case of Melanotic Sarcoma of Nose. G. Wilkinson.

Australian Medical Journal, Melbourne

December 16, I, No. 22, pp. 231-240

32 Analysis of 312 Cases of Laryngeal Diphtheria; Outline of Treatment. F. V. Scholes.
33 Diphtheria Carriers in School Epidemic: Treatment. G. Leary.

Annales des Maladies des Org. Génito-Urinaires, Paris

December 15, XXIX, No. 24, pp. 2209-2304

34 Remote Results of Prostatectomy. (Résultats de 207 prostatectomies.) V. Pauchet. (Résultats éloignés des prostatectomies.) R. Gonzales.
35 *Extensive Resection of the Bladder. (Les résections larges de la vessie.) D. Giordano and T. Rovsing.

35. **Extensive Resection or Removal of Entire Bladder.**—Rovsing's article was summarized in The Journal, Dec. 16, 1911, p. 2035.

Archives Générales de Chirurgie, Paris

December, V, No. 12, pp. 1321-1440

36 Traumatic Rupture of Abdominal Wall. (L'éclatement sous-cutané traumatique de la paroi abdominale.) F. Leguen and H. Lorin.
37 *Remote Ulceration and Perforation of the Intestine with Cancer of the Rectum. (Des ulcérations et perforations intestinales à distance dans le cancer de rectum.) A. Chalier and F. Tomasset. Commenced in No. 11.
38 Snapping Wrist. (Un cas de poignet à ressort par rétraction des tendons fléchisseurs.) P. Mauclaire.

37. **Remote Ulceration in the Intestine with Cancer of the Rectum.**—Chalier and Tomasset say that their present article supplements several others that have appeared on remote ulceration in the bowel with cancer in the small intestine and colon. They have been able to find only seventeen cases of such lesions with cancer of the rectum, while fifty with cancer of the colon are on record. In most cases the ulceration above is a necropsy surprise, but the possibility should always be borne in mind when there is stenosis, and obstinate fetid diarrhea with rectal cancer should suggest ulcerative colitis above; an artificial anus in the colon or removal of the cancerous rectum will ward off trouble from this source. In thirteen cases the intestine had perforated; the hole was in the cecum in three cases; in the ascending colon in one, in the transverse and descending colon in two, in or near the sigmoid flexure in six, and in the small intestine in one case. In a case reported by Kocher, the perforation occurred during an enema given under pressure. In some cases the bowel ruptured from distention without ulceration; the point most liable to rupture is, in the small intestine, at the point where the mesentery is attached; in the colon, it is at its junction with the cecum, at the right side, in front, where the wall is thinnest. The peritoneum tears first, parallel to the axis of the intestine, as it is less elastic. The patients soon died in all the cases on record, as operative treatment came too late or the perforation was overlooked. To be effectual, treatment should be based on the assumption that a perforation has occurred or is impending whenever there is obstruction from a cancer in the rectum, and an exploratory laparotomy should not be delayed; if there are no signs of perforation or peritonitis, mere colostomy will suffice. Jaboulay utilized the perforation for the artificial anus in one case. The possibility of multiple perforation should not be forgotten. In conclusion, the necessity for a prompt artificial anus in all cases of inoperable cancer of the rectum is reiterated as the routine procedure, even before obstruction has occurred.

Archives des Maladies du Cœur, etc., Paris

December, IV, No. 12, pp. 737-827

39 Estimation of Blood-Pressure. (Etude comparée des méthodes palpatoire et oscillatoire dans la mensuration clinique de la pression artérielle.) V. Cordier and J. Rebattu.
40 The Blood-Dust as Seen with the Ultramicroscope. (Etude sur les hémokonies ou granulations libres du sang observées à l'ultramicroscope.) F. Cottin.

Lyon Chirurgical, Lyons

January, VII, No. 1, pp. 1-120

41 *Urinary Complications with Cancer of the Rectum. (Des complications urinaires au cours du cancer du gros intestin, et des indications opératoires qui en découlent.) L. Bérard and J. Murard.
42 *Volvulus of Sigmoid Flexure. (Volvulus du colon pelvien.) E. Duroux and L. Mangini.
43 Membranous Pericolitis. G. Cotte.

41. **Urinary Complications of Cancer of the Large Intestine.**—Bérard and Murard remark that the problem is to detect the complications on the part of the urinary apparatus with a known cancer in the large intestine or to suspect the cancer concealed behind the acute urinary disturbances. They review

twenty-two cases, including two from their own practice. In one of the latter a man of 60 had complained of gastro-intestinal disturbances for six months, with colics, diarrhea and pyuria for the last two months, with great loss of weight. A tender bunch could be palpated above the pubis, on the right side; rectal palpation and catheterization of the bladder were negative. In introducing the catheter a few days later it became clogged and the obstruction was found to be from a lump of feces, and a laparotomy revealed a cancer in the sigmoid flexure which had perforated into the bladder. In their other case a cancer in the sigmoid flexure was relieved by an artificial anus above, but it came too late to prevent perforation of the bladder by the invading cancer. The pains in the bladder in this case disappeared at once after the artificial anus had been made; this permitted lavage and disinfection of the bladder, materially improving the patient's condition, and possibly permitting radical removal of the cancer in favorable cases. Small hot enemas, frequently repeated, often give great relief in the inoperable cases, but an artificial anus above may transform the condition and is always of benefit, warding off further irritation of the environment of the tumor and inflammation and infection of the urinary apparatus. The cases cited are all from French literature, with one exception.

42. **Volvulus of the Lower Colon.**—Duroux and Mangini give the details of two cases of volvulus of the sigmoid flexure region, and discuss the best methods of treatment. One of their patients recovered after the enormously distended loop, the pelvic colon, was untwisted and reduced after the gas distending it had been voided through a tube introduced through the anus. In the other case the volvulus was extreme and an artificial anus was made but did not act properly as, instead of being in the cecum as supposed, the opening had been made in the displaced and twisted colon. The patient succumbed not long after a second laparotomy. In both cases the mesentery showed traces of inflammation, evidently the main factor in the volvulus. Wearing a supporting bandage and dieting may prove useful in warding off actual volvulus, when symptoms suggest that such is impending. Once established, electric enemas may aid in promoting absorption of gas by the intestinal mucosa, and this in turn may relieve the distention and allow the twisted intestine to straighten out. Other medical measures which have been advocated are injection of a gas supplementary to opium and massage of the abdomen, injection of water under considerable pressure, as Tillaux has recommended—these medical measures may succeed if the volvulus is not complete and definite, but when it is of the latter variety nothing but a prompt operation can prove effectual.

Presse Médicale, Paris

January 6, XX, No. 2, pp. 9-24

44 Specificity of Serotherapy for Snake Bite. (Etudes sur la spécificité des sérums antivenimeux.) M. Arthus.
45 General Spinal Anesthesia. (La rachianesthésie générale: rachi-strychno-stovainisation.) T. Jonnesco.
46 Salvarsan in Obstetrics. (Des résultats donnés par le salvarsan en obstétrique.) C. Jeannin.

Semaine Médicale, Paris

January 10, XXXII, No. 2, pp. 13-24

47 Structure of Cranial Nerves and of Spinal Nerve-Roots and Its Relation to Disease. (La structure réelle des nerfs craniens et des racines rachidiennes de l'homme et ses relations avec les processus pathologiques: les inflammations et les néoplasies en particulier.) J. Lhermitte and B. Klarfeld.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXI, No. 3, pp. 247-362. Last indexed Jan. 6, p. 69

48 Distribution of Tuberculosis in Swiss Province. (Verbreitung der Tuberkulose, speziell der Lungentuberkulose, im Kanton Glarus.) F. Spieler.
49 *Graphic Record of Lung Findings. (Die graphische Darstellung des Lungenbefundes.) J. Nahm.
50 *Case of Atrophy of the Lung. (Fall von "Lungenatrophie.") A. Bauer.
51 *Diagnosis of Air Above Pleuritic Effusion. (Zur Diagnostik kleiner Gasblasen über pleuritischen Ergüssen.) H. Kraus.
52 *Serotherapy of Tuberculosis to Date. (Die bisherigen serotherapeutischen Bestrebungen bei Tuberkulose.) P. Piehl.
53 *Severe Anemia in Tuberculosis. (Die schweren Formen der Anämie im Zusammenhange mit der Tuberkulose samt einigen Bemerkungen über die Tuberkulose tierischen Ursprungs (Typus bovinus) bei den Menschen.) A. Gluzinski.
54 Madder in Treatment of Tuberculosis. (Krapp bei Tuberkulose.) A. Bauer.

49. **Graphic Signs in Pulmonary Work.**—The Journal has published articles on the subject of using signs or hieroglyphics to represent the auscultation and percussion findings, "clinical shorthand records." Nahm here gives the chart and signs which he has found most convenient for the purpose. [Barach's signs, based on the phonetic values, were illustrated in The Journal, Nov. 6, 1909, page 1541; they are widely used.]

50. **Atrophy of the Lungs.**—In the case reported by Bauer the patient was admitted to a sanatorium with the diagnosis of pulmonary tuberculosis, but she proved to be free apparently from this, and the abnormal findings were the result of a partial lack of development of the lung or, as he styles it, atrophy of the lung on a basis of inherited syphilis. The Wassermann reaction was positive in the serum and the albumin reaction in the scanty sputum.

51. **Diagnosis of Air Above Pleuritic Effusion.**—Kraus calls attention to the instructive findings with roentgenoscopy when the patient is examined erect and then with the trunk inclined at an angle of about forty-five degrees. As the trunk is thus bent over, a clear space is seen above the level of the fluid, while in the erect position there is nothing to show the presence of the spontaneous pneumothorax. It springs into view on the screen as the level of the fluid shifts.

52. **Serotherapy of Tuberculosis to Date.**—Piel comments on the increasing vogue of serotherapy in tuberculosis during the last eight or ten years but adds that opinions are still divided as to the dosage, and especially the dosage at various ages. He reviews the history of serotherapy, especially of the Maragliano, Neporoschny and Marmorek preparations. He remarks in conclusion that we have not made much advance in serotherapy after all in the last twenty years, and it is possible that we are on the wrong road, but that the results to date justify further trials, keeping watch over the outcome for years and always with a scientifically critical mind.

53. **Severe Anemia with Tuberculosis.**—Gluzinski has been studying the question why tuberculosis in some cases is accompanied by changes in the blood suggesting pernicious anemia while in others the blood does not feel the effect of the bacterial intoxication so severely. His experimental research and clinical observation suggest that the tubercle bacilli involved in these cases with severe anemia are probably of the bovine, not the human, type. Tuberculosis of this anemic type is found most often in children, which harmonizes with the greater opportunities during this age for contracting tuberculosis of the bovine type. In a case described in detail a woman of 44, previously healthy, was under his care for five years, the clinical diagnosis being progressive pernicious anemia, chronic gastro-enteritis and ulcerations in the intestine. Necropsy confirmed this, but with the unexpected discovery that the gastro-intestinal trouble was a primary tuberculosis of the intestines. The tuberculous affection had evidently displayed a tendency to spontaneous healing in some parts, which explains the intermittent character of the symptoms observed. The tubercle bacilli involved were of the bovine type, and his experimental research confirmed the assumption that the toxins of bovine tubercle bacilli have a tendency to induce severe changes in the blood, of the chlorotic type, with leukopenia, lymphemia and possibly eosinophilia, in marked contrast to the blood findings when the animals were treated with the toxins of tubercle bacilli of human origin. These assumptions were further confirmed by the blood and marrow findings in a girl of 12 with tuberculous lymphadenitis and fatal progressive anemia. Gluzinski adds that there must be some predisposition on the part of the blood and marrow in such cases, just as anemia is not observed in every person harboring the bothriocephalus.

Deutsche medizinische Wochenschrift, Berlin

January 11, XXXVIII, No. 2, pp. 49-96

55 *Abdominal Injury. (Ueber Bauchverletzungen.) Riedel. Commenced in No. 1.
56 *Sulphur Reaction in the Urine with Cancer. (Eine Schwefel-Reaktion im Harne Krebskranker.) H. Salomon and P. Saxl.

57 Moving-Picture Apparatus for Diagnosis of Internal Disease. (Ueber einen neuen Kinematographen zur Diagnostik mittels Röntgenstrahlen bei inneren Leiden.) E. Grunmach.
58 *Disturbances in the Internal Secretion with Diseases of the Pancreas. (Einige Störungen der inneren Sekretion bei Pankreaserkrankungen.) M. Cohn and H. Peiser.
59 *Fatal Cachexia with No Gross Pathologic Anatomic Findings. (Tödliche Kachexie ohne gröbere anatomische Grundlage—einfache chronische Gastritis; intestinale Autointoxikation und Leberzirrhose.) W. Rindfleisch.
60 Roentgenotherapy in Dermatology. M. Joseph and C. Siebert.

55. **Abdominal Injuries.**—Riedel reviews his extensive experience in this line, comparing it with the results of recent experimental research—an instructive survey of the field of abdominal trauma and the prognosis. He asserts that the most certain sign of injury of an abdominal organ is rigidity of the abdominal musculature; this, he says, follows when the abdominal cavity becomes soiled with stomach or intestine content or blood. The quicker and the more abundant the flow of blood or escape of stomach or bowel content, the more promptly the abdominal muscles stiffen. This may also occur in exceptional instances with a circumscribed injury of the abdominal wall and mere contraction of the bowel. Rupture of the stomach is rapidly followed by this rigidity, but the bowel contracts after rupture so that its contents escape less readily and the abdominal wall stiffens more slowly. Microbes from the ruptured intestines seem to require an interval of six hours before they can proliferate in the abdominal cavity. When the hemorrhage is from injury of the liver, he advises suturing omentum in the wound to arrest the bleeding, but says that the injured spleen had better be entirely removed. A ruptured kidney is best treated conservatively unless it seems incapable of recuperation. He states that mild contusions, without injury of abdominal organs, sometimes induce rapid meteorism, developing in the first few hours after the trauma. Even slight abdominal trauma may entail severe symptoms, but they gradually decrease in intensity, while with actual organic injury the intensity of the symptoms keeps increasing. Mild contusions seldom lead to permanent adhesions, kinks in the bowel, etc., and such need not be suspected unless the patient loses flesh and looks badly in the following year. Of equally rare occurrence are subcutaneous ruptures of sound abdominal muscles. Compound injuries exposing and infecting the peritoneum are comparatively frequent and are hard to manage; the best means to ward off peritonitis is by repeated opening and evacuating the pus pockets as they develop between the layers of the muscles.

56. **Sulphur Reaction in Urine with Cancer.**—Salomon and Saxl give the details of their urine test for cancer based on the qualitative determination of the sulphur split off by hydrogen dioxid from the neutral sulphur in the urine, in the barium sulphate precipitate. A previous communication on the subject was summarized in The Journal May 6, 1911, p. 1371. They now report further experiences with the test, the results being negative in only six of forty-one cancer patients, while a negative response was obtained in 172 of the 182 non-cancer cases. They remark that the technic requires skill and experience to ensure reliable findings, but that the test is not affected by food or the specific gravity of the urine or by the presence of fever, anemia or cachexia.

58. **Symptoms of Hyperthyroidism with Disease of the Pancreas.**—Cohn and Peiser state that they became impressed with the tendency to exophthalmos in their last few patients with pancreatitis, and they investigated for other signs of thyroid hyperfunctioning although none of the patients had a goiter. Their list includes two women 27 and 62 years old and one man of 44, all with acute hemorrhagic pancreatitis; a young woman with purulent pancreatitis, with necrosis, and a man of 30 with chronic interstitial pancreatitis. There was more or less exophthalmos in four of the total five cases; the Graefe sign was present in four, the Moebius and Stellwag signs, tremor and dermographism in five; relative lymphocytosis in four; phloridzin glycosuria in five, and the thyroid was tender in all of the patients. The composite curve of the findings closely resembles the curve in true exophthalmic goiter, and points unmistakably to disturbances in the internal secretions when the pancreas is diseased.

59. **Fatal Cachexia Without Gross Anatomic Basis.**—Rindfleisch remarks that an acute cerebral syndrome may prove fatal with negative pathologic anatomic findings; such cases are occasionally encountered. But it is extremely rare to meet a case in which a chronic affection entails fatal cachexia and yet no pathologic anatomic cause for it can be discovered at necropsy. He reports a case of this kind, the patient a stucco worker of 48, whose progressive cachexia without diarrhea terminated fatally in three years, and the only findings were those of a chronic gastritis entailing atrophy of the mucosa. The favoring factors were evidently bad teeth, insufficient mastication, liquor and tobacco. Simple gastric cancer generally runs a more rapid course; it usually, he says, affects persons with a previously good stomach, and is suggested by slight motor disturbances, changes in shape on roentgenoscopy, positive Salomon test findings and occult blood in the stools. In the case reported, all the above were negative, but there was some pigmentation of the skin, although none in the mucosæ; it is interesting to note that achylia usually accompanies Addison's disease. Treatment of this protracted and refractory chronic gastritis is that of gastritis and pernicious anemia in general, especially with a diet preferably of vegetables, excluding meat and eggs. In the case reported, the secondary cirrhosis of the liver was a necropsy surprise. A similar cachexia from gastric achylia was noted also in two other men recently, between 30 and 40.

Medizinische Klinik, Berlin

January 7, VIII, No. 1, pp. 1-46

61 *Diabetes of Nervous Origin. (Ueber neurogenen Diabetes.) C. von Noorden.
62 Complex Structure of Gall-Stones in Relation to Gall-Stone Disturbances. (Welche Bedeutung besitzen die Kombinationssteine für die Auffassung des Gallensteinleidens?) L. Aschoff.
63 *Form of Purpura with Nephritis. (Ueber eine nephritische Form der Werlhofschen Blutfleckenkrankheit.) H. Eichhorst.
64 Foot-and-Mouth Disease. (Ueber Maul- und Klauenseuche.) M. Fischer.
65 Subsidence of Infiltrations After Acute Intercurrent Infections in Children. (Heilung von Infiltrationen im Kindesalter nach akuten Infektionen.) E. Baumgarten.
66 Physiology of Heart Functioning. (Wo entstehen die normalen Bewegungsreize im Warmblüterherzen und welche Folgen für die Schlagfolge hat ihre reizlose Ausschaltung?) K. Brandenburg and P. Hoffmann.
67 *The Fatalities at the Municipal Shelter at Berlin. (Die Massenerkrankungen im Städtischen Asyl für Obdachlose in Berlin, 24. bis 31 Dezember 1911.) F. Pinkus.
68 Bromids in Epilepsy. (Brombehandlung der Epilepsie.) R. Bing.

61. **Neurogenic Diabetes.**—The patient in von Noorden's case, a man of 40, had an inherited neuropathic taint but the glycosuria did not develop until the age of 36, following a period of great anxiety connected with the massacres in Russia. Severe insomnia, loss of appetite and weight and obstinate constipation were accompanied by 1.5 per cent. sugar in the urine, persisting even on antidiabetic diet. Sleepless nights were followed by exacerbation of the glycosuria. Although the nervous element was so marked in this case, as in a number of others von Noorden has encountered, yet there is always great danger that true diabetes may develop from the nervous form. This actually happened in this case; the patient lost his glycosuria under slight restriction of carbohydrates, with one day a week in which no carbohydrates were taken. He kept well on this diet for a year. Then another physician found the urine free from sugar on two analyses and advised the patient that antidiabetic restrictions were no longer necessary, so he commenced to eat at will. It was not long before he had pains in the calves of the legs and he soon began to lose weight and 5.6 per cent. sugar was found in the urine. Attempts to reduce the carbohydrates now brought on acetonuria, and the man is now a confirmed diabetic. It seems evident that "nervous" diabetes is a danger signal and precursor of true diabetes and should be managed accordingly. The individual tolerance for carbohydrates should be determined and the diet based thereon; the restrictions need not be severe. One may possibly thus impose unnecessary restrictions on a few patients, but this will do them no harm, while neglect of this precaution may wreak great harm to others.

63. **Nephritic Form of Purpura.**—Eichhorst reports three cases of hemorrhagic purpura in which the kidneys were involved. This hemorrhagic nephritis seems more liable to occur in the cases with a chronic course and tendency to recurring subcutaneous extravasations of blood. His cases demonstrate further that the nephritis in these conditions may be of the interstitial or parenchymatous type, but both are extremely refractory to treatment and yet they do not seem to display any influence on the myocardium or pulse, and do not entail debility or uremia. Notwithstanding the dubious prognosis as to ultimate recovery, the nephritis need not be regarded very seriously. His patients were a girl of 15 and two young men and the symptoms of nephritis have persisted to date, although the general condition is otherwise good. No medicinal or other measures applied for the purpura and its complications seemed to have more than symptomatic effect.

67. **The Fatalities at the Berlin Municipal Shelter.**—Pinkus closes his official report on the clinical and necropsy findings with a description of the consternation and constant work of all who had anything to do with the tragic occurrences in the municipal lodging house during Christmas week. Some of the doctors did not leave their posts for five nights, and the morgue was crowded with arriving cadavers. He states that there were 163 cases of the mysterious sudden illness with seventy-two deaths. No woman was affected, which is an argument in favor of the methyl alcohol theory, as women are not admitted to the saloon where the methyl alcohol had been dispensed. The men were taken sick also always during the hours when the saloon was open. No case occurred among the attendants at the municipal shelter, and the saloon incriminated had only purchased the stock of methyl alcohol five days before the first men were taken sick. A few of the cases occurred in other parts of the city. After the saloon was closed no further cases developed. Pinkus suggests that the sickness may have been a combination of botulism, sausage poisoning, and the effects of drinking methyl alcohol, some of the patients exhibiting symptoms of both. (See the Berlin Letter in The Journal, Feb. 3, page 358.)

Münchener medizinische Wochenschrift

January 9, LIX, No. 2, pp. 65-120

69 *Serodiagnosis of Tumors. (Ueber Serodiagnostik der Geschwülste mittels Komplementbindungsreaktion.) E. v. Dungern.
70 Anaphylaxis as Factor in Infection and Immunity. III. (Rolle der Ueberempfindlichkeit bei der Infektion und Immunität.) A. Schittenhelm and W. Weichardt.
71 Is Anaphylaxis a Factor in the Birth Act? (Ist die Geburt als ein anaphylaktischer Vorgang aufzufassen?—Biologische Untersuchungen.) P. Esch.
72 *Influence on the Heart of the Presence of a Myoma. (Experimentelles und Anatomisches zur Frage des sogenannten Myomherzens.) M. Neu and A. Wolff.
73 Pituitary Extract as Oxytocic. (Hypophysenextrakt als Wehenmittel bei rechtzeitiger und vorzeitiger Geburt.) A. Hamm.
74 Roentgenoscopy of the Lungs. (Die radiologische Untersuchung der Lungenspitzen. Das Hustenphänomen.) S. Kreuzfuchs.
75 Salvarsan in the Blood After Intravenous Injection. (Salvarsan im Blute bei Intravenöser Injektion.) J. Abelin.
76 *Unilateral Cramps in Diagnosis. (Ueber die diagnostische Wertung halbseitiger Krämpfe.) E. v. Malaisé.
77 Serotherapy of Postdiphtheric Paralysis. (Behandlung postdiphtherischer Lähmungen durch Heilserum.) M. Crohn.
78 Superheated Air in Treatment of Infantile Eczema. (Heissluftbehandlung der Ekzeme im Säuglingsalter.) J. Perlmann.
79 *The Alien Insane. (Die ausländischen, insbes. die überseeischen Geisteskranken.) W. Weygandt.
80 Vaccine Therapy of Gonorrhea. (Weiteres zur Frage der Behandlung der Gonorrhoe beim Manne.) A. A. L. Menzer.
81 Improved Technic for Blood-Count and Hemoglobin Percentage. (Ueber Prüfung und Eichung des Sahlischen Hämometers und über Verbesserungen der Methoden der Erythrozytenzählung und Hämoglobinbestimmung.) K. Bürker. Commenced in No. 1.

69. **Serodiagnosis of Tumors by Fixation of Complement.**—Dungern has succeeded in evolving a technic which gives reliable specific findings positive in all the tumor cases and negative in the others, as he shows by tabulation of the findings in 121 patients and twenty-two healthy controls. The only dubious findings were in some syphilitics with positive Wassermann reaction. It is remarkable, he comments, that all tumors seem to react in this specific way by fixation of complement while this does not occur with normal growth, not even with the extreme growth of tissue in a pregnancy. Benign tumors do not give such a pronounced reaction as the malignant. His technic is simple: one part of finely sliced tumor tissue is mixed with 98 per cent. alcohol and the extract is ready to use after from twelve to forty-eight hours. After filtering it is mixed with two parts of physiologic salt solution. The serum to be tested is used unwarmed in the amount of 1/20 c.c. The complement is guinea-pig serum 1/20 in 1 c.c. salt solution. The mixture is allowed to stand three hours at room temperature. He used beef blood for the tests and his extracts were made from mammary or pharyngeal carcinoma tissue or from a vulvar epithelioma.

72. **The Heart with Myoma.**—Neu and Wolff present experimental and anatomic evidence to prove that there is not a special type of injury of the heart due to the presence of a myoma. In six cases in which the hearts were examined, they showed merely the results of injury from excessive losses of blood or wasting away of the body; that is, a tendency to brown atrophy or fatty degeneration or both combined, such as are common in these conditions.

76. **Diagnostic Importance of Jacksonian Epilepsy.**—Malaisé discusses the various affections which may induce epileptiform spasm limited to one side, saying in regard to syphilis of the brain that subsidence of the disturbances under treatment for syphilis does not always mean that the underlying lesion is necessarily syphilitic; he adds also that a gumma in the brain which does not yield to specific treatment should be removed by an operation. He says of hysteria that the hysteric unilateral epileptiform spasm may resemble in every respect regular Jacksonian epilepsy and may be followed by transient or permanent paresis in the region involved and by disturbances in speech. Ballet has stated that the hysteric spasm is generally accompanied by a fluttering of the eyelids and waves in the abdominal musculature. A temperature above normal testifies for an organic affection. Jacksonian epilepsy may be one manifestation of genuine epilepsy, but in this case no circumscribed anatomic focus can be found. He mentions further the recent research on the hemiparesis or monoparesis which may be left after subsidence of a general epileptic seizure; Redlich asserts that such (or at least a hemihyperesthesia) will be found in 50 per cent. of all patients after a general epileptic seizure. This suggests that there must be some focus in one hemisphere, which, although not the exclusive cause for the epileptic seizures, yet may be the primal source for the epileptic irritation of the brain. This assumption opens the way possibly for removal of the cause and at least it will promote sharper differentiation of the different forms of epilepsy. Jacksonian epilepsy may also be observed in those strange cases of brain pseudotumor in which the symptoms subside entirely in time, and not a trace of the supposed serous meningitis or swelling of the brain could be detected in the few cases that came to necropsy.

79. **The Alien Insane at the Hamburg Asylum.**—Weygandt describes the hard conditions that prevail at Hamburg on account of the rigorous provisions in the United States to keep out undesirable immigrants. The steamer lines bring back to Hamburg those refused admittance to the United States, and the great numbers, the multiplicity of languages, and other causes combine to render the problem of the alien insane at Hamburg a peculiarly difficult one. The authorities at Hamburg strive to return to their home provinces the alien insane, but this often requires long correspondence, sending of photographs, etc. He adds that the United States deports emigrants that become insane within three years after their arrival, and they often have become so Americanized in this period that their photographs are not recognized in their home town. Weygandt's article is most interesting as showing the admirable working of our emigration laws as others see and feel their effects. In 1910, 1,041,570 emigrants embarked from Hamburg for America; 379 were deported on account of insanity, and 709 were sent back as

having developed insanity or epilepsy within the three-year limit after their arrival. All nations and languages were represented; in some cases neither could be determined. Among the last 204 emigrants thus returned to Hamburg, 127 showed signs of dementia præcox, including twenty with catatonia. He cites only two cases of mistaken diagnosis; excitement over the theft of money had led to deportation of two healthy persons adjudged insane. Weygandt remarks in regard to the hygienic measures enforced in the German ports before embarkation, especially the bath, that they are disliked so intensely by the emigrants that thousands of them, especially those from Russia, avoid Germany and go by way of Austria or Switzerland to ship from French, Belgian or Dutch ports. Medical inspection of the hosts of emigrants at Hamburg is now restricted to testing the pupil reaction and knee-jerk and looking for signs of the tongue having been bitten or other physical anomalies, calling aside the suspects to examine them in detail later with the help of an interpreter. Weygandt thinks that much more might be accomplished in turning back those almost certain to be deported later and left on their hands, if trained psychiatrists, understanding the Slavic languages, could examine the emigrants during their three days' stay at the emigrant quarters. He concludes with the remark, "It is quite hopeless to expect any modification of the United States emigration regulations. A great deal, however, depends on the way they are enforced; at present this is done with great strictness. Whether a change in this respect may follow a change in the personnel of the officials, it is impossible to say." [This last sentence is peculiarly significant in view of the recent political shake-up at Ellis Island.—Ed.]

Therapeutische Monatshefte, Berlin

January, XXVI, No. 1, pp. 1-88

82 Drug Management of Pathologic Conditions in the Peripheral Circulation. (Pharmakotherapeutische Beeinflussung pathologischer Zustände am peripheren Kreislauf.) R. von den Velden.
83 *The Karell Milk Diet in Heart Disease. (Zur Anwendung der Karellschen Milchkur bei Herzkranken.) W. His.
84 Cardial Asthma. (Anwendung subkutaner Heroineinspritzungen bei Asthma cardiale nebst Bemerkungen über kardiale Dyspnoe.) A. Fraenkel.
85 *Red Light in Treatment of Pleurisy with Effusion. (Behandlung pleuritischer Exsudate mit Rotlichtbestrahlung.) L. Kuttner and A. Laqueur.
86 Salt-Free Dietetic Treatment of Eczema in Infants. (Zur Indikation und Technik der Behandlung des Säuglingsekzems mit molkenarmer Milch.) H. Finkelstein.
87 Arsenic in Dermatology. (Aphoristische Bemerkungen zur Arsentherapie in der Dermatologie.) J. Jadassohn.
88 *Form of Iron Needed in Chlorosis. (Eisenwirkung bei Chlorose.) W. Heubner.

83. **The Karell Milk Diet in Heart Disease.**—The special feature of the Karell "milk cure" is restriction to milk exclusively and very small amounts of it, not surpassing 800 or 1,000 c.c. of milk a day for five or six days. This is less than a quart of milk in the twenty-four hours, and clinicians have feared undernourishment and weakness from it, but experience has shown that these theoretical fears are ungrounded. The deficit on this diet is principally in the carbohydrates, the source of energy for the muscles, and this is not needed so much as the patients are kept in bed. Karell published in 1865 his favorable experience with this milk cure in hundreds of cases of heart disease, but not until 1907 was the method systematically applied outside of Russia except in Lenhartz' service, where it has been in use for eighteen years. His thinks that the time has come for an authoritative judgment on the value of this method, which he ranks very highly, although unable to explain completely the mechanism of its effect. He cites a number of instances to illustrate the benefit liable; sometimes there may be an interval of two or three weeks before the benefit becomes apparent. In one case reported, digitalis and diuretics had no effect until after a Karell course, diuresis commencing the sixteenth day after restriction to milk; in another case the diuresis began the sixth and reached its maximum the twelfth day. It is remarkable that on this small amount of milk the diuresis increases. One factor that explains the benefit is the reduction of production of toxins in the gastro-intestinal tract on the milk diet, and also the lesser filling of the abdomen. The small amounts of milk, sipped slowly, put an end to a tendency to flatulence, and thus indirectly relieve the heart, which suffers when the stomach or bowel is distended. The Karell diet excludes also a nervous-reflex action on the heart, and also toxic-uremic influences. The indications for the Karell cure include not only heart disease with a tendency to edema, but numerous cases of cardiac, renal and cardiopulmonary insufficiency. He lists the indications under eight heads: 1. The cardiac disturbances of the obese; he advises for these patients occasional interposition of a "milk day" but not a long "milk cure," as they are usually accustomed to eat freely and might respond with weakness of the heart to sudden deprivation of their usual ration. 2. With emphysema and chronic bronchitis accompanied by increasing weakness of the right heart, the dyspnea subsides in a few days on the Karell diet and longer courses are seldom necessary. 3. With cardial asthma with degeneration of the myocardium, the rapid subsidence of the disturbances is often surprising, especially when heart tonics and sedatives have previously failed to relieve. After a week at most the patient can be allowed to return to a light diet with fluids up to 1,200 c.c., repeating the Karell diet at need after an interval. 4. Angina pectoris is often remarkably benefited by the Karell diet, especially the mild form in which the attacks are not severe but recur frequently. Particularly good results are obtained with patients inclined to plethora and meteorism and the attacks occur when the stomach is full or the intestines distended. The Karell diet alone is not always effectual but often proves a valuable adjuvant to iodin, nitrites, massage of the heart and exercise, etc. 5. With insufficiency of the kidneys, the benefit from a transient restriction to a milk diet is conceded by all, especially when the heart shows signs of weakness and uremia is impending. 6. Rebellious effusions in the serous cavities often yield surprisingly soon to the influence of the Karell cure. Romberg has emphasized the advantages of a salt-poor diet in tuberculous ascites. His endorses this but in his experience effusions in the pleura and pericardium subsided more readily than in the abdominal cavity. 7. The Karell cure is often effectual as a supplement to digitalis when neither alone is of any use. 8. Valvular defects as such are no indication for the Karell cure but when the myocardium becomes insufficient and edema is developing, the restricted milk diet may give relief; the intensity and length of the course must be strictly individualized.

85. **Red Light in Treatment of Pleural Effusion.**—Kuttner and Laqueur induce hyperemia in the depths, to promote absorption of effusion, by applying the light from an arc or incandescent lamp, passing it through red glass to exclude the chemical rays. Experiments on animals proved the efficacy of the measure although the effect was much more marked in clinical cases as the human skin bears the exposures better. They report the details of a few cases from their extensive experience. The red light exposure is for twenty or thirty minutes a day; at the close of the sitting the skin of the region shows considerable hyperemia. The method is applied as an adjuvant to the usual measures for pleurisy with effusion.

88. **Bivalent Iron Salts in Chlorosis.**—Heubner suggests that chlorosis may possibly be defined as a condition in which the organism is unable to reduce the ingested iron to that form in which it can be taken up in the blood. It seems as if empiric experience had selected the one form of iron, namely, the bivalent ferrous salts, which is the form most readily utilized, while laboratory research has hitherto disregarded this distinction. In chlorosis the capacity for reducing the higher salts of iron, the ferric salts, to the lower salts, the ferrous salts, seems to be lost, but if the iron can be introduced in the ferrous form, the chlorotic organism works it up into hematin as under normal conditions. Good nourishment, arsenic, etc., aid in this synthetic process, while with a lack of bivalent iron the process can scarcely proceed at all. This fact explains the persisting vogue of Blaud's pills, of syrup of ferrous iodid, and certain natural mineral waters, all of which contain the iron in the form of ferrous salts, while the proprietaries on the market are generally made of ferric salts.

Zeitschrift für Geburtshülfe and Gynäkologie, Stuttgart

LXIX, No. 3, pp. 553-796. Last indexed February 10, p. 450

89 Very Young Embryo in Accessory Tube. (Ueber ein junges menschliches Ei im Mesosalpingiolum einer Nebentube.) M. Walthard.
90 The So-Called Lower Segment of the Uterus. (Zur Frage des sogen. unteren Uterinsegmentes.) A. Gräsel.
91 Sensibility to Cocain and Its Relation to the Secretion of Epinephrin. (Ueber Kokain-Empfindlichkeit und deren Beziehung zur Adreninsekretion in den verschiedenen Phasen des weiblichen Geschlechtslebens.) O. Ury.
92 Hemoglobinophil Bacterium as Cause of Puerperal Fever. (Ein hämoglobinophiles Stäbchen als Fiebererreger im Wochenbett.) C. Koch.
93 Dislocation of Thoracic Organs by Ovarian Tumors. (Veränderung des Situs der Brustorgane durch Riesenovarialtumoren.) W. Rübsamen.
94 Electric Excitability of the Uterus Muscle. (Experimentelle Untersuchungen über die elektrische Reizbarkeit der Uterusmuskulatur.) W. Rübsamen and J. Danziger.
95 *Laceration of Tentorium During Birth. (Tentoriumzerreissungen bei der Geburt.) R. Pott.
96 Origin and Growth of Myomas of the Uterus. (Ueber Wachsthum und Genese der Myome und Adenomyome des Uterus.) F. Heimann.
97 Fatty Degeneration in the Uterus Muscle. (Zur Kenntnis fettiger Gewebsveränderungen in der Uterusmuskulatur.) B. Ehrmann.
98 Adenocarcinoma of the Vagina. G. Hirsch.
99 Universal Hydrops of the Fetus. (Zur Kasuistik und Aetiologie des Hydrops foetus universalis.) O. Fischer.
100 Chronic Ulceration and Induration of the Vulva Accompanying Cancer of the Rectum. (Esthiomène infolge Carcinoma recti.) M. L. Muller.
101 Hematoma of Uterine Cervix. (Ueber postpartale Hämatome der vorderen Muttermundslippe.) C. Koch.

95. **Laceration of Tentorium During Birth.**—Beneke has recently called attention to the comparative frequency of laceration of the tentorium in new-born infants, this being the cause of the hemorrhages in this region. Pott gives here the details of thirty-three cases in which this laceration of the tentorium occurred. Since it has been sought more systematically, it has been found more frequently, being marked in six of the last fifteen infant cadavers examined. The necropsy findings are compared with the clinical course where possible, in the thirty-three cases. The findings show that laceration of the tentorium is liable to occur at any birth, while the danger increases proportionately with difficult delivery; the danger of laceration does not lie in the prolongation of the birth but in the traction to which the head is subjected, stretching the falx cerebri in the lengthwise direction of the skull. The laceration causes no symptoms; these are due to the resulting hemorrhage, and then only when the blood is dammed up in the region. The laceration heals so rapidly that there is scarcely a trace left by the end of three weeks, but relics of the hemorrhage may be long perceptible. In future, in forensic cases, the brain should be separated above the tentorium, leaving the latter unmolested. This will best reveal the conditions experienced during birth and the resulting injury for the child.

Zentralblatt für Chirurgie, Leipsic

January 13, XXXIX, No. 2, pp. 41-72

102 *Postoperative Paralysis from Constricting Band. (Zur Frage der Drucklähmungen nach Esmarch'scher Blutleere.) W. Wolf.

102. **Postoperative Paralysis from Constricting Band.**—Wolf comments on five cases recently published in which the patients found on rousing from the effects of the general anesthetic that the arm to which the Esmarch band had been applied had been left with paralysis. In the first three cases the paralysis has entirely disappeared at present, although in one case six months of treatment were required; in the fourth case only two months have elapsed since, so there is still time for improvement. But in the fifth case over six months have elapsed and there is some paresis of the arm and total hysteric analgesia of the entire arm. Wolf then reports a case from his own experience. The patient was an army officer of 30 and the blood was expelled from the arm to allow suture of a tendon in the left hand. A Martin constricting band was applied for about an hour and on its removal the entire arm was found paralyzed, with sensory disturbances, and four weeks later a reaction showing a tendency to degeneration was obtained. Conditions are gradually improving now, two months after the operation, and hope of a complete cure in a few months more seems justified. The patient had contracted syphilis nine years before, and Wolf is convinced that the old syphilis had predisposed the nerves to injury on slight provocation. The case teaches, he says, that long constriction of the arm should not be applied when there is a history of syphilis. It is possible, he suggests, that revision of the cases of ischemic paralysis on record might disclose unsuspected syphilis in the antecedents.

Zentralblatt für Gynäkologie, Leipsic

January 13, XXXVI, No. 2, pp. 33-64

103 Gynecologic Prophylaxis of Psychoses and Suicide. (Die gynäkologischen Läsionen bei der Manie des Selbstmordes und die gynäkologische Prophylaxe gegen den Selbstmord beim Weibe.) E. Siemerling.
104 *Hysterotomy for Drainage After Laparotomies. (Ueber die Technik der zum Zweck einer Drainage ausgeführten Hysterotomien bei Laparotomien.) S. v. Toth.
105 Puerperal Auto-Infection. (Der "neue Gesichtspunkt" in der Selbstinfektion.) G. Winter.

104. **Draining Through the Uterus After Laparotomies.**—Toth expatiates on the advantages of draining through the vagina after abdominal gynecologic operations. For this he prefers amputating the uterus, regarding it as unwise to leave the uterus after removing the adnexa, even on one side only, for a puerperal purulent process. When the adnexa on both sides are to go, it is much better to remove the uterus with them as its retention then can do only harm. As a rule, amputation of the uterus offers all the advantages of removing the entire uterus while not depriving the floor of the pelvis of so much of its support. To ensure ample drainage, he slits the posterior wall of the stump of the cervix and the connected portion of the vagina, cutting backward with a knife held in forceps introduced into the cervix. Any tendency to bleed is arrested by a few sutures taken through the raw edges. Sponges are pushed down into the vagina from above, and, finally, the entire small pelvis is walled off from the general abdominal cavity by suturing it under a curtain of peritoneum. No effusion collects above the stump, which is thus amply drained. He summarizes the details of thirty cases in which this technic was applied with extremely good results even in the most complicated cases. All the women recovered promptly and completely. The technic avoids all possible danger of injuring the bladder or ureters or their innervation, and the vagina retains its normal architecture, size and shape. He gives two illustrations of the technic.

Policlinico, Rome

January 14, XIX, No. 3, pp. 77-112

106 *Negative Results from Roentgenotherapy of Nephritis. (Dell' azione curativa dei raggi x nelle nefriti.) D. Galausino.

106. **Negative Results from Roentgenotherapy in Nephritis.**—Galausino exposed a number of rabbits and guinea-pigs to the action of the Roentgen rays, striving to detect a curative action on experimental nephritis, but without any apparent result. He was never able to detect any difference between the behavior and findings in the kidneys exposed and in those of the control animals. Similar negative findings were obtained also in six clinical cases of chronic parenchymatous nephritis and one of transient mixed nephritis.

Brazil Medico, Rio de Janeiro

January 1, XXVI, No. 1, pp. 1-10

107 Simplification of Technic for Gravimetric Analysis: Weighing the Precipitates Without Drying. (Simplificaçao ao processo gravimetrico. Pesagem dos precipitados no estado humido.) A. Godoy.
108 Cystoscopy. (Cystoscopia, seu valor e suas indicaçoes.) A. B. Praguer.

Hospitalstidende, Copenhagen

November 22, LIV, No. 47, pp. 1329-1368

109 *Experimental Research on Epidemic Poliomyelitis. I. O. Thomsen.
110 *Medicolegal Test for Seminal Stains. (Paavisning af spermatozoer ved Hjælp af Jern-Hæmatoxylinfarvning.) V. Ellermann.
111 *Benzidin Test for Occult Blood. (Om Paavisning af meget smaa Blodmængder ved Benzidinprøven.) V. Ellermann.

December 6, No. 49, pp. 1409-1440

112 Spontaneous Dislocation of Crystalline Lens into the Vitreous. (Et Tilfælde af spontan Luxation af den cataractøse Linse ind i Corpus vitreum.) Jespersen.
113 *Development of Hypertrophy of the Prostate and Suprapubic Prostatectomy. (Hvad foregaar der ved den suprapubiske Prostatektomi? Hvorfra udvikles den saakaldte Prostatahypertrofi?) A. Lendorf. Commenced in No. 48.

December 13, No. 50, pp. 1441-1472

114 Bismuth Not Adapted for Neutralizing Excess of Acid. (Nogle Bemærkninger on Subnitras bismuth. og. Carb. bismuth. som. syremættende Midler.) C. Lundsgaard.

109. **Experimental Poliomyelitis.**—Thomsen states that Denmark has escaped epidemic poliomyelitis until recently, but last year (1911) there were 250 cases reported. He undertook special experimental research on the subject, and was able to induce the disease in thirteen monkeys inoculated with infectious material, including scrapings from the throat and nose of persons and monkeys with poliomyelitis. Some of the material was inoculated in the nasal mucosa, confirming the possibility of contracting the disease in this way. He was never able to obtain positive results with other animals than monkeys, and he thinks that contamination of the material inoculated was probably responsible for the positive results in this line which have been reported by Krause and Meinicke. Thomsen's attempts to induce immunity were all negative. The virulence of the virus seemed to be enhanced when it was injected with vaccine virus.

110. **Technic for Determination of Seminal Stains.**—Ellermann describes a method which stains the spermatozoa while leaving the cloth unstained, throwing the heads of the spermatozoa into great prominence; the specimen is durable and photographs well. A thread picked with a needle from the cloth is first stained with Dervieux's stain (0.5 gm. erythrosin in 100 gm. ammonia water). The stain is left in contact only one minute and is then washed off carefully; the thread is then placed on a slide and all the water carefully blotted up. The thread is then treated with Weigert's iron-hematoxylin tissue stain, the two solutions being mixed in equal parts just before use. The separation of the thread into its fibrils is done through the stain. After two minutes' contact the excess of stain is taken up as completely as possible with filter paper. A few drops of distilled water are then added and the picking apart of the fibrils completed, after which the specimen is washed with distilled water until it comes away clear. Mounted in balsam the spermatozoa show up black, the tail distinct its entire length and the heads blacker at the rear than in front, this latter characteristic serving to distinguish the true spermatozoa.

111. **The Benzidin Test with Small Amounts of Blood.**—Ellermann lays four or five round pieces of filter paper on top of each other in a flat, medium-sized Petri dish. The scrap of blood to be examined is placed in the center of the upper round and is then treated with the benzidin solution. He prefers Ascarelli's formula: a mixture of 2 c.c. of a saturated alcoholic solution of benzidin with 2 c.c. of 3 per cent. hydrogen peroxid and two drops of glacial acetic acid. In case of a positive reaction, blue stripes spread out like rays from the scrap of blood. The same small scrap of blood can be utilized also for spectroscopy and the precipitin reaction.

113. **Development of Hypertrophy of the Prostate.**—Lendorf presents anatomic and clinical evidence to prove that abnormal hypertrophy does not occur in the true prostate but from accessory prostatic glands. These glands hypertrophy while the true prostate—the two symmetrical side lobes enclosed on all sides by smooth circular muscular fibers, centrally and peripherally—does not participate in the abnormal hypertrophy. The accessory glands are found in the vicinity of the internal orifice of the urethra and through the prostatic portion, being bounded peripherally by the central circular muscular fibers of the sphincter of the bladder and prostate. The true prostate merely stretches as these accessory glands hypertrophy, serving as a capsule around the hypertrophied mass. He discusses the operative technic most logical when the development of the hypertrophy is understood.

Ugeskrift for Læger, Copenhagen

January 11, LXXIV, No. 2, pp. 49-88

115 *Conditions in Ancient Pompeii in Regard to Hygiene and Sanitation. (De hygiejniske Forhold i Oldtidens Pompeji.) H. Mygind. Commenced in No. 1.

115. **Sanitation in Ancient Pompeii.**—Mygind discusses, with twenty-six illustrations, the medical and sanitary aspects of Pompeii, its plan, its architecture, etc. The systematic arrangement of the city is extolled. There was no sewerage system, but the lava foundation and the slope of the town rendered this less necessary here than in Rome, for instance. Some of the streets evidently served as open sewers, with stepping stones at the crossings for foot passengers; the houses of the wealthy had no openings on the side facing these sewer-streets, except where the drain opened into the street. The houses of the poor were unventilated and unlighted cells but ample provision was made for public and private baths. On the whole, Mygind remarks in conclusion, in several of the points considered, Italy has not taken a single forward step in the more than two thousand years that have passed since Pompeii was built.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Practical Electrotherapeutics and X-Ray Therapy. With Chapters on Phototherapy, X-Ray in Eye Surgery, X-Ray in Dentistry, and Medicolegal Aspect of the X-Ray. By J. M. Martin, M.D., Professor of Electro-Therapeutics and X-Ray Methods in the Medical Department of Baylor University. Cloth. Price, $4. Pp. 446, with 219 illustrations. St. Louis: C. V. Mosby Company, 1912.

Old-Time Makers of Medicine. The Story of the Students and Teachers of the Sciences Related to Medicine During the Middle Ages. By James J. Walsh, K.C.St.G., M.D., Ph.D., Dean and Professor of Nervous Diseases and of the History of Medicine at Fordham University School of Medicine. Cloth. Price, $2. Pp. 450. New York: Fordham University Press, 1911.

Studies on Leprosy. XIV, The Artificial Cultivation of the Bacillus of Leprosy; XV, Attempts at Specific Therapy in Leprosy. By Donald H. Currie, Moses T. Clegg and Harry T. Hollmaun. Public Health and Marine-Hospital Service of the United States. Public Health Bulletin No. 47. Paper. Washington, 1912.

A Handbook of Practical Treatment. By Many Writers. Edited by John H. Musser, M.D., LL.D., Professor of Clinical Medicine in the University of Pennsylvania, and A. O. J. Kelly, A.M., M.D. Volume III. Cloth. Price, $6 net. Pp. 1095, with illustrations. Philadelphia: W. B. Saunders Company, 1912.

Fourth Report of the Wellcome Tropical Research Laboratories. At the Gordon Memorial College, Khartoum. Andrew Balfour, M.D., B.Sc., F.R.C.P. (Edin.), Director. Volume A—Medical. Cloth. Price, $5. Pp. 404. New York: Toga Publishing Company, 35 West Thirty-Third Street

Handbook of Physiology. By W. D. Halliburton, M.D., LL.D., F.R.C.P., Professor of Physiology, King's College, London. Tenth Edition (Being the Twenty-Third Edition of Kirkes' Physiology). Cloth. Price, $3. Pp. 923, with 592 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

Blood-Vessel Surgery and Its Applications. By Charles Claude Guthrie, M.D., Ph.D., Professor of Physiology and Pharmacology, University of Pittsburgh. International Medical Monographs. Cloth. Price, $4. Pp. 360, with illustrations. New York: Longmans, Green & Co., 1912.

Medical Service in Campaign. A Handbook for Medical Officers in the Field. By Major Paul Frederick Straub, Medical Corps (General Staff), United States Army. Second Edition. Leather. Price, $1.50. Pp. 186, with illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

Practical Gynecology. A Comprehensive Text-Book for Students and Physicians. By E. E. Montgomery, M.D., LL.D., Professor of Gynecology, Jefferson Medical College. Fourth Edition. Price, $6. Pp. 857, with illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

The American Year-Book. A Record of Events and Progress. 1911. Edited by Francis G. Wickware, B.A., B.Sc., Under Direction of a Supervisory Board Representing National Learned Societies. Cloth. Price, $3.50. Pp. 863. New York: D. Appleton & Co., 1912.

The Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume 1, Number 1. Paper. Pp. 133, with illustrations. Six numbers a year. Price per year, $8. Philadelphia: W. B. Saunders Company, 1912.

Bronchial Asthma. Its Pathology and Treatment. By J. B. Berkart, M.D. Third Edition. Cloth. Price, 5 shillings. Pp. 150. New York: Oxford University Press, 1911.

Surgery and Society. A Tribute to Listerism. By C. W. Saleeby, M.D., F.R.S.E. Cloth. Price, $2.50 net. Pp. 395. New York: Moffat, Yard & Co., 1912.

Second Report of the Lake Michigan Water Commission. President, George B. Young, Health Commissioner of Chicago. Paper. Price, $1. Pp. 204.

First Annual Report of the Bureau of Vital Statistics of the State of Ohio, 1909. Two Volumes. Cloth. Pp. 1667. Springfield, Ohio, 1911.

Fourteenth Annual Report of the Managers of the New Jersey State Village for Epileptics, Skillman, Somerset Co., N. J. 1911.

First Report of the Holman Association for the Promotion of Rural Nursing, Hygiene and Social Service. Baltimore, 1911.

Transactions of the American Climatological Association. Volume XXVII, 1911. Cloth. Pp. 410. Philadelphia.

Biennial Report of the Board of Managers of the Springfield Hospital, Sykesville, Md. 1909-1911.

Fifteenth and Sixteenth Reports of the Elliot City Hospital, Keene, N. H. 1909 and 1910.

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PATHOLOGY AND TREATMENT OF TUBERCULOSIS OF THE BONES AND JOINTS [*]

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I am sorry to say that Scotland is in the unenviable position of possessing, per head of the population, a greater proportion of surgical tuberculosis than is to be found in most countries, and as I have been Surgeon to the Royal Edinburgh Hospital for Sick Children for the past twelve years, I have had exceptional opportunities of studying the pathology and treatment of bone and joint tubercle.

Since Koch read his memorable paper at the International Medical Congress held in London in 1901, when he made the statement that "the bacillus of human tuberculosis was incapable of producing tuberculosis in bovines," and "the bacillus of bovine tubercle was to be considered as practically incapable of transmission to man, and that consequently the danger of contracting phthisis from the milk or meat of tuberculous bovines need no longer be guarded against," the relationship of these two forms of tuberculosis has formed the subject of much expert investigation, both clinical and experimental, in America as well as in Europe, and it is not too much to assert that, as far as the health of the community is concerned, the question is hardly less important than malignant disease.

Although the third report of the British Commission on Bovine Tuberculosis has not yet been issued,[†] enough evidence now exists to show that a large proportion of surgical tuberculosis, at any rate in children, is of bovine origin. My own clinical observations led me to this conclusion some years ago, and Drs. John Fraser and A. P. Mitchell, two of my assistants and former house surgeons at the Children's Hospital, who are now working, the former at tuberculosis of the bones and joints, the latter at tuberculosis of the lymphatic glands, are rapidly accumulating pathologic and experimental proof of this contention, but as their work calls for much careful experimentation, it will be some time yet before the results can be published.

The reason why bovine tuberculosis is so common among children in Scotland is due, mainly, to the prevalence of tuberculosis in dairy cows, to their inadequate veterinary inspection, and to the ignorance of the farmers themselves in matters relating to bovine tuberculosis. It is true that in the large towns there is a certain amount of inspection, but it is still very inadequate; for example, in Edinburgh one veterinary surgeon of the public health department is expected to examine all the cows (fully 2,800) supplying milk from the city byres at intervals of not more than three weeks, and in addition he endeavors to supervise the supply from the byres outside the city boundary. Referring to the city report for the year 1909, 1,531 inspections of the city byres are recorded as against twenty-two of the byres beyond the city. As a result of these examinations, thirty-seven cows which contributed to the city's daily milk-supply were ordered to be removed on account of their tuberculous condition. In thirteen of these cows the udders were involved, and in each tubercle bacilli were present in the milk.

It is left entirely to the dairykeeper to dispose of the diseased cow as he may think fit, so long as he has it removed within the stipulated time, viz., twenty-four hours after the official notice is served. Unfortunately a considerable proportion of these animals find their way to England, where they must, for a time, at any rate, continue propagating this disease.

The total inadequacy of this inspection for protecting the public against an undoubted fruitful source of infection is only too apparent, and the fact that the city milk-supply from the country is rapidly and steadily increasing every year strongly emphasizes the immediate necessity for some radical change.

A large proportion of the milk which comes into Edinburgh (and the same may be said of other large cities) is derived from dairy farms in the rural districts, many of which are under no veterinary supervision whatsoever. In the smaller towns and villages scattered throughout Scotland the milk-supply is derived from small neighboring farms.

As an example of what not infrequently happens, I may instance the following: A country child, aged 9 months, whom I operated on a few months ago for multiple osseous tuberculosis, proved to be a very instructive case. Dr. Mitchell, on investigating the milk-supply of the patient, discovered that of the six cows in the byre, two had tuberculous udders, with the milk from both teeming with tubercle bacilli.

Only recently I was asked to see a baby who, the mother thought, was suffering merely from the effects of teething. On examination the child was found to be suffering not only from multiple tuberculous dactylitis of the hands and feet, but also from tuberculous disease of the upper jaw, of both frontal bones, and of the cervical and mesenteric glands. No operation was recommended. Death occurred six weeks later from tuberculous meningitis. The parents were both free from tubercle, as also were the other children. On inquiring into the milk history, I was informed that two cows were kept on the home farm for the special use of the household; that they had both been tested, and that neither of them reacted to the tuberculin test, which had been applied six months previously. I suggested that they were probably too tuberculous to react, and that the best plan would be to kill them. This was done, with the result that both cows were found to be suffering from general tuberculosis, and that one of them had a tuberculous udder. I might instance other cases in which the evidence of milk infection was equally conclusive.

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[*] Read in the Section on Surgery of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

[*] Owing to lack of space, this article has been abbreviated by the omission of several pages of text; but this omitted portion is included in the author's reprints and in the Transactions of the Section. A copy of the reprint will be sent on receipt of a stamped, addressed envelope.

[†] Since this paper was read, the report referred to has appeared. See THE JOURNAL A. M. A., Aug. 5, 1911, p. 491.

There was brought a short time ago to the Surgical Out-Patient Department of the Royal Edinburgh Hospital for Sick Children a child, aged 1 year and 5 months, suffering from multiple osseous tuberculosis. The following appalling history was elicited from the mother: The baby had been bottle-fed with milk obtained from a small dairy farm. The mother had been informed by the child's grandfather, who worked on the farm, that soon after the birth of the child, one of the cows had "gone wrong." He told how the animal had rapidly wasted, become so weak that it was unable to stand; it was actually milked lying on the ground, and this milk was used for human consumption. By this time it was thought expedient to call in a veterinary surgeon who, finding the animal suffering from generalized tuberculosis with marked involvement of the udder, at once ordered its destruction and burial.

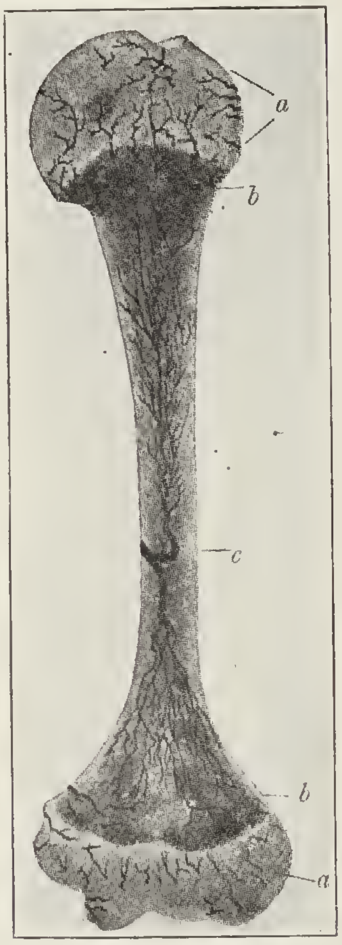

Fig. 1.—Humerus of new-born child, showing the three sets of intra-ossal blood-vessels: (a) epiphyseal; (b) metaphyseal; (c) medullary. (After Lexer.)

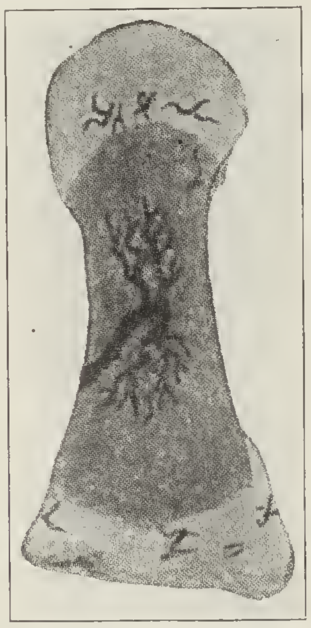

Fig. 2.—First (?) metacarpal bone of new-born child. To show the large size of the main nutrient artery and the relatively small size of the epiphyseal and metaphyseal arteries. (After Lexer.)

From what I have seen in the Children's Hospital, I cannot help but feel that we have begun at the wrong end in our endeavor to combat tuberculosis. In my opinion more real progress would have been made if much of the money that has been spent on sanatoriums for pulmonary consumption had been devoted either to the stamping out of bovine tuberculosis among dairy cows, or, if this be too great a financial undertaking for the country, means should at any rate be provided whereby every infant and young child may be supplied with sterilized milk. The question is one of national importance, and the sooner it is faced by the government the better. It is high time our municipal authorities began to tackle the problem in a really serious and business-like manner.

PATHOLOGY

There can be no doubt that osseous tuberculosis is practically always hematogenic in its origin, and that in a large proportion of cases the primary focus is situated in the lymphatic glands, especially the upper deep cervical set, which receive their lymphatics from the oral and nasopharyngeal cavities, including the faucial and pharyngeal tonsils. Next in importance come the bronchial and mesenteric glands. As the result of the caseation and destruction of these glands, the bacilli sometimes gain access to the interior of the small veins connected with them. They are then liable to be conveyed to the right side of the heart and thence through the lungs into the systemic circulation, by which they are distributed to various parts of the body. They may also reach the venous circulation through the thoracic duct. Having reached the peripheral circulation, they may become arrested in various parts of the body in the form of minute emboli. There can be no doubt that the bacilli are very frequently destroyed by the vital activity of the proliferating endothelial cells, as well as by the connective tissue cells and leukocytes; if, on the other hand, the resistance of the child is feeble, the bacilli take root and a definite lesion is the result.

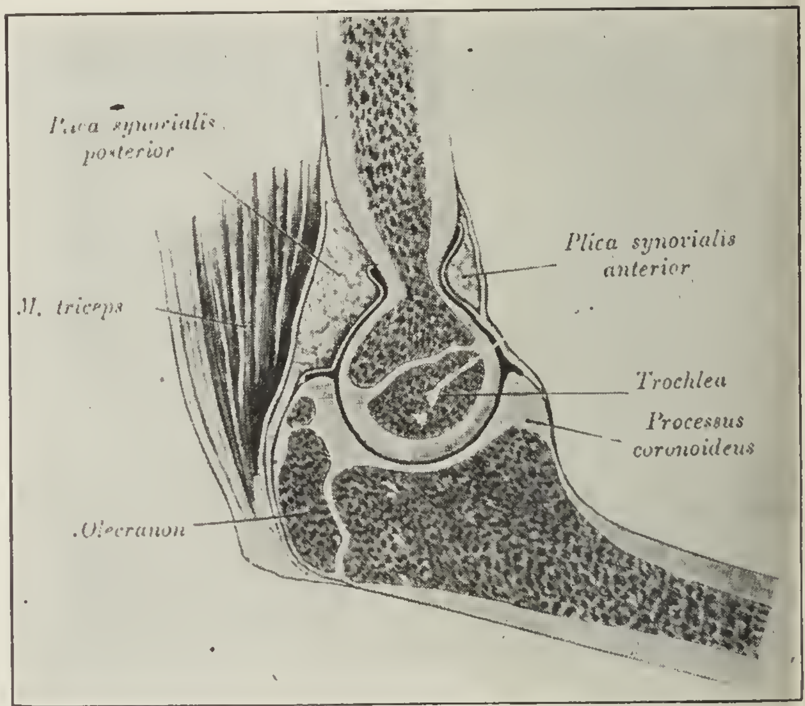

Fig. 3.—Vertical section through elbow joint of child, aged to show the relationship of the epiphysis and metaphysis of the humerus and ulna to the synovial membrane. (After Braune.)

Dr. Fraser is obtaining experimental proof of this theory by injecting the femoral artery of guinea-pig with an emulsion of tubercle bacilli obtained from guinea-pigs injected with caseous material derived from osseous tuberculosis in children. He points out that i is important to tie the vein at the same time so as t favor the deposit of the tubercle by retarding the cir culation. As the result of these experiments, he ha been able to produce tuberculous lesions in the lower metaphysis of the tibia as well as in the metatarsal bones. These experiments will be published.

Before considering why it is that the bacilli are s liable to settle down and flourish in the bones, espe cially of children, we must first of all study the distribution of the blood-vessels in the growing bones. This has been done, more especially by Lexer, who has produced excellent stereoscopic illustrations of the arterial supply to the various bones by injecting them with a mixture of quicksilver and turpentine oil.

The intra-ossal vessels consist of three systems (Fig. 1): first the diaphyseal, which includes the main nutrient artery. This vessel, as soon as it has reached the medulla, divides into a short ascending and descending branch, each of which by a process of repeated bifurcation gives rise to a dichotomous system of vessels which terminate at the ends of the diaphysis by anastomosing slightly with the metaphyseal arteries. These latter, which form the second system, consist of a number of small independent vessels which perforate the metaphysis close to the epiphyseal cartilage. In addition, moreover, to the branches which supply the metaphysis and anastomose with the terminal twigs of the nutrient artery proper, others perforate the epiphyseal cartilage and end by anastomosing with the third system, namely, the epiphyseal arteries. These consist of a few small vessels which pierce the cartilaginous extremity of the growing bone to reach and supply the epiphyseal centers of ossification. The metaphyseal and epiphyseal arteries are derived from the vessels which go to form the periarticular anastomosis, and it is from this anastomosis that the ligaments and synovial membrane receive their blood-supply; and as it is chiefly at the ligamentous attachments that the metaphyseal and epiphyseal arteries enter the bone, it is obvious that there is a free anastomosis between the metaphyseal and epiphyseal arteries on the one hand, and those which go to supply the ligaments and synovial membrane on the other hand.

With regard to the intra-ossal vessels, it will be observed that the ultimate branches of all three sets anastomose in the region of the metaphysis, so that by whichever of the three routes the bacterial embolus finds its way into the bone, it is in this last situation that it is most likely to be arrested.

Moreover, we know that the ends of the diaphyses are very vascular, that the blood-vessels form wide capillary, in fact almost cavernous, loops immediately under the epiphyseal cartilage, and that the trabeculæ which surround them are very slender and imperfectly ossified. No doubt, too, the circulation is here comparatively slow, a circumstance which still further favors the arrest of emboli. We know also that very slight traumatisms may give rise to detachment or loosening of an epiphysis, and there can be no doubt that, as the result of contusions and joint strains, traumatisms may be produced in the neighborhood of the metaphyses, which, although they do not always produce macroscopic results, nevertheless may give rise to capillary hemorrhages, and this may serve to explain how it is that slight strains are liable to be followed by tuberculosis, the bacilli being arrested by the local damage to the circulation.

While joint tuberculosis may manifest itself as a primary synovial disease, it is more frequently the result of a secondary invasion from a primary osseous focus situated in the metaphysis of one of the bones which enter into the formation of the joint.

As, however, both the epiphyses and the metaphyses receive their blood-supply from the same source as the ligaments and synovial membrane, it is largely a matter of accident as to whether the disease begins in the bone or in the synovial membrane; indeed, there is no reason why it should not occur independently and simultaneously in both situations. It cannot be denied that the matter is important from the practical point of view, but, as I hope to show presently, the solution of the question is essentially an anatomic one, and I am convinced that much of the confusion and difference of opinion which exists with regard to the pathology of bone and joint tubercle has arisen from an insufficient appreciation of the importance of an exact knowledge of the anatomy and development of the extremities of the long bones in children, and of the relations of the epiphyses, or, I should say, of the ends of the diaphyses (metaphyses) to the synovial cavities of the joints (Fig. 3).

From what has already been said it will be gathered that, in children, the most common situation to meet with a primary osseous focus ought to be the metaphysis and not the epiphysis, and my experience at the Royal Edinburgh Hospital for Sick Children has convinced me that this is actually the case. This I have taught for some years past, and it is difficult to understand why our modern text-books still make the statement that primary tuberculosis of the long bones usually starts in the epiphysis. This may be the case in adults, but it is certainly not so in children. Take, for example, the *elbow joint* in a young child: First, with regard to the humerus, we find that apart from the two epicondyles, which we may leave out of consideration, its lower epiphysis is made up merely of the articular portion of the bone; and of the two centers of ossification which go to form it, the outer (capitellar) does not begin to ossify till the second year, and the inner (trochlear) not until the eleventh year. Hence we see that up to the second year of age the lower epiphysis is entirely cartilaginous, and it is universally agreed that tubercle never begins in cartilage. It follows, therefore, that if a child under two years of age develops a tuberculous elbow joint secondary to disease in the humerus, the disease must have begun in the diaphysis and not the epiphysis.

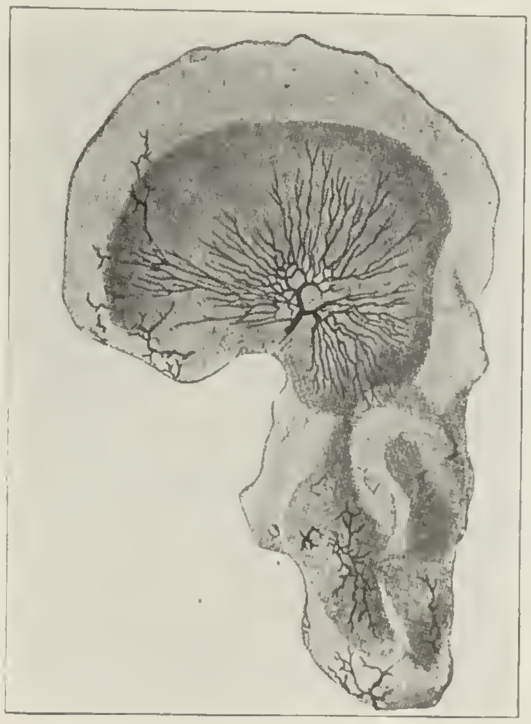
Fig. 4.—Os innominatum of new-born child showing leash of vessels descending to the acetabulum from the large nutrient artery of the ilium. (After Lexer.)

Similarly, the upper epiphysis of the ulna forms not much more than the tip of the olecranon process, and involves only a very small portion of the articular cartilage; indeed, sometimes the *whole* of the cartilage of the greater sigmoid cavity is developed from the diaphysis. The small size of the upper epiphysis of the radius is familiar to all, and it does not begin to ossify until the sixth year. It follows, therefore, that when the elbow joint is involved secondary to an osseous focus, that focus almost invariably begins either in the lower end of the diaphysis of the humerus or the upper end of the diaphysis of the ulna.

It is well known that in children tuberculous disease of the elbow joint is much more frequently met with than in the shoulder or the wrist, and here again we have an anatomic explanation, namely, that the nutrient arteries all run towards instead of away from the elbow.

What has been said with regard to the elbow applies almost with equal force to the *hip-joint.* The upper epiphysis of the femur comprises merely the articular extremity of the bone. The whole of the neck, therefore, belongs to the diaphysis, and is it not a matter of common observation that when the hip-joint is involved secondary to an osseous focus that focus is situated almost invariably either in the neck of the femur or in one of the three elements which go to make up the acetabulum? As the acetabular ends of the innominate bone possess no epiphysis, they may, from the present point of view, be regarded as metaphyseal and not epiphyseal; and a glance at Lexer's figure of their blood-supply supports this view (Fig. 4). While, however, the upper epiphysis of the femur is small, it must be remembered that its ossification commences within the first year, so that it may, in quite exceptional cases, be the seat of a primary focus.

When we come to study the anatomy of the *knee-joint* in relation to tuberculous disease, we find that, unlike the elbow, its epiphyses are of large size, and, moreover, that they begin to ossify very early. My experience has been that primary synovial disease is more frequently met with in the knee than in any other joint. In the comparatively rare cases in which it is secondary to an osseous focus, that focus, I admit, is generally met with either in the lower epiphysis of the femur or the upper epiphysis of the tibia, but by this I do not wish to imply that the disease does not occur with even greater frequency in the adjacent metaphyses.

This leads us to another point in the anatomy of the ends of the developing long bones which is of great importance clinically, and which serves to explain why some joints are so much more liable to be involved (and so much earlier involved) than others secondary to a focus in the end of a diaphysis. It may almost be stated as an axiom that the smaller the epiphysis the more likely, or, in other words, the earlier, does the adjacent joint become involved, because the smaller the epiphysis the more closely is the end of the diaphysis (metaphysis) related to the joint. For example, the olécranon, the coronoid, and the radial fossæ, which belong to the lower end of the diaphysis of the humerus, are all covered by synovial membrane, and are therefore just as much intra-articular as is the lower epiphysis. In excising the elbow joint in a child we all know how frequently the synovial disease is found to be secondary to a focus in the lower end of the diaphysis of the humerus which has perforated into the joint through one or other of these fossæ. The same applies to the upper end of the ulna. The hip-joint is another good example, because the metaphysis, which is formed by the neck of the femur, is almost entirely intra-articular. The epiphyses at the knee, the lower epiphysis of the tibia and the upper epiphysis of the humerus are, on the other hand, relatively much larger; the corresponding joints are therefore much less likely to be involved—or are much later involved—secondary to metaphyseal foci, because these foci are very liable to perforate the cortex of the bone outside the limits of the synovial membrane.

MORBID ANATOMY AND PROGRESS

We shall now discuss shortly the morbid anatomy and the progress of the disease as it occurs at the growing end of the diaphysis of one of the long bones. As this is the seat of election it is desirable, not only to describe it first, but, in order to emphasize the condition as a separate entity, to give it the definite name of *tuberculous metaphysitis,* a name which will, moreover, distinguish it from the two other conditions to be referred to later, namely, *tuberculous epiphysitis* and *tuberculous diaphysitis.*

TUBERCULOUS DIAPHYSITIS

In tuberculous diaphysitis of the long bones proper the disease may start either in the spongy tissue at a little distance away from the metaphysis or in the medullary canal, and in each situation the disease may present itself either as a more or less circumscribed focus or as a diffuse infiltration which may involve the whole length of the medullary cavity (Fig. 5). As the disease is of hematogenic origin, it will generally be found to occupy either the upper or lower half of the diaphysis, according to whether the bacterial embolus enters the upper or the lower division of the nutrient artery. As already stated, it not infrequently happens that a primary focus beginning in the metaphysis spreads as a tuberculous infiltration into the medullary cavity so that it is not always possible to draw a sharp distinction between metaphyseal and diaphyseal tuberculosis.

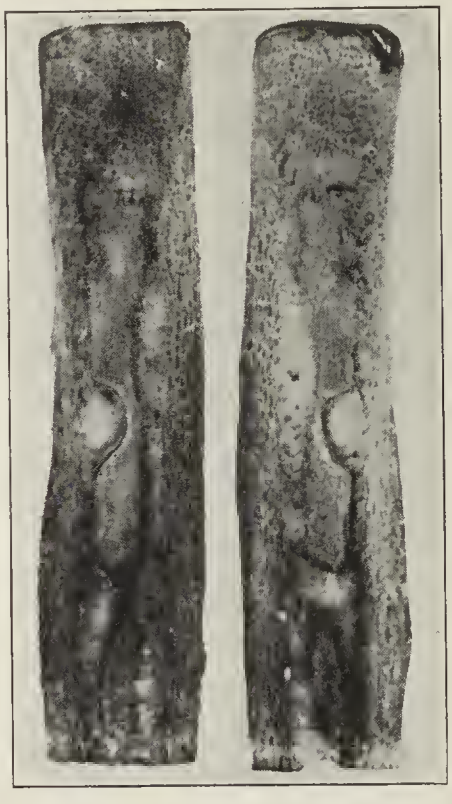
Fig. 5.—Vertical section of the lower half of the diaphysis of the femur resected subperiosteally from a child, aged 13 years. It shows the naked-eye appearances of a diffuse tuberculous diaphysitis with the formation of an elongated central sequestrum.

The circumscribed form of the disease generally occurs as a soft, caseous, avascular focus, surrounded by an advancing zone of active tuberculous tissue of a greyish color, semi-transparent and slightly vascular. The surrounding bone, apart from its increased vascularity, may appear almost normal; in some cases it is rarefied, while in others again, especially if the disease be very chronic and tending to heal spontaneously, it is more or less sclerosed (Fig. 6). Sometimes the focus contains one or more small sequestra, but even when the sequestrum is single, it is seldom of large size. Only rarely is the focus represented by a chronic abscess, and when this is the case the wall of the abscess does not present the smooth sclerosed surface met with in the chronic staphylococcal abscess of Brodie.

The congestion set up in the surrounding bone by the presence of the tuberculous focus in its interior spreads through the Haversian systems to the periosteum, with the result that a formative osteoplastic periostitis is set up, which gives rise to the deposit of layer after layer of new bone between the periosteum and the cortex. It is this sheath of subperiosteal new bone which gives to the disease its most important and characteristic diagnostic sign, namely, thickening of the diaphysis; indeed, in the early stage of the disease this is the only physical sign present. Its importance, therefore, cannot be overestimated (Fig. 7).

As the disease almost invariably occurs during childhood, congenital syphilis, pneumococcal and other pyogenic infections, when subacute, are the chief conditions with which it is likely to be confounded. The presence of tuberculous lesions elsewhere in the body, or the presence or absence of a syphilitic history, will generally suffice to clear up the diagnosis. Radiography will demonstrate the position, size and shape of a focus, the presence or absence of a sequestrum, and the thickness and extent of the subperiosteal sheath of new bone. It should therefore always be resorted to before proceeding to operation, as it shows exactly how much bone should be removed.

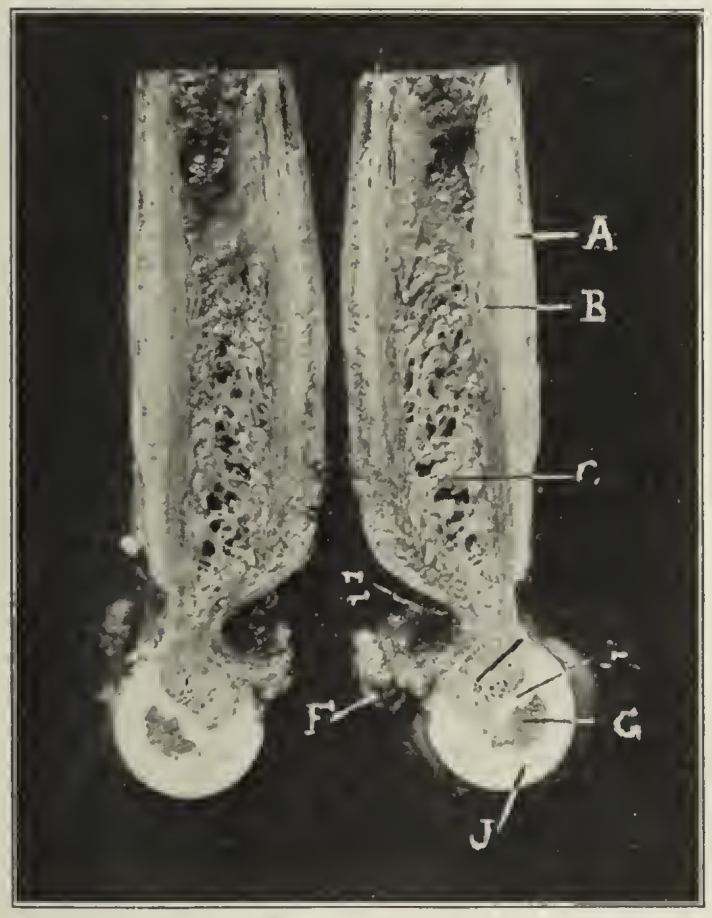

Fig. 6.—Sagittal longitudinal section of lower third of humerus resected subperiosteally from a child, aged 2 years: (a) thick sheath of new subperiosteal bone; (b) original compact bone of cortex; (c) caseous infiltrating tubercle of marrow spreading upward from a focus in (d) the metaphysis; (e) olecranon fossa perforated by the tubercle; (f) tuberculous synovial membrane; (g) ossific center in the capitellar portion of lower epiphysis; (h) cartilage of epiphyseal disc; (j) articular cartilage.

A radiograph, however, cannot always be relied on to settle the diagnosis between tuberculous and other forms of osteitis, especially when the former condition is very chronic and associated with an abundant formation of new subperiosteal bone, as this bone, along with the original cortex, obscures the view of the interior of the bone.

Pathologists and clinicians have been so much in the habit of regarding periostitis and superficial formative osteitis as the main feature of congenital syphilitic bone lesions, that they appear to have lost sight of the fact that the same condition is met with in tuberculous osteitis; and the result has been that many cases of tuberculous disease of the diaphysis have been looked on as syphilitic.

OPERATIVE TREATMENT

The operative treatment of primary tuberculous osteomyelitis of the diaphysis consists in the first place in freely exposing the bone at, as well as a little above and below, the seat of the disease. The incision is so planned that the dissection occasions the minimum of injury to the soft parts. An intermuscular plane is chosen which avoids injuring, more especially, the nerve-supply to the muscles.

The method usually adopted is, after freely opening up the bone with a chisel, to gouge and thoroughly scrape away the diseased focus. This having been done, either some preparation of iodoform or pure phenol is applied to the wall of the cavity; the latter is then stuffed with iodoform gauze or filled with Mosetig-Moorhof's iodoform-wax filling.

While the above method is that which has been invariably employed by those surgeons who have recorded cases of the disease, I am strongly of opinion that such a procedure should be the exception rather than the rule. The early results of such a method of treatment are satisfactory enough, but unfortunately it too often happens that the patient sooner or later returns with the scar tuberculous and the seat of a sinus leading down to further disease in the bone. Such a result is not to be wondered at when we consider how difficult it is to remove all the affected area by the gouging process.

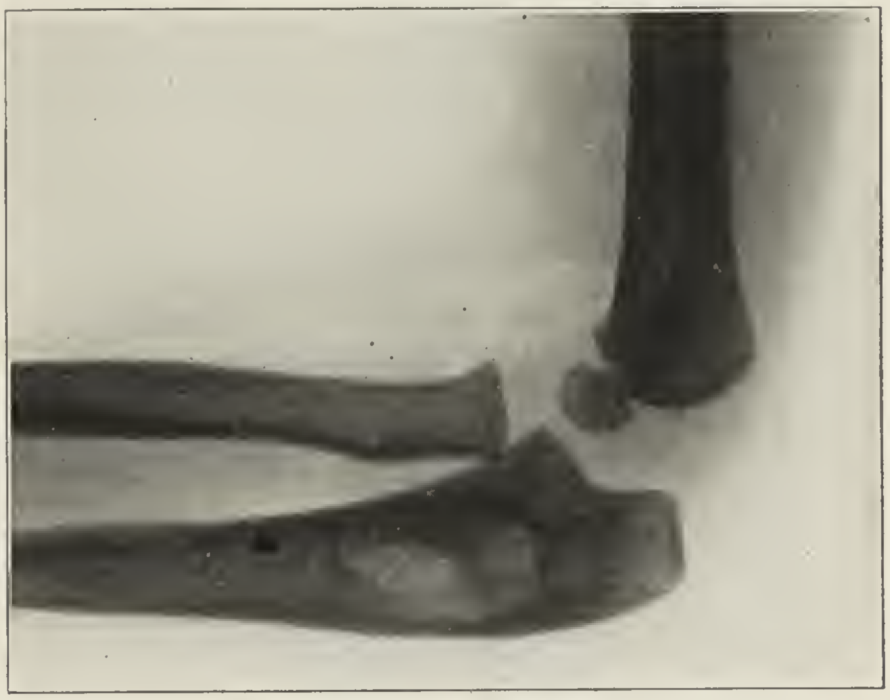

Fig. 7.—Circumscribed tuberculous focus in upper metaphysis of ulna of child aged 4 years. Upper third of ulna thickened containing tuberculous abscess cavity surrounded by a well-defined wall of sclerosed bone. Joint not infiltrated. A typical case for curetting.

After a few such disappointments I have for a number of years past treated the affection by subperiosteal resection of the diseased part of the diaphysis. Care is taken to divide the bone well above and below the focus; in short, the disease is dealt with radically, as if it were a malignant tumor.

By the aid of radiography, the disease can be diagnosed in its early stage, before the focus has perforated the bone. This is the most favorable stage for operation, as the knife can be kept outside the infected area. No iodoform or other antiseptic need be applied to the wound, no stuffing is introduced and the wound can almost invariably be closed without drainage.

The best instrument for dividing the shaft of the bone is Gigli's wire saw. This is passed round the shaft inside the periosteum, which is thoroughly separated all round with a suitable elevator. For introducing the saw behind the bone, I use an instrument which resembles somewhat a broad flattened aneurysm needle with an oblique slit leading into a large eye placed as close as possible to its extremity. After the instrument has been passed behind the bone and the eye made to project on the opposite side between the bone and the periosteum, the loop at the end of the wire saw is hooked into the eye by means of the slit above mentioned. By withdrawing the instrument, the saw is carried behind the bone; the handles are then hooked on, and the bone is sawn across. In young children the bones of the forearm may be snipped across with ordinary bone forceps, but this instrument leaves a bruised and less even section, with the result that there is often some irregularity subsequently where the new bone joins the old. By using Gigli's wire saw, on the other hand, it is often almost impossible, even with a radiograph, to tell, after the new bone has completely developed, where the bone had been divided.

After the diaphysis has been divided beyond one extremity of the lesion, a strong hook is introduced into the medullary canal, and while the divided end is forcibly dragged upward the periosteum is separated from the deep surfaces of the bone until it is freed to a little beyond the opposite limit of the diseased focus. When this level has been reached, Gigli's saw is again applied and the bone divided. The sawn surfaces of the segment of bone removed are carefully examined to make sure that they are free from disease; if not, more bone must be removed.

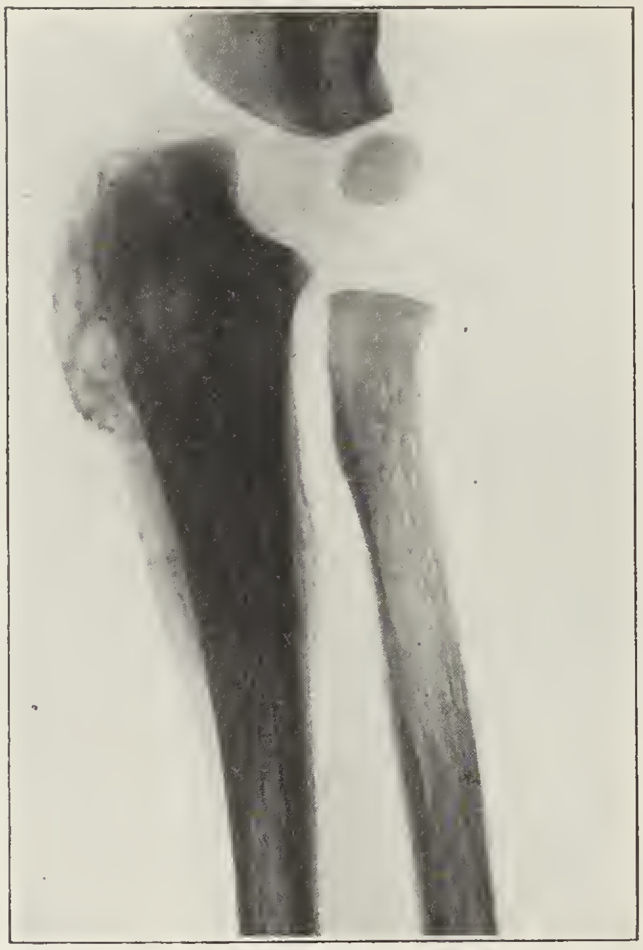

Fig. 8.—Tuberculous focus in upper metaphysis of ulna. Child aged 4½ years. Focus has not yet involved the elbow joint and there is considerable thickening from the deposit of new subperiosteal bone.

If the disease has involved the metaphyseal extremity of the diaphysis the diseased segment must be removed right up to the epiphysis. After sawing across the diaphysis, the separation of the diseased portion from the epiphysis is effected by seizing its divided end and wrenching it away from the epiphysis. When this has been done it will be found that the epiphyseal cartilage, instead of coming away with the diaphysis, is left firmly attached to the epiphysis. This is what one would expect on anatomic grounds; were it otherwise, the radical operation would be contra-indicated on account of the shortening which would result. As long as the disease has not actually involved the epiphyseal cartilage itself, I have found that the above operation does not give rise to any subsequent shortening.

The bleeding from the periosteal tube seldom amounts to more than a general oozing, which soon ceases. Occasionally the main nutrient artery requires to be ligatured. After the bleeding has practically ceased, the periosteal tube is closed with a buried catgut suture. Care is taken to suture carefully the two extremities of the incision in the periosteum in such a way as completely to cover the sawn stumps of the bone. It is this precaution, combined with the use of Gigli's saw, which enables Nature to effect such a remarkably accurate fusion of the new bone with the old stump. In suturing the periosteum, I prefer to use an interrupted rather than a continuous suture, for, should the periosteal tube become overdistended with blood, the tension is removed by some of the blood escaping between the sutures.

A few cutaneous catgut sutures are also employed to stitch the deep fascia, and, in the case of a deep bone such as the radius or fibula, the muscles are also stitched, either along with, or separately from, the periosteal tube. The operation is completed by closing the skin wound with interrupted sutures of silkworm-gut.

AFTER-TREATMENT

The after-treatment consists in keeping the leg quiet for some weeks, after which period it is put up in a suitable splint (or perhaps in plaster of Paris) until the new bone is sufficiently well developed to allow the patient to begin to use the leg. If the disease has not involved the periosteum, the new bone, as already stated, is perfectly reformed in from three to six months. If, on the other hand, the periosteum has been invaded by the disease, the reproduction is less perfect and some deformity is liable to result.

To reach the shaft of the fibula, the dissection should be made along the intermuscular septum (posterior peroneal) which separates the peroneal from the flexor muscles so as to avoid injuring the superficial peroneal nerve which occupies the septum (anterior peroneal) between the peronei and extensors. In resecting the upper half of the diaphysis care must be taken not to injure the common peroneal nerve.

While tuberculous diaphysitis of the tibia is about equally common in its upper and lower halves, in the case of the humerus, on the other hand, it is met with very much more frequently in the lower half of the diaphysis, owing, as already stated, to the fact that the nutrient artery is directed downward. In resecting the lower half of the diaphysis of the humerus, the incision is begun on the back of the external condyle and carried vertically upward, immediately behind the external intermuscular septum as far as the musculospiral groove. The bone is reached by deepening the incision through the fleshy fibers of the inner head of the triceps. The musculospiral (radial) nerve and superior profunda vessels are carefully freed and retracted forward and upward. If the disease extends higher up than the middle of the shaft, some of the fibers of the outer head of the triceps must be divided in an upward and backward direction parallel to and behind the musculospiral nerve, the external cutaneous branches of which are divided. The periosteum is divided along the whole length of the wound, and the bone, after having been divided at the requisite level, is completely freed from the periosteum, and then wrenched away from the lower epiphysis. In spite of the fact that the capsule of the elbow joint is attached to the bone considerably above the level of the epiphyseal cartilage, in wrenching away the diaphysis from the latter, the cavity of the joint is *not opened into,* because the operation is done subperiosteally.

In the after-treatment it is important to keep the periosteal tube on the stretch so as to prevent shortening and angular deformity. This is best done in the manner already described under excision of the elbow, namely, by applying extension to the hand with the limb abducted and the forearm extended and supinated. The elbow should not be bent until the new bone is well formed. .

Another common site of tuberculous diaphysitis is the diaphysis of the radius, especially its lower half.

Resection of the lower third or so of this bone ranks among the commonest of these operations. The incision is commenced a finger's breadth below the dorsoradial tubercle on the back of the lower end of the radius—a tubercle which separates the groove for the extensor carpi radialis brevior from that for the extensor secundi internodii pollicis (pollicis longus)—and is carried vertically up the middle of the lower half of the back of the forearm. The deep fascia, along with the upper part of the posterior annular (dorsal carpal) ligament, is divided, and the outer border of the extensor communis digitorum is identified and freed. To expose the radius, this muscle is retracted inward, while the fleshy bellies of the extensor ossis and extensor primi internodii pollicis are retracted well upward and outward. The fibers of the latter muscle are partly detached from their origin from the back of the radius. The periosteum is now divided longitudinally as far upwards as is necessary. After dividing the radius and hooking it up into the wound, the periosteum is separated from the anterior aspect of the bone, and the latter is wrenched away from the lower epiphysis.

In some cases the disease involves the greater part of the diaphysis of the radius so that the bone has then to be divided immediately below the bicipital tuberosity. In these cases the best plan is to react the lower half or so of the bone in the first place, and then to complete the operation by continuing the dissection upward until the bone is reached above the level of the disease. For this purpose the incision already described is continued upward along the outer border of the extensor digitorum communis, so as to open up freely the intermuscular septum between it and the extensor carpi radialis brevior. In the floor of the wound there are exposed, from below upward, the extensor primi internodii pollicis, the extensor ossis metacarpi pollicis, and finally the supinator brevis. The posterior interosseous vessels emerge between the two latter muscles, while the nerve pierces the supinator brevis a little above its lower border. Forceps are applied to the divided branches of the artery, but care is taken not to injure the nerve.

The important part in the after-treatment is to prevent shortening of the radius during its reformation. Should this occur, the hand will become deviated to the radial side. The best way to prevent this deformity is to apply a pistol splint which will maintain the hand in the position of ulnar flexion, or if necessary, extension may be applied to the hand in the same way as after resection of a portion of the humerus.

While one need have no hesitation in performing the operation of subperiosteal resection for tuberculous diaphysitis of the bones of the leg and forearm, and even of the humerus, in the femur the matter is not so simple because of the serious disability which would result if the new formation of bone were not sufficiently perfect to bear the superincumbent weight of the body. There can be no question that when the disease in the shaft is localized and fairly well circumscribed, the gouging operation should be tried, at any rate in the first instance.

CONCLUSIONS

1. Bone and joint tubercle is particularly common in Scotland, especially among the artisan and poorer classes.

2. This prevalence is due partly to the system of living in old and crowded flats, but more especially to the presence of bovine tuberculosis in the dairy cows, to their inadequate inspection, and to the ignorance of the farmers and public generally regarding the transmission of bovine tuberculosis to the human subject.

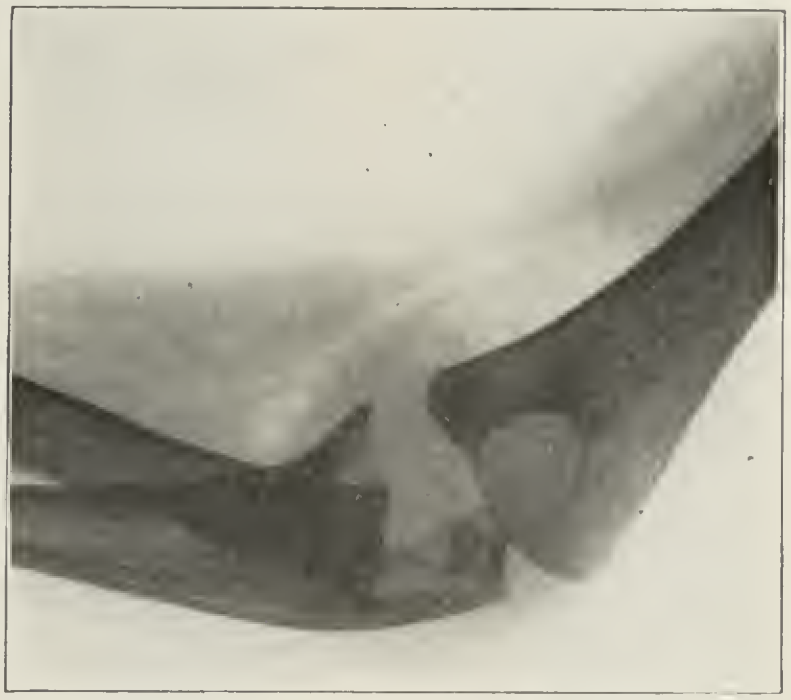

Fig. 9.—Tuberculous focus in upper metaphysis of ulna with secondary invasion of the elbow joint.

3. The chief portals by which the bacilli gain access into the human body are the buccal and pharyngeal tonsils, the lungs and the intestine, the bacilli being carried to the associated lymphatic glands and thence into the blood-stream.

4. The localization of the disease in the bones is accounted for by the distribution of the intra-ossal vessels, and that in children the disease is more frequently met with in the growing ends of the diaphysis (the metaphysis) than in the epiphysis.

5. The joints which are most often and earliest involved secondary to an osseous focus are those which possess small epiphyses, viz., those at the hip and elbow.

6. In the rare instances in which the disease begins in an epiphysis, it does so more especially in those which are relatively large and which begin to ossify early, viz., those at the knee.

7. The reason why primary bone foci are so much more frequently met with at the elbow than at the shoulder or wrist, is that the nutrient arteries of the humerus and bones of the forearm are all directed

toward the elbow, and the same fact probably explains why a tuberculous focus is much more frequently met with in the upper than in the lower metaphysis of the femur.

8. The frequency of tuberculous dactylitis is also accounted for by the blood-supply of the bones.

9. Tuberculous diaphysitis of the long bones proper is probably commoner in children than has hitherto been supposed, and the condition has no doubt often been regarded as syphilitic or as due to a subacute pyogenic infection.

10. A circumscribed focus of tubercle in the metaphysis should, if possible, be removed by operation before the adjacent joint becomes involved; this may be done either by gouging and curetting or by a subperiosteal resection.

11. In the majority of cases tuberculous diaphysitis should be treated by subperiosteal resection rather than by gouging and curetting, except perhaps in the case of the femur.

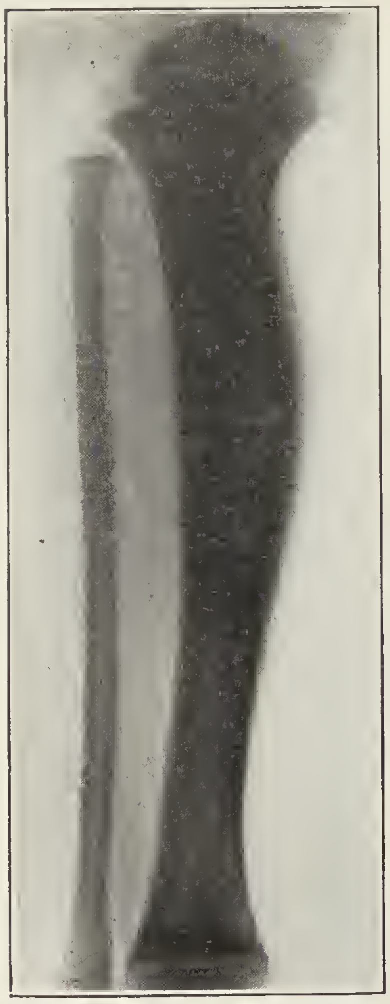

Fig. 10.—Tuberculous diaphysitis of tibia, child aged 3 years.

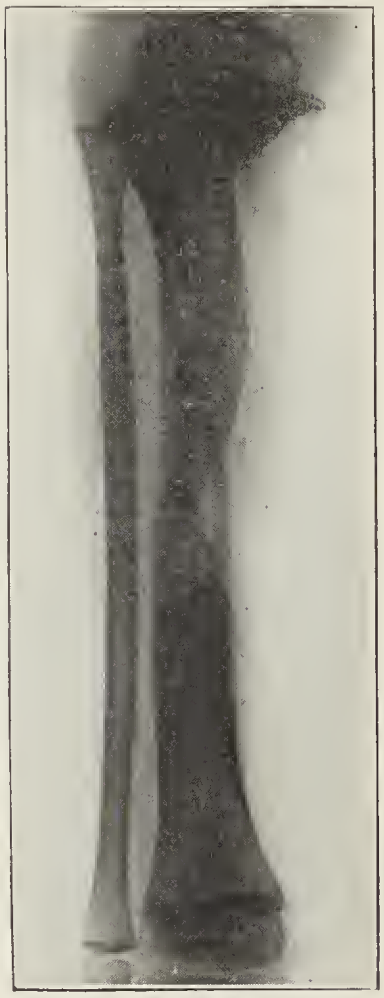

Fig. 11.—Illustration from the same case as in Figure 10. Taken two months after resection of upper two-thirds of the tibia. It shows the formation of the new shaft by the periosteum.

12. If the metaphysis as well as more or less of the diaphysis is involved, and the affected portion of bone is divided and wrenched away from the epiphyseal cartilage, the latter does not come away with the diaphysis but always adheres to the epiphysis.

13. If this operation be undertaken before the periosteum has become invaded by the disease, its bone-forming properties are such that it is capable of completely reproducing the portion of bone which has been removed.

14. In the after-treatment it is advisable to apply extension to the leg in order to keep the periosteal tube on the stretch so that shortening and angular deformity may not occur.

15. In order to obtain a stable weight-bearing leg after excision of the head and neck of the femur for tuberculous disease, the leg should be placed in the after-treatment in the abducted position with the trochanter planted firmly into the acetabulum, and the muscles stitched back over it.

16. In excision of the knee for tuberculous disease, nailing of the tibia to the femur greatly facilitates after-treatment and at the same time insures osseous ankylosis in good position, and the same may be said of nailing the foot to the tibia after excision of the ankle.

17. In excising the elbow for tuberculous disease in children, it is often necessary to combine the operation with subperiosteal resection of a considerable portion either of the humerus or of the bones of the forearm.

9 Great Stuart Street.

THE THREE RULES OF TREATMENT IN ADULT JOINT TUBERCULOSIS *

LEONARD W. ELY, M.D.
DENVER

If a man has appendicitis he goes to a reputable surgeon, receives an opinion, and has his appendix removed. If he consult a dozen surgeons he will get about the same advice from them all. If he has a tuberculous joint or a joint that is thought to be tuberculous, what a predicament is he in? One surgeon would put him to bed, another would immobilize the joint, another would administer tuberculin, another static electricity, another would open, scrape and pack, another would resect, and another would amputate. Some inject iodoform, some formaldehyd solution, some charcoal, some phenol (carbolic acid), some use passive congestion, some would apply a brace, some plaster of Paris.

This is chaos. It is high time that the treatment of adult joint tuberculosis rested on a more stable foundation than empiricism, and I propose to submit three rules for the treatment, which rest, not alone on clinical experience, but on a laboratory examination of the results of other men's work and of my own, and a study of the patients. My material now consists of about eighty specimens.

The first rule is that the treatment of adult tuberculous joints should almost invariably be radical. Painless and useful function in these joints is more or less of an iridescent dream. While in a few of the milder synovial forms the joints may recover under conservative treatment, this is, in the vast majority of instances, hardly worth trying for more than a few months. If the bone is much damaged and if one is sure of the diagnosis, it is better not to try conservative treatment. The spine offers no field, however, for radical treatment.

This statement will doubtless be challenged. Frequently one reads of brilliant results following some form of conservative treatment. I refuse to accept them for the following reasons: 1. The clinical diagnosis of joint tuberculosis is often an extremely difficult matter. My laboratory examination shows about 33 per cent. of error, and I believe that adult joints cured with good function by conservative means are rarely tuberculous. 2. The treatment in the hands of others does not show the results claimed by its author. 3. Joints supposed to be cured conservatively often flare up after a number of years. On the other hand, a tuberculous joint properly treated radically cannot again break out.

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* Read in the Section on Surgery of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

The second rule is that in operating, our aim should be to deprive the joint of function, and the simplest and best way to deprive a joint of function is by a resection. The reason for the location of tuberculosis in the region of the joints is that there are here two tissues which are vulnerable to the tubercle bacillus, namely, the synovia and the red or lymphoid marrow. The presence of these tissues is dependent on function. If function be removed they disappear. If they disappear the disease dies out. The joint tuberculosis gets well because it has no field for existence. Therefore, the object of the resection is, not to remove all the infected tissue, but simply to destroy function in the joint, and thus to cause the disappearance of the lymphoid marrow and of the synovia.

This rule has two great exceptions. In the joints of the tarsus and carpus, no operation can be done which will cause the necessary change in the structure. Therefore, the only hope will be in a resection wide enough to get out every particle of infected tissue, or in an amputation. Partial operations are worse than useless. The other exception is that if the patient's vitality be very low, an amputation will probably be preferable to a resection.

The third rule is that in all operations on tuberculous joints secondary infection must be avoided at all costs. If drains be used they must soon be removed. Scraping and packing tuberculous joints and abscesses should never be practiced.

The reason for this rule is as follows: Pure tuberculosis is what may be termed a selective disease, affecting only certain kinds of tissues, those containing lymphoid and epithelial cells, for instance. As has been said, in the joints it affects only the red or lymphoid marrow and the synovia. Fibrous connective tissues, ligaments, yellow marrow, muscle, etc., are all immune or practically so. If, however, a secondary infection be added, tissues formerly immune become immediately vulnerable, and instead of a strictly localized tuberculous process there is a wide-spread, infiltrated tuberculous area. The dangers of the disease are increased threefold. If a tuberculous joint be opened and drained, it will almost invariably become secondarily infected. When we attempt to provide, by drainage, for the exit of tuberculous material, we actually provide for the entrance of pus germs.

The reason for all the various theories and differences of opinion on joint tuberculosis is really a lack of knowledge of all its aspects except its cause and its clinical features. We know that tuberculosis exists in certain tissues and does not exist in certain other tissues. We believe that the relation of the lymphocytes to the tubercle bacilli is a phagocytic one, but it must seem strange to us that only in those tissues where the lymphocytes or similar cells are found, as for instance, in the lymphoid marrow, can unmixed tuberculosis exist.

It is almost impossible to explain the occurrence of the disease on this hypothesis, or to explain the rationale of radical or of conservative cure, and until we can explain most of the phenomena of the disease and can base our opinions on something more than clinical experience, we shall with difficulty convince our opponents of the truth of our contentions, for one man's clinical experience has about as much value as another's.

The hypothesis of the pathogenesis of joint tuberculosis which I would submit is as follows: The accepted relation of the lymphocyte (or similar cell) to the tubercle bacillus is at least not an invariable one. Let us assume that the lymphoid cell, instead of being the antagonist of the tubercle bacillus, bears the same relation to it that the red blood-cell bears to the plasmodium of malaria. In other words, the lymphoid cell is not the antagonist of the tubercle bacillus, but its prey.

If this hypothesis is correct, few phenomena of joint tuberculosis remain obscure. The bacilli, floating in the blood, are thrown out into the tissues. Where they find cells suitable for their growth, as in the lymphoid marrow and synovia, they thrive; where they do not find such cells, as in the fatty marrow, in the muscles, or in the fibrous tissues, they die. When the lymphoid marrow and synovia disappear from the region of a joint after a successful aseptic resection, the tubercle bacilli have no soil for their growth. If, however, a secondary infection be added, the resulting suppuration provides the necessary supply of cells for the growth of the tubercle bacilli, and the disease may last indefinitely, even in tissues that previously were immune.

The three rules, then, that I would submit for the treatment of joint tuberculosis in the adult are:

1. Almost invariably the treatment should be radical.

2. Its object should usually be to deprive the joint of function. If this be impossible then the operation must be planned to remove every bit of the diseased tissue at whatever cost.

3. Secondary infection should be avoided at all hazards. If it takes place, vigorous effort should be made to overcome it by cupping, bismuth paste injections, etc., before resorting to operation and afterward.

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ABSTRACT OF DISCUSSION

ON PAPERS OF MR. STILES AND DR. ELY

Dr. John B. Murphy, Chicago: The tuberculosis attacks the area that is most active in the process of growth. My patients have been about 90 per cent. adults and 10 per cent. children, which makes an enormous difference in the practical phases of the disease. It gives one an entirely different point of view. Mr. Stiles showed you that the disease began in children almost exclusively in the diaphysis. That is correct for children. In my experience in young children the epiphysis is largely cartilaginous tissue and tuberculosis never primarily attacks cartilage. In adults it rarely ever begins on the shaft side of the epiphyseal line, but practically always in the epiphysis. I am sure Mr. Stiles has had that same experience in adults.

I am going to confine my remarks to the knee-joint. The same changes occur whether it is in the femur or in the tibia. When tuberculosis begins in the shaft side of the epiphyseal line the tendency of the disease is not to involve the joint, and this accounts for the splendid results that Mr. Stiles showed you. On the contrary, when in the adult it begins on the epiphyseal side of the epiphyseal line, the tendency is for the disease to attack the joint later; and that is what occurs in the class of cases referred to by Dr. Ely. So you have two entirely different conditions dependent on the age of the patient.

When there is tuberculosis or any other disease which has destroyed a large portion of the bone, it must be supplanted by some means that will conduct the living osteogenetic elements from one or the other end of the remaining portion of bone or both, if we expect to have in the adult without a periosteum the same reproduction of bone which Mr. Stiles showed you was so beautifully produced in the young from the periosteum.

When there is no periosteum left to reproduce the bone, transplanted bone must be placed in contact with the osteogenetic living elements of the remaining "stumps" and held in contact, if we ever expect to have a reproduction of the bone.

Dr. Ely's proposition is the removal of the tuberculous portion of the joint, and then the production of a bony ankylosis. I would say from my experience that tuberculosis in a child, involving the joint, does not often begin in the joint; it begins in the bone. In children it begins in two places—in the upper end of the shaft and in the synovial membrane—more frequently, however, in the former, and secondarily attacking the synovial membrane.

I have been treating tuberculosis on the expectant plan and in an ambulatory way, and any ambulatory treatment of joint disease in my opinion is a deception; it deceives the surgeon and gives the patient a bad result.

If we maintain the conformation of the limb during the process of the disease, we finally have an ankylosis; then with the limb in good position we have an opportunity of producing a perfectly movable, useful and painless joint through an arthroplasty.

In the resections of the knee-joint the reason we have had such poor results has been the mobility existing between the ends of the bones immediately after operation. If they could be immobilized perfectly we would not have the failures that we have from excision. Now, by just taking off the surface, getting bony approximation and immobilizing the parts by placing between the bones a plate of magnesium, the ultimate results are excellent. There is perfect primary union, the conformation of the limb is preserved, the patella is retained and a subsequent arthroplasty is done for the establishment of a movable joint.

Dr. Thomas W. Huntington, San Francisco: I shall deal only with tuberculous disease of the hip-joint, or something so closely allied to it and in analogy with it that I have not been able to make a differential diagnosis. I have not been satisfied with the results attained by those having widest jurisdiction; and I am not alone in this.

Waldenstrom of Sweden, who has written one of the most exhaustive monographs on this subject, has said definitely that the disease, as it exists to-day, is being treated badly as a rule. He believes that hip-joint cases have not been subjected to operation sufficiently early, and states that we cannot hope for any improvement under the ritualistic plan now in vogue. He looks forward to the time when the family physician and the average surgeon will refer these cases to one who has the courage and conviction to deal with them along the lines which he regards as rational.

I am absolutely in accord with that position. For the past ten years I have devoted considerable time to this subject. Because of untoward circumstances and paucity of material, I have been unable to demonstrate absolutely the truth of the position which I have taken, but I can show to-day in my own environment several cases of hip-joint disease which have gone on to a perfectly movable joint and a useful life without resection or loss of earning capacity on the part of the individual. Many of us here are possibly familiar with the plan which I have advocated and which has been kindly alluded to by Mr. Stiles.

Briefly, the operation consists of tunneling into the neck of the femur by a subtrochanteric route, cleaning out the neck of the bone with a curet, leaving little except the very outer wall or cortex. The remaining cavity is treated along the lines of ordinary surgical procedure. I do not stand in awe of the bugbear of mixed infection, and treat the bone cavity exactly as I treat a wound in the skin or abdomen. Bismuth paste has, in one instance, served a purpose as a bone filler. By this means, a useful limb and a movable joint have, in every instance, resulted without the wearing of any formidable apparatus, without confining the patient in such a manner that he becomes a "leaner" or dependent through life. With Waldenstrom, I wish to insist that this can only happen when these patients are referred to the surgeon at the proper time for an appropriate, and, what I believe to be, a most rational surgical procedure.

Mr. Harold J. Stiles, Edinburgh, Scotland: There is just one point with regard to Dr. Ely's statement which I cannot quite reconcile with his pathology. He tells us that the tubercle occurs especially in two tissues, namely, the red marrow and the synovial membrane, and that these tissues form a food for the tubercle; they are the tissues they seem to especially enjoy; and yet in the same breath he says that it is not necessary to remove all of the diseased synovial membrane. I think it is necessary. If you leave the disease in the synovial membrane it will progress from the membrane to the ligaments, soften the ligaments, and the disease will continue.

Dr. Murphy always throws great light on any pathologic subject or surgical subject which he discusses, and I am deeply indebted to him for his work on the transplantation of bone; and when I get an advanced case, one in which the periosteum has become involved, then I shall certainly plant the bone in the way that he suggests; and if I do so I feel perfectly sure that I will get good results in cases which would otherwise prove unsatisfactory.

There is an anatomic explanation as to why the disease in the adult is liable to begin in the epiphysis, whereas in the child it is apt to begin at the end of the diaphysis. Luxor showed clearly that in the growing bone the nutrient system of arteries was well developed, and the metaphyseal and epiphyseal arteries were much smaller, whereas in the adult the nutrient system of arteries was the smaller and the metaphyseal and epiphyseal arteries were larger.

Then there is just one other little important anatomic point which is interesting. We are all agreed that tuberculosis in children is much more common in the elbow than in the shoulder or wrist. The reason of that again is an anatomic one, in that the nutrient arteries run toward the elbow, whereas they run away from the shoulder joint and the wrist. So that the embolus is much more likely to follow the course of the blood-stream towards the elbow than towards the other joint, and the reason why tuberculosis is so common in the bones of the hands and feet is that here are the distal arteries in the systemic circulation; and these bacilli if not arrested, ultimately come to the small arteries in the distal bones.

Dr. Leonard W. Ely, Denver: Mr. Stiles' point about leaving the synovial membrane although it is food for the tubercle bacillus goes to the root of the whole matter. Here is the state of affairs: When you destroy function in the joint, the synovia disappears, and there is nothing left but fibrous tissue—there is no more synovia. Whether you take it out or not, it simply disappears, as the red marrow does.

The nutrient system of arteries in connection with bone and joint tuberculosis may be disregarded. Nutrient arteries run everywhere in the body. The increased circulation in a part is no cause for tuberculosis. Lack of anastomosis in the vessels of the brain does not predispose the tissues of the brain to tuberculosis. When you explain a condition in the joint you must have an explanation that will hold elsewhere. All arteries end somewhere, but end arteries are not located in the joints alone, and an anastomosis exists in adult bones. As to the disease beginning in the synovia: I am sure that if Dr. Murphy would take his joints to the laboratory and cut them up and look at them through the microscope, he would find that synovial tuberculosis is very frequent.

Of course he wants a movable joint after tuberculosis; so do I; so does everyone; but he cannot get it in an adult. I have watched these cases under all sorts of treatment for years, by those who believed in conservative treatment, and by those who did not. In the end almost all come to resection. If Dr. Murphy would look at these joints under the microscope and find in them, after many years, cheesy tubercles hidden in the fibrous tissue, he would never open them and attempt to restore motion.

Concerning the operation of tunneling the head of the femur, the tuberculosis exists in the synovia and in the marrow. It is diffuse, not discrete. You cannot pick it out as you would a wen. One cannot tell how far the disease has extended, by the x-ray or by any other method; and to attempt to remove that tuberculous tissue with a curet or with any other instrument would be like attempting to clean out cheese from the meshes of a sponge, with a steam shovel. One of the favorite locations of the disease is under the cartilage. This cartilage derives its nutrition from the bone marrow beneath; and when that tissue is disturbed the cartilage is deprived of nutrition, the joint is opened and the disease is diffused.

I am not familiar with Waldenstrom's recent work; but I never saw an authenticated case of tuberculosis in the joint cured by that tunneling operation nor heard of one. Many cases have been reported, but without proof of the diagnosis. Dr. Huntington's classification of "tuberculosis or something allied to it" is not enough. There is nothing "allied" to tuberculosis. The disease is tuberculosis or it is not tuberculosis. If it is tuberculosis, that operation is irrational and will never be a success.

Dr. Harry M. Sherman, San Francisco: Referring to the paper of Mr. Stiles, as regards the location of the infection, for over twenty-five years we have known that in hip-joint tuberculosis the location of the lesion was in the juxta-epiphyseal portion of the diaphysis, that part which is now called the metaphysis; that is, still in the diaphysis. What was true of the hip-joint is probably true of other joints—the lesion occurs in a place where bone is growing. In the hip and elbow, these metaphyseal locations are practically intra-articular. In other joints they are extra-articular. That is, the metaphysis is outside of the point of attachment of the capsule of the joint and the reflexion of the synovial membrane. So that the statement that these conditions are considered nominally epiphyseal I think is a little beside the point. Why the metaphysis should be affected rather than the epiphysis when we are dealing with the bacillus of tuberculosis—which is a non-motile organism, and can only grow where it is carried by the blood or lymph stream—it is impossible to say, unless Dr. Ely's hypothesis should prove to be correct. But, mechanically, it is difficult to see how the bacillus can be carried into a metaphyseal artery and not into an epiphyseal artery. If there is some difference in the receptivity of the tissues in the metaphysis and the epiphysis perhaps an explanation may be found.

Out of several hundred radiographs of people suffering with tuberculosis of the joints, I can produce only a very few which are the duplicates of those which Mr. Stiles showed. In the picture, and as he told it to us, the lesion is not a joint tuberculosis, but it is a lesion in the diaphysis, and its tendency is away from the joint rather than toward it. Hyperplastic periostitis along the diaphysis is very rare in the cases which I have seen, and I have had a radiographic apparatus working on these conditions ever since it became a practical matter. On the contrary, I find that the tendency is to invasion of the joint at a very early time—so early that it is difficult to attack the lesion before the joint has been infected. This has been called especially to my notice in cases of the hip-joint when I have been trying to do a focal operation, which Dr. Ely says is impossible, but which I still think is possible, because it has been done; in these cases in which I thought that I would certainly find an intact synovia and a purely osseous lesion, I have been disappointed in discovering an already infected synovia with the lesion in the bone progressing. The tendency has been for the pathologic process to advance to a synovitis and panarthritis, rather than to progress along the diaphysis, producing a hyperplastic periostitis which Mr. Stiles showed us so beautifully.

Again, it is not at all unlikely that with this eminent authority to back us, we shall be tempted to attack these joints by operative measures rather than to proceed along the old lines of conservatism—conservatism which has given us in not a few instances results which were satisfactory to the patient and to the surgeon, though with a certain loss of time. This is a danger to be guarded against. In this connection it would be most interesting and even imperative to know what is the exact line of cleavage—where the separation between the diaphysis and the epiphyseal cartilage occurs, when the affected diaphysis is pulled out—and whether all of the tuberculous tissue is pulled out with the bone, leaving an intact and unaffected cartilage behind it. Without that knowledge it is not at all unlikely that we surgeons in America, trying to follow in the footsteps of the surgeon from Scotland, may do our patients some harm, because we have not yet learned all of the detail of his technic.

Dr. S. J. Hunkin, San Francisco: I take exception to the remarks of the gentleman from Denver, who would have us believe that all that is necessary to cure tuberculosis in bone is to destroy the function of the joint. Fifteen or twenty years ago I had the unhappiness—due to ignorance—to destroy the function of many tuberculous joints by operations then in vogue. Some of these people are coming to my office from time to time even now with tuberculosis still progressing in the same old areas. I did not get secondary infection in these cases, as some may try to believe, because cultures taken during the time of operation and treatment up to the time of healing showed the wound to be generally sterile. I do not know what kind of tubercle bacteria occur in the high altitudes of Denver. It is possible, of course, that they like peculiar tidbits; that they feed on nothing but red bone marrow and synovial membrane. That is not true, however, of these bacilli in California. They are not so fastidious; they will feed on almost anything in the joint neighborhood; and we find great tumors coming out of the joint, filling up the spaces around the hip-joint, without any breaking down, without any abscess, just simply tuberculomas, and there has been no secondary infection. Certainly tuberculosis in such instances was growing in something beside red bone marrow or synovial membrane. If the purely conservative plan of treatment for tuberculosis of bone is not followed, that is, an exceedingly conservative plan, then in my opinion it is wise to pursue an extremely radical plan, as suggested by Mr. Stiles. There can be no middle ground in this particular. You cannot cure tuberculosis in the joint by "tickling it in the neck," as suggested by my friend from San Francisco, nor by "paring a thin red line," as the gentleman from Denver practices.

ANTITYPHOID VACCINATION *

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The rationality of antityphoid vaccination rests primarily on the fundamental fact that immunity is acquired during an attack of the disease. This immunity is not absolute in every instance. Dreschfeld's figures, referred to by Ricketts and Dick, give 0.7 per cent. recurrences. Recurrences shortly after an attack, however, or within a few years, appear to be rare and these are, on the whole, not so severe as the first attacks. From experimental observation it is known, too, that in animals an active immunity follows the introduction of dead or live typhoid bacilli and that this immunity is associated with and depends on the development of specific antibodies, namely agglutinins, lysins, precipitins and opsonins, in the body of the animal.

On the above facts as a basis Wright in England, in 1896, devised his method of antityphoid vaccination which was used extensively, especially in the South African War. The results were striking, the incidence of the disease being very substantially (50 per cent.) reduced and the mortality, in the cases in which it did occur, was decreased over 50 per cent. Leishman gives the following data: In 6,610 soldiers under similar conditions, who were not vaccinated, there were 187 cases and twenty-six deaths. In 5,473 soldiers vaccinated against typhoid only twenty-one took the disease and two died.

In the United States Army Major Russel,[1] Nelson and Hall,[2] and others, have obtained even more striking results. This is especially true as regards the troops that were mobilized on the Mexican border recently, at which time many thousand soldiers were vaccinated. The fever, so far as available reports indicate, has occurred in only one individual and he had a very mild and short attack. That typhoid fever was present in the camp at the time is known because of its occurrence in the uninoculated. Due allowance should be made, of course, for the rigid sanitary measures carried out, which were, without doubt, important factors also in controling the disease.

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* From the Laboratory of St. Luke's Hospital.

[1] Boston Med. and Surg. Jour., 1911, clxiv, 1.

[2] The Journal A. M. A., Nov. 25, 1911, p. 1759.

Wright at first gave only one injection, but later recommended two about ten or twelve days apart. The first dose, he advises, should contain from 750 million to 1 billion and the second from 1,500 million to 2 billion dead bacilli. In the United States Army the vaccine is used in three doses at ten-day intervals, 500 million in the first and 1 billion in the two subsequent doses.

The results obtained, especially in armies, have been so favorable that naturally the work has been extended to other fields, particularly that of hospital service. At St. Luke's Hospital, for many years past, an occasional case of typhoid has developed among the nurses and it was deemed advisable to administer the vaccine to those of the resident staff, laboratory workers and nurses who desired it. Up to the present time it has been given to ninety-one individuals.

The vaccine was prepared in the laboratory of the hospital from four strains of typhoid bacilli recently isolated from the blood of typhoid patients, and which had been carefully identified by proper cultural and agglutination tests. The bacilli were grown for twenty-four hours on plain agar, then suspended in salt solution and the emulsion standardized. The bacilli were killed by heating to 60 C. for one hour, after which proper tests were made to insure sterility.

The first dose contained 500 million dead bacilli and the second, given after ten or twelve days, contained 1 billion. The injections were all made subcutaneously on the arm at a point just over the lateral head of the triceps muscle. The reaction is manifested by local and general phenomena. The local reaction occurs in all cases and begins in from two to four hours. It consists of tenderness, heat, swelling and redness. The intensity varies considerably. In most cases the redness and swelling cover an area around the site of injection several centimeters across. Occasionally it is far more extensive, in a few cases extending from the elbow nearly to the shoulder and completely encircling the arm.

In about one-half the individuals tenderness of the axillary glands was noted. The local changes subside usually after from two to four days, but not infrequently slight tenderness, redness and a little induration persist longer. The general reaction begins usually some hours after the local reaction, reaching its height in from eight to twelve hours. In some individuals it is scarcely noticeable, in others quite severe. In general the reactions after the first dose were more severe, though some exceptions were noted. The symptoms complained of most frequently are a feeling of depression, some headache, hot, dry skin, restlessness, insomnia and, sometimes, chilliness and nausea. The temperature rarely rose over a degree or two. In two instances 102 F. was noted within the first twenty-four hours following the injection, but it was not absolutely certain that there were not some other contributing factors. As a rule, on the following day the individuals again felt quite well, and no serious complications appeared in any instance.

While on the whole the intensity of the reaction, both general and local, was fairly uniform, a few rather striking variations were noted. Some individuals, as above stated, manifested extensive local reaction; others had chills with more or less severe depression and in a few instances there was nausea. Such variations, I believe, are entirely individual phenomena and are probably manifestations of hypersusceptibility caused by unknown factors.

About two weeks following the last dose of vaccine the serum from a number of individuals was tested for the presence of agglutinins. In all a typical Widal reaction was obtained, the agglutination being complete in from thirty to forty-five minutes in dilutions as high as 1 to 120. Higher dilutions were not used. Attention may here be called to the fact that a positive agglutination test in an individual who has received the antityphoid vaccine is of no value whatever. Since the vaccine is now being used more and more it will be important henceforth for clinicians, when utilizing the Widal test in suspected typhoid cases, to inquire whether or not the patient has had, at some previous time, the antityphoid vaccine.

One individual, a nurse on regular duty at the hospital, a few days following the first injection of vaccine developed typhoid fever. Some weeks previously another nurse had acquired the disease in the hospital, and, inasmuch as it was during the typhoid season, it was not surprising that the disease appeared in an individual during the course of the administration of the vaccine. Two weeks before receiving the vaccine she was on service in a ward caring for a number of typhoid patients. She reacted to the vaccine with slight local redness, edema and tenderness and with a temperature twelve hours later of 100 F. There was no tenderness of the axillary glands and the local reaction rapidly subsided. Excepting the temperature there were no general symptoms and, according to her statement, she felt entirely well following the injection. On the seventh day malaise, chills and fever (102.5 F.) appeared and on the next day her temperature was 104 F. A day or two later a blood culture gave a pure growth of typhoid bacilli; the leukocyte count was persistently low. The spleen later was palpable and a few indistinct rose spots appeared. The Widal test was positive, but of course this had no significance. The temperature remained between 102 and 104 F. for ten days, then during the next five days descended to normal where it remained permanently. In every way the course was mild; there was no relapse and the patient was able to leave the hospital twenty-three days after the onset.

It has been shown by Wright that immediately after the injection there occurs a decrease in the amount of antibodies normally present in the body. This phenomenon he called the negative phase and during this period, according to him, the individual is more susceptible to the disease. There follows, after a few days, the so-called positive phase at which time the specific antibodies increase in amount until approximately the tenth day when the maximum is reached. The amount remains about constant for a time and then slowly decreases to the normal, which is reached usually after a period of weeks or months. It should be pointed out that this phenomenon, which may be represented in the form of a curve known as the antibody curve, corresponds in general to the curve obtained during and following an attack of the disease, with the exception that the antibody reaction in the latter case is usually more intense.

The question arises as to whether the occurrence of typhoid fever in the above-mentioned individual following the vaccine is an illustration of increased susceptibility during the negative phase.[3] It is possible that this person was already harboring bacilli and the negative phase was sufficient to permit them to gain the upper hand and precipitate the symptoms. Should this be true it would illustrate Wright's contention that the vaccine should not be given during an epidemic. During the typhoid season a coincidence might so easily occur that one individual case such as this can be of little value for or against the assumption of hypersusceptibility during the negative phase.

Experience has been rather against the idea that hypersusceptibility exists following the injections. Its only support, apparently, is Wright's work years ago in the English army, at which time he gave only one or two very large doses. These large doses could very well have been responsible for such results. The experience in the U. S. Army does not seem to corroborate Wright's contentions, and the report of Cullinan in Dublin (quoted by Major Russel), which bears directly on this point, speaks strongly against it. He inoculated during an epidemic, and of the uninoculated individuals 14.9 per cent. acquired the disease while only 1.36 per cent. of the inoculated were striken.

The fact is significant that following the vaccine the disease in this nurse who acquired typhoid ran a mild course, and in duration was only about one-half the average. This is in accord with the report of a number of cases, which have occurred during or shortly after the inoculation. Richardson and Spooner[4] mention two cases occurring in nurses, one of whom showed symptoms shortly after the first inoculation. The course was very mild, lasting only about two weeks. At the time there was an epidemic among the nurses. The second case appeared in a nurse who was taking care of two very sick typhoid patients. She had had three injections and three days following the last she developed mild symptoms of typhoid. Her temperature never was above 102.5 F. and she made an uninterrupted recovery. These authors[4] believe that there is no substantial basis for the belief in hypersusceptibility during the negative phase. Attention should be called to the fact that they used small doses beginning with 50 million and increasing to 300 or 400 million. It may be questionable whether these doses were large enough, especially in view of the fact that the agglutinins after their inoculations were not high, being only 1 to 50 in 80 per cent. of the cases. Russel reports similar instances in the Army.

It is known that the immunity following the disease exists much longer than the period of time during which the antibodies are found in the blood. This fact has been explained by assuming that the tissues acquire the power during the disease of rapidly reacting to the same infection, should it subsequently be acquired, in such a way that large amounts of antibodies will be quickly produced and will overwhelm the invading organisms before they gain sufficient headway to cause either any symptoms at all or only a mild attack. It is possible, therefore, to understand why the immunity acquired during an attack of the disease may be at least relative during the remainder of life, though probably slowly decreasing in intensity.

This leads to the question of the duration of immunity acquired by the introduction of the dead bacilli into the body. The data on this point obtained by actual observation do not cover a long period of time. Wright states that the immunity lasts about two years. It probably lasts longer. Theoretically one should expect a relative immunity for the remainder of life, even though it might be slight. In order to decide this point careful observations are needed covering a long period of time.

Perhaps a word of warning should be uttered concerning the present method of administration. Thus far, though many individuals have been inoculated, no serious results have been reported. It is a fact, however, that the vaccine has heretofore been given chiefly to young and healthy army men who have passed a thorough physical examination. We should remember that any substance that will, in a healthy individual, cause headache, nausea, insomnia and an increase of temperature of two or sometimes three degrees, etc., as the typhoid vaccine may do in the doses used, must be considered a powerful toxin. Consequently it is reasonable to assume that certain changes such as myocardial degeneration, vascular changes, kidney degenerations, etc., might easily result, though they may be manifested only at a much later period of life. And perhaps the consequences might be much more severe should the vaccine be injected into an individual who was at the time suffering from renal, cardiac or other lesions. At any rate, it would seem inadvisable to use the vaccine previous to a careful physical examination.

I believe it advisable also to modify the administration of the vaccine in such a way as to avoid the occasional rather severe reactions. It would seem reasonable to begin with a small dose, giving about 250 million or even less. Such a dose causes some local reaction, but almost no general reaction. The second dose may then be double the first (500,000,000) and the third 1 billion. If it should prove necessary more doses might be given. It is important to avoid severe reactions for several reasons. If a smaller initial dose is given the local soreness will be less and the general discomfort, headache, depression, etc., will largely be obviated. It would therefore not be necessary for the individual to stop work for a period (twenty-four hours) following the injection of the relatively large doses now given, as it now sometimes is. Should there be any truth in Wright's negative phase theory, a small initial dose would tend to eliminate whatever danger might exist in this respect.

As to the possibilities of antityphoid vaccination it is evident that it will find its greatest usefulness in connection with large gatherings of men like the army, especially under conditions in which the water- and food-supply cannot be carefully supervised; also in connection with institutions of various kinds, colleges and universities and especially hospitals. To those who have any regular association with typhoid patients its administration would seem advisable. This includes nurses, physicians, certain hospital employees, laboratory workers and the like. In cities where an epidemic is raging its wholesale use might be indicated, and where one member of a family has acquired the disease, it might seem rational to vaccinate the entire household.

Finally, it should not be assumed for an instant that, because favorable results have been obtained with antityphoid vaccine, we can be less vigilant in our sanitary measures directed against the spread of this disease.

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[3] The possibility of acquiring the disease from living bacilli in the vaccine may be mentioned. The vaccine used in this instance after heating had been tested on three successive days just previous to the injection. Several drops of the vaccine (without antiseptic) was introduced into the culture tubes, and in no instance did any bacterial growth appear after incubation. The same supply of vaccine was also tested several days later and found absolutely sterile. Again, this individual was inoculated at the same time and with the same vaccine as about sixty other persons, none of which acquired the disease. Furthermore, it is very doubtful if typhoid fever can be caused by subcutaneous injections of live bacilli.

[4] Richardson and Spooner: Boston Med. and Surg. Jour., 1911, clxiv, 8.

THE SYMPTOMATOLOGY AND DIAGNOSIS OF ANGINA PECTORIS

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Angina pectoris is a symptom, or rather a symptom-complex, characterized by paroxysmal attacks of pain, which usually radiate characteristically, and by sudden death, or the fear of death. It appears usually after the age of 40, and occurs more frequently in men than in women.

It may be divided for purposes of description into two forms: an organic angina and a functional angina, or a form with and a form without appreciable organic alteration. The latter has been further divided into neurotic, neurasthenic, reflex, hysterical, toxic and other types, all sometimes called pseudo-angina; but these terms are vague, and, lacking an organic origin so far as is known, may be grouped under the one heading, functional angina. It is apparently agreed now that the term "pseudo-angina" should be dropped, "since the basic features of all forms are the same" (Osler), and as Mackenzie says, why should a heart pain be called a pseudo-angina any more than a stomach pain, pseudo-gastralgia?

The cardinal features of an attack of angina are: pain, which usually radiates; a sense of constriction; and sudden death or the fear of impending death. The attacks are induced ordinarily by extra effort of some sort, mental or physical. Physical exertion is the most frequent exciting cause, and walking rapidly against the wind, especially after meals, will often bring on an attack in one who is susceptible. Worry and anger, coldness and dampness, and distention of the stomach may also incite the attack. Occasionally it is spontaneous, coming on without any apparent reason while the patient is resting quitely in bed or on a couch, but this is more likely to be the case in functional angina of nervous origin, or in the later stages of organic angina.

The onset is, as a rule, exceedingly sudden, the attack coming without warning immediately after exertion; or its approach may be heralded by tingling, numbness or pain in an extremity or in any part of the body.

No symptom of the attack is constant in character. In different individuals and in different attacks in the same individual the symptoms may vary considerably. There is a painless form of angina, "angina sine dolore," first described by Sir William Gairdner, but pain is almost always present in some degree, from a feeling of uneasiness to intense and terrific agony. The pain is usually substernal, a little to the left or the right of the sternum, or rarely behind the apex of the heart. It is usually sharp and agonizing and associated with a sense of constricton which is terrific, vise-like and overpowering. This sense of constriction is said by Mackenzie to be due to powerful contraction of the intercostal muscles, which he speaks of as due to a visceromotor reflex. The pain may radiate over the entire distribution of the brachial plexus, or to some of its individual portions, into the neck and left axilla, as a rule, or into the left shoulder and down the arm to the elbow or the wrist, or to the tip of the little finger, or the little and ring fingers, following the distribution of the ulnar nerve, or even into all the fingers. The pain may radiate to both arms or rarely to the right arm alone. It may radiate to any other portion of the body, to the abdomen or legs, simulating the gastric crisis of tabes or an attack of intermittent claudication, which occurs when the large arteries of the lower extremities are sclerosed. The pain may originate in other parts of the body and gradually approach and persist over the heart. Sometimes there is no radiation, or in the milder attacks the pain is not so severe and there may be only a slight sense of weight or constriction or numbness in the precordial region. The seat of the pain has been located by Henry Head in the right or left auricle, or ventricle, or in the aorta, according to the part of the chest to which it is referred. Various theories to account for the pain have been brought forward, but in the main they may be divided into two classes; one based on ischemia of the cardiac muscle, the other on some inflammatory process of the cardiac plexus of nerves. A reasonable theory that needs further elucidation, however, was brought forward by Otto May, who doubts the mechanical origin of cardiac pain and thinks it due to some chemical change in the myocardium. Yet, whatever the explanation, "pain is the great central fact" and is so severe that the individual is, as a rule, struck dumb and motionless and fears that he may die.

In organic angina the patient usually stands motionless till the attack passes, leaning for support on anything in reach; he may kneel down; rarely does he lie down, though Mackenzie says he may roll on the floor in agony. As a rule, however, the pain is increased by lying down (Huchard).

Consciousness is usually preserved but may be lost for a moment. The expression is anxious, the face pale and drawn, and a cold perspiration breaks out on the forehead. There may be dyspnea or cardiac asthma, but ordinarily the respiration is unaffected during organic angina. Osler says a man may die from angina without any change in his respiratory function other than abrupt cessation. Possibly the angina, the dyspnea and the cardiac asthma are all symptoms absolutely distinct. At any rate, the respiration during an attack of angina may be so irregular and shallow as to cause those present to fear the approach of death. Often the patient is simply holding his breath, not breathing, and under these circumstances the attack frequently passes with a deep inspiration.

The heart action may be disturbed in both organic and functional angina, and cardiac weakness is the rule, especially when there is myocardial insufficiency, though not necessarily in all organic anginas, for the cardiac action and the pulse may be perfectly normal in severe attacks of organic angina.

The pulse may be frequent or infrequent, regular or irregular, and is often unequal, the radial pulse on one side being smaller than on the other, with or without aneurysm of the aorta, and a previous arhythmia may disappear during the attack (Von Neusser).

The blood-pressure is commonly supposed to be increased during the attack, and often is, but this too varies considerably. In twelve cases in which Forschheimer studied the blood-pressure, it was normal in one, low in seven and increased in four. Mackenzie has never found any evidence of vascular spasm, or had any difficulty in getting sphygmographic tracings on account of the smallness of the pulse, yet Theodore Janeway says: "Well-marked hypertension is important evidence in the diagnosis of true angina."

In the cases which I have observed hypertension was the rule, and in one case I have been able to record the pressure at frequent intervals over an extended period preceding, during and following the attacks. In this patient the attacks generally came on with a rapid and steady rise in the systolic pressure from about 130 to 180, 190 or 200, and then on the administration of amyl nitrite or nitroglycerin as quickly came down with a subsidence of the pain and constriction. Again, in the same patient, there were attacks without any increase in blood-pressure, though the symptoms were not so severe as when there was hypertension. At other times this patient had a systolic pressure or 160 to 180 without experiencing any inconvenience. Yet a simple increase in aortic pressure would not of itself be sufficient to cause an anginal attack, occurring, as it does so often, without pain.

The duration of the attack in organic angina is usually a few seconds or a few minutes, but attacks have been reported of unusual length and severity, which, resulting in death, on autopsy were found to be due to thrombosis of a coronary artery (Gibson, Herrick, Morrison).

Uneasy, painful sensations or sensitiveness of the skin may last some time after the acute spasm has subsided, and the attacks may succeed each other with great rapidity, until an almost permanent status anginosus develops and death occurs in one of the attacks (Osler). The susceptibility to these frequently recurring attacks may be due to a repetition of the cause in the heart itself, or, as explained by Mackenzie, to an irritable focus in the spinal cord, which has been violently stimulated by the visceral shock, so that this portion of the cord may remain for a time in an overexcitable state, setting up further attacks of angina with very little or no provocation. Following several severe attacks in rather quick succession, I have seen the succeeding attacks, extending over a period of some months, gradually diminish in severity and frequency, and I am inclined to accept the theory that there may have been an irritable focus in the cord, which in this instance gradually recovered its tone.

After a severe attack the patient is generally greatly prostrated, requiring a day or so in which to recuperate. In other instances of typical coronary disease — the attacks following exertion—a man may go about his business at once without any particular discomfort, only stopping motionless till the attack passes. Another may have an attack in the morning on walking up hill or against the wind, and may not have another attack all day though continuing to walk and to exert himself, the heart having apparently regained control or tone for the time being.

I have seen one man subject to attacks of angina who, on starting out for a day's hunting, would have an attack before walking one hundred yards and would have to stop and rest, but then he could go on all day tramping across country without further inconvenience.

As time goes on, however, in organic disease the attacks are likely to become more frequent and more severe, the patient finally succumbing in an attack. Death may occur with the first attack, or with the second or in one of a series of rapidly recurring attacks. Sometimes death comes gradually, or the patient may go on for years with coronary angina, apparently none the worse except when the attacks come on, dying eventually of some intercurrent malady. In disease of one coronary only there is of course the possibility of the development of a collateral circulation, and the attacks have been know to disappear with the development of free mitral insufficiency (Byron Bramwell).

The sudden death has been a cause of much speculation, but no satisfactory explanation of its mechanism has been made. Osler says that it is the quickest death we see, and that it must be a vagal death, a sudden inhibition of the respiratory center in the medulla. Huchard tells of a man who literally died standing before he had time to fall, being seen to totter and being caught by a bystander, who discovered him to be already dead. Others fall as if struck by lightning; others die in bed during the night. No doubt many unexplained cases of sudden death may be due to an unrecognized angina.

The diagnosis is not difficult. As a rule it is easily differentiated from other diseases, such as biliary, pancreatic or renal colic, but the diagnosis between organic and functional angina is sometimes quite difficult. The necessity for the differentiation is appreciated when one realizes that organic angina nearly always terminates sooner or later in sudden death, while functional angina terminates nearly always in recovery. Death during an attack of angina does occur without any obvious sign of disease of the heart or blood-vessels having been recognized during life or being found on autopsy, but in such an instance there may have been some unrecognized structural change in the heart or blood-vessels.

It may be that there is no angina without some organic change in the cardiovascular system, and that the functional form is merely a milder form of organic angina. Osler divides angina into three classes or grades: a mildest form, *les formes frustes* of the French; a mild form, or angina minor; and a severe form, or angina major. But in any event two distinct classes, the one dangerous, the other not, have been recognized since the time of Heberden, who first described angina and gave it its name.

The physical characteristics of the attacks in organic and functional angina may closely resemble each other. In functional angina the attacks may be very severe and exactly simulate those in organic angina, but there are certain associated phenomena which aid in the differentiation.

Functional angina occurs more frequently in women, and in earlier life. It may occur at any age. The onset is frequently spontaneous, without exertion or any apparent exciting cause, often recurring at the same time in the day or associated with certain actions, defecation for instance, and having certain nervous or vasomotor symptoms ushering in the attack. There may be a general or local vasoconstriction or vasodilatation; the former with cold hands and feet and cyanosis of the lips and finger nails, the latter with forcible heart action and wide-spread throbbing of the arteries. Numbness, tingling and weakness may be alike in both organic and functional angina, but in functional angina the pain is apt to be less severe, the appearance is agitated and the duration longer. Nothnagel, in speaking of what he calls vasomotor angina, says that the anginal symptoms are of secondary origin, and are brought on by a very general spasm of the arteries. Neurasthenia and hysteria are often associated with the functional form.

In a patient whom I have had under observation and who in the beginning suffered several very severe attacks of angina, since when there have been many attacks of a milder character and gradually diminishing in frequency and severity, cyanosis appeared with the attacks, first in the lips and finger-nails, and spread quickly over the entire face, the neck, the upper part of the chest and down the arms, the left arm more than the right, and persisted for some hours after the acute anginal attack had subsided, disappearing gradually. In these attacks the hands and feet were cold, the nervous shock intense and the prostration extreme. They were sometimes associated with a strong full pulse and high tension, at other times the pulse was weak and irregular. The respiration was apparently not affected except in the very severe early attacks when there was some dyspnea and the breathing was at times labored, at others shallow. The first attacks were sudden, spontaneous and unassociated with any exertion or effort of any kind, mental or physical, and there was no digestive disturbance. Later there was considerable digestive disturbance, which generally aggravated the attacks.

This patient has never had any physical signs of cardiac or vascular disease. Before the onset of the anginal attacks an oculist found it impossible to fit her with glasses, saying that there was a spasmodic condition of the blood-vessels of the retina, which so affected the eye that glasses satisfactory one day were unsatisfactory and had to be changed the next. This angina was, I believe, functional and of nervous origin, but I cannot explain the connection.

Angina due to tobacco, alcohol, tea, coffee, malaria, influenza and other infectious diseases, the so-called toxic form, is rare, and can be diagnosed usually from the history of the case. Every year several cases due to excessive cigarette smoking are seen in the Emergency Hospital Chest Clinic. The onset in these cases is spontaneous as a rule and the pain not so severe, but distinct. The attacks frequently and usually last several hours and are associated with cardiac dilatation, arhythmia, tachycardia and palpitation.

The diagnosis of organic angina is plain when, given a history of anginal attacks in an elderly individual, there are present also any physical signs of cardiac or arterial disease, especially aortitis or aortic insufficiency, and when there is also a history of syphilis in earlier life; but when there is no evidence of any change in the heart and arteries, one must rely on the history of the case, the character of the attack, the exciting cause, the onset, the duration, the appearance of the patient, the presence or absence of vasomotor symptoms or associated symptoms. Even then there will sometimes be great difficulty in deciding and autopsy sometimes proves an organic angina when there were no physical signs of cardiac or vascular disease, but observation will accomplish a great deal and time proves much.

The Wyoming.

A STUDY OF THE CONVALESCENT CARRIERS OF TYPHOID [*]

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The reason for the study of this subject is the well-known menace of typhoid carriers to the community. The following observations were made on patients during convalescence, just before discharge from the hospital, to ascertain what proportion were carriers at that time.

In making the investigation, the feces, urine, saliva, and, in male patients, the prostatic fluid, were examined. The examination of the latter fluid was suggested to us by the report of Marchildon,[1] founded on two cases of typhoid prostatitis and seminal vesiculitis at autopsy.

In addition to the routine examination mentioned above, we thought it advisable to study the blood in typhoid convalescents. This study, taking into consideration the opsonic index, Widal reaction, the white blood-cell and differential count, was made in order to determine their relation, if any, to the carrier.

PREVIOUS REPORTS ON CARRIERS

A great deal of attention has been drawn to carriers in recent years from the fact that so many epidemics have been definitely traced to them. They were generally of the food-purveying or food-preparing classes.

Horton Smith, in his Gouldstonian lectures in 1900, was the first to suggest the advisability of studying the excretions of ex-typhoid patients as a possible cause of outbreaks of epidemics. Because of the great suffering of the victims and the many deaths among them, the carrier becomes a terrifying, although an unintentional, enemy of society.

Park,[2] basing his conclusions on the investigation of fifty-two patients examined eight months after recovery, thinks that 2 per cent. of all typhoid patients become chronic carriers.

Frosch[3] gives a tabulation of 6,708 cases, in which 310, or 4.62 per cent., continued to excrete bacilli for over ten weeks after recovery.

Graham Overlander and Dailey[4] found bacilli in the feces of eleven, or 16.9 per cent. of sixty-five patients, ten days previous to their discharge from the hospital.

Semple and Greig found that 11.6 per cent. of eighty-six typhoid convalescents discharged typhoid bacilli in their feces for over six weeks.

Klinger[5] was able to trace to their source 1,397 cases, or 36 per cent. of the entire number of cases investigated. In 1,272 cases the typhoid convalescent carrier was found to be the cause, and in 125 cases, the healthy carrier. Considering all patients as chronic carriers in whom the bacillus had been demonstrated for at least three months, it is found that out of 431 carriers, 211 were temporary and 220 chronic carriers. In thirty of the chronic carriers, cholecystitis was present. The ages of the carriers in the two classes were also markedly different; the temporary carriers were mostly young; the chronic, old or middle-aged. This class also contained many weakly individuals and twenty-five lunatics. Of 222 chronic carriers, thirty continued to pass bacilli for six months, fifty-five for a year, sixty-four for two years and eighty-one for four and one half years. Postmortem examinations were made on three of ten chronic carriers; the supposition that the gall-bladder was the breeding-place of the bacilli was confirmed.

In 1902, Conradi and Von Drigalski found typhoid bacilli in the stools of persons who had not had the fever, but had been in contact with people who had the disease. Roscoe[7] reports an outbreak of twelve cases in an insane hospital, due to contact with a carrier who had never had typhoid.

Davies[8] found that in five of seven examinations of the feces of a carrier, no bacilli were found, and of these, four were successive from January 20 to March 14,

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[*] From the laboratory of the City Pathologist of St. Louis.

[*] Read before the Fulton County Medical Society, Atlanta, Ga., Nov. 16, 1911.

[1] Marchildon: Am. Jour. Med. Sc., July, 1910; abstr. in The Journal A. M. A., July 23, 1910, p. 349.

[2] Park: The Journal A. M. A., Sept. 19, 1908, p. 981.

[3] Frosch: Klin. Jahrb., Jena, 1908, xix, 537.

[4] Overlander, G., and Dailey: Boston Med. and Surg. Jour., Jan. 14, 1909, p. 38.

[5] Klinger: An Epidemic in South Germany, Translation and Review by Captain Black, Jour. Roy. Army Med. Corps, January, 1910.

[7] Roscoe: Lancet, London, 1909, xvii, 1137.

[8] Davies: Proc. Royal Sc. Med., 1908, epidemiologic section, p. 224.

1911, indicating the intermittency of the excretion of typhoid bacilli by carriers.

Kayser[9] reports that in Strasburg, during the years of 1901 to 1905, 13.5 per cent. of all cases of typhoid were traced to six typhoid carriers, all of whom were women and gave histories of having had typhoid from one to twenty-seven years before.

OPSONINS

Gaehtgens[10] has found that the opsonic index returns to normal in a few months after typhoid, unless the person becomes a chronic carrier, in which case it remains high. Hamilton,[11] following the suggestion of Gaehtgens, tested the opsonic indices of seven carriers having gall-bladder disease, and found high opsonic indices. Stone[12] says: "During convalescence and afterward the opsonic index is relatively high. During the first few weeks of the fever the index is increased to 1.5 to 3.5. There is generally a slight decline during convalescence, but high indices may be obtained during this time. A high index, from 2 to 3, is as a rule persistent for months after an attack."

AGGLUTININS

It is generally understood that during the second or third week of typhoid fever the agglutinins are increased so that, on an average, the serum will agglutinate typhoid bacilli in dilutions of 1 to 50, 1 to 100 or 1 to 200, sometimes as high as 1 to 400. Stone[12] states that after the decline of the disease a rapid decrease of agglutinins ensues, the average being 1 to 60 or 1 to 80, and that for a few months to one year or longer this value remains low at about 1 to 40 or 1 to 60. Leishman and Harrison,[13] quoted by Stone, however, refer to one patient whose serum, six months after recovery, agglutinated the typhoid bacillus in dilutions of 1 to 1,000.

LEUKOCYTES

The leukocytes in typhoid, as a rule, are decreased after the first few days. The leukocytes have been thoroughly studied by O. Nageli. His conclusions, as quoted by Sahli,[14] are as follows:

> First stage or ascending fever curve: Usually a neutrophilic leukocytosis which soon diminishes, eosinophils entirely or almost absent. Moderate diminution of lymphocytes.
>
> Second stage: Neutrophils and lymphocytes diminished still farther; lymphocytes may be somewhat increased toward the end of fastigium.
>
> Third stage or remission: The lymphocytes are frequently increased and sometimes decidedly so; the neutrophils are diminished; the eosinophils are beginning to reappear. In adults the lymphocytes may remain few in number.
>
> Fourth stage or descending fever curve: The neutrophils are more diminished. Lymphocytes considerably increased; eosinophils are increased.

After the fever disappears, neutrophils increase, the lymphocytes are very abundant, and the eosinophils increase.

In convalescence after typhoid a high percentage of lymphocytes is thought to exist; the opsonic index and the agglutinating power of the serum vary considerably. This, then, is the question: Do a very large number of lymphocytes in the differential count, a leukopenia or high opsonic index and agglutination on the part of the serum have any relation to the carrier at the time of his discharge from the hospital, or do these depend on the length or severity of the disease or some other factors? This we are trying to determine.

GENERAL SURVEY AND TECHNIC EMPLOYED

In this series of cases we endeavored to examine every excretion and secretion which could be expected to contain typhoid organisms and which, in any way, could be excreted and thus get into the outside world and be a source of infection.

Each patient was examined at least twice, some more frequently, and, although examinations were made in more cases than we present here, we record only the cases that were proved to be typhoid by laboratory methods.

Different mediums were tried out. We were accustomed to the malachite green, Conradi's, von Drigalski's and that of Endo, but were more or less disappointed and dissatisfied with the use of these mediums, as they depend entirely on the color reaction. So finally, our preliminary plating was done on the semisolid Hesse medium as modified by Stokes and Hachtel,[15] which gives good color reaction and the evidence of motility. This worked beautifully, a colony of typhoid bacilli giving a pale pinkish large colony, while the colon was usually small and always a deeper red.

This medium also has its disadvantages. The motile colon bacillus is hard to differentiate by this medium, so further tests have to be carried out. Other confusing organisms are the *Bacillus pyocyaneus, Bacillus alkaligenes* and *Bacillus proteus vulgaris*. Of course, all cocci and non-motile bacilli give very small colonies, and the above bacilli, except the *proteus*, give large, rather bluish colonies, instead of the large pinkish ones which the typhoid bacillus exhibits and are consequently largely eliminated by the plating with the semisolid, colored, sugar medium. After studying our tables and results, however, we have concluded that although for urine and prostatic fluids we prefer the semisolid medium, for the examination of feces which contain large numbers of various motile bacilli, we could use a solid medium, such as the Endo, to better advantage. Although, personally, we found that this medium was best adapted for our purposes in the urine, saliva and prostatic fluids, we are free to admit that to make any of the differential mediums useful, one must gain experience in interpreting that particular reaction of the organism studied on the medium employed.

To test out the organism further it was stained by Gram's method and grown in glucose-agar stab, litmus milk, milk, bouillon, potato and for the indol reaction; getting typical characteristics in all of these tests, we finally determined the agglutinability of it by an immune serum typhoid. This, of course, necessitated a large amount of work, taking into consideration the number of examinations made. Occasionally, feces or urine of typhoid patients obtained during the course of the disease, were examined as a control for our methods.

We examined the prostatic secretions of nineteen convalescents; four of the male patients were not examined because bacilli were found in the urine at the time of their release from the hospital. One left the hospital before notifying us and two were under 6 years of age. In one case, we isolated the paratyphoid A from the prostatic secretion. It is noteworthy also that we had previously isolated the bacillus from the blood (Case 3, Table 1). This patient gave a negative Widal for typhoid bacillus up to the time of his vaccination by the killed typhoid organisms, which his clinician deemed wise to give him because of a prolonged convalescence. After the vaccination the Widal test was positive.

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[9] Kayser, quoted by Park: THE JOURNAL A. M. A., Sept. 19, 1908, p. 981.

[10] Gaehtgens: Deutsch. med. Wchnschr., 1909, xxxv, 1337.

[11] Hamilton: THE JOURNAL A. M. A., Feb. 26, 1910, p. 704.

[12] Stone: THE JOURNAL A. M. A., Oct. 16, 1909, p. 1253.

[13] Leishman and Harrison, quoted by Stone: THE JOURNAL A. M. A., Oct. 16, 1909, p. 1253.

[14] Sahli: Treatise on Diagnostic Methods of Examination, 1906, p. 46.

[15] Stokes and Hachtel: Arch. Int. Med., 1910, vi, 121.

As a harboring place for bacilli, we think the prostate gland deserves consideration. It is in such position and so constituted anatomically as to be a feeder of bacilli to the urine. Some cases of chronic prostatitis might be traced to such organisms of hematogenous origin.

The fact that 20.5 per cent. of the patients examined were carriers does not prove that these people are chronic carriers by any means; but it does prove that a large number of people left this hospital as carriers.

In summing up our results, we feel quite certain that some of the patients were excreting bacilli in their feces, although bacilli were not discovered. We judge this because the bacilli were isolated but once from the feces (Case 1, Table 3), while we isolated the bacilli from five urines, the prostatic fluid of one patient and the saliva mixed with bronchial mucus of another; also because the blood-findings in several of the negative cases were very similar to those in the cases of patients proved to be carriers.

TABLE 1.—CARRIER CASES

Case No.	Sex	Age	Color	Duration of Disease (Days)	Leukocyte Count.	Differential Count						O. I.	Feces	Urine	Saliva	Prostate	Gall-Bladder	Widal of Convalescence	Laboratory Diagnosis Confirmed	Remarks
						P.	S. L.	L. L.	E.	M. C.	T.									
1	M.	22	W.	56	8,600	65.5	12.5	21.5	0*	0	0	8.3	—	+	—	0	..	— 1/50	Widal.	
2	M.	22	W.	51	9,600	45.5	25.5	27.5	0.7	0	0	3.6	—	+	—	0	..	— 1/50	Widal.	
3	M.	17	W.	91	6,000	58.5	22.5	18.5	0	0	0	2.5	—	—	—	+	..	+ 1/400	Blood culture.	Paratyphoid A blood culture. Paratyphoid A prostate.
4	M.	35	W.	45	8,000	53.6	35.0	9.3	2.0	0	0	7.0	—	+	—	0	..	+ 1/100	Blood culture.	
5	M.	33	W.	120	8,000	49.7	31.5	18.5	0	0	0	7.5	—	—	+	—	..	+ 1/50	Blood culture.	Organism found in saliva with mixed bronchial mucus.
6	F.	20	W.	71	6,000	56.8	16.8	25.9	0	0	0	4.3	—	+	—	..	..	— 1/50	Blood culture.	
7	M.	28	W.	60	8,000	61.5	11.5	20.5	3.0	2.5	0	4.3	—	+	—	0	..	+ 1/50	Blood culture.	
				70+	7,742	55.8	22.18	20.2	0.8	0.3	0	5.3	—	—	—	—	—	....		Averages.

Therefore we have arrived at the conclusion that the feces contain too many motile organisms to permit the use of the semisolid medium successfully for the detection of typhoid bacilli. When such material is examined, even though diluted, there are always innumerable motile bacilli which tend to fill up the plate with large colonies and the detection of the typhoid bacillus is made much more difficult.

We think our results justify us in suspecting that the opsonic index is high in persons who are carriers when they leave the hospital. The average index of our carriers is 5.5, while of twenty-one others who are not carriers, the average was 1.97. The highest index of the carriers was 8.3, and the lowest 2.5. The highest index of the non-carriers was 8, and the lowest was 0.1. There was only one other up to 5. The other non-carriers were quite low; one laboratory stock culture was used in this opsonic determination with unheated serum.

The average length of the disease in the seven carrier cases was seventy days; that in the twenty-seven non-carrier cases was seventy-two days.

The average leukocyte count in the carrier cases was 7,742; in the non-carrier cases, 7,844. The large lymphocytes in the carrier cases averaged 20.2, while those of the non-carrier cases averaged 12.6, or a difference of 7.6 per cent.; while the small lymphocytes in the carrier cases averaged 22.18, and those of the non-carrier cases, 35.1. In the carrier cases three serums would not agglutinate stock culture of typhoid in dilutions of 1 to 50; one was positive in 1 to 400. both to typhoid and to paratyphoid A. Another was positive in 1 to 100 dilution and two in 1 to 50. Six of the twenty-seven non-carrier cases were negative in dilutions of 1 to 50; two were positive in dilutions as high as 1 to 400; eighteen were positive in lower dilutions and one was not tested.

GALL-BLADDER AND POST-MORTEM CASES

Post-mortem examinations of four typhoid patients who died in the various stages of the disease were made. All had typhoid bacilli in their gall-bladders (see Cases 2, 3, 4 and 5, Table 3). One cholecystitis patient gave a pure culture of typhoid bacilli, and was found to be a carrier at operation. The bile contained a pure culture of typhoid bacilli. Bacilli had been isolated from the feces previous to the operation. He had had typhoid fever seven years previously. His opsonic index was low, 0.9, but he was suffering, at the time, from peritonitis following the operation. The large mononuclear leukocytes were increased in this case to 23 per cent.; polynuclears were 60, small lymphocytes 16, and transitionals, 1. The leukocyte count varied from 13,000 to 17,000. The Widal reaction was negative in dilutions of 1 to 50 for his own bacilli and for stock cultures. Two blood-cultures were negative for typhoid (see Case 1, Table 3).

It seems to us that all typhoid convalescents should be examined before leaving the hospital, and if found to be carriers, should be asked to return from time to time for reexamination. They should also, in our opinion, be carefully instructed as to how dangerous they are to people around them if they prepare or dispense food or drinks in any way. As the average man is not a wilful murderer at heart, he would, undoubtedly, be anxious to follow instructions and would be glad to find himself pronounced a non-carrier after three or four negative reports have been made. The last precaution is necessary because of the proved intermittence in the excretion of the bacilli.

The armies of the world, especially those of England and the United States, have proved beyond question the efficacy of vaccination against typhoid and the harmlessness to the individual of the operation. If we profit by the success of our experience of vaccination against small-pox and make typhoid vaccination compulsory also, for the good of the whole people, typhoid fever will be a thing of the past and the typhoid carrier will cease to be a menace in civil life, as he has about ceased to be in army life. Until that time comes, as we firmly believe it will come, we wish here to urge that the carrier question be one that is carefully considered and that examination of out-going patients be a routine procedure, as well as the subject of reexamination; only

TABLE 2.—NON-CARRIER CASES

Case No.	Sex	Age	Color	Duration of Disease (Days)	Leukocyte Count.	Differential Count						O. I.	Feces	Urine	Saliva	Prostate	Gall-Bladder	Widal of Convalescence	Laboratory Diagnosis Confirmed	Remarks
						P.	S. L.	L. L.	E.	M. C.	T.									
1	M.	23	W.	58	9,000	56.8	32.0	4.7	6.5	0	0	2.2	—	—	—	0	—	— 1/50	Blood culture.	
2	M.	46	W.	59	8,800	47.2	47.2	1.5	4.0	0	0	0.1	—	—	—	—	—	+ 1/100	Widal.	
3	M.	22	W.	40	9,000	37.6	57.0	4.0	1.3	0	0	0.37	—	—	—	—	—	+ 1/100	Widal.	
4	M.	34	W.	75	8,800	48.5	45.0	0.75	5.6	0	0	0.65	—	—	—	—	—	+ 1/50	Widal.	
5	M.	18	W.	48	5,200	36.0	25.3	35.5	0.9	2.3	0	2.3	—	—	—	—	—	— 1/50	Blood culture.	
6	F.	18	W.	65	10,000	59.8	16.9	18.9	4.0	0	0	3.6	—	—	—	0	—	+ 1/50	Blood culture.	
7	M.	13	W.	58	6,500	56.0	35.6	7.0	0.9	0	0	2.8	—	—	—	—	—	+ 1/50	Widal.	
8	M.	22	W.	67	3,200	61.4	21.6	16.9	0.9	0	0	0	—	—	—	—	—	+ 1/50	Widal.	
9	M.	5	W.	127	6,000	61.8	12.9	24.7	0	0	0	2.4	—	—	—	0	—	+ 1/200	Widal.	
10	M.	21	W.	78	8,800	41.5	26.5	31.0	1.0	0	0	5.0	—	—	—	0	—	— 1/50	Widal.	
11	F.	35	W.	55	6,800	39.5	40.5	16.5	2.0	0	0	0	—	—	—	0	..	+ 1/200	Widal.	
12	M.	25	W.	59	14,000	58.0	10.0	31.0	1.0	0	0	1.1	—	—	—	—	..	+ 1/100	Widal.	
13	F.	12	W.	49	6,000	32.5	39.3	27.0	1.0	0	0	1.6	—	—	—	0	..	+ 1/50	Widal.	
14	F.	21	W.	49	6,400	54.5	38.9	5.4	0	0	1.2	0.46	—	—	—	0	..	+ 1/200	Widal.	
15	M.	19	W.	81	10,000	54.7	21.0	23.0	1.0	0	0	0.39	—	—	—	—	..	+ 1/50	Widal.	
16	M.	28	W.	35	8,600	67.0	26.0	1.7	5.3	0	0	1.1	—	—	—	—	..	+ 1/400	Blood culture.	Typhoid vaccine during convalescence.
17	M.	13	C.	150	7,000	45.5	38.5	10.0	4.0	1.5	0	1.6	—	—	—	—	..	+ 1/400	Widal.	Typhoid vaccine during convalescence.
18	M.	29	C.	76	4,000	47.5	30.8	16.8	3.5	0	1	2.0	—	—	—	—	..	+ 1/100	Blood culture.	Typhoid vaccine during convalescence.
19	M.	15	C.	84	8,000	67.0	21.0	7.0	5.0	0	0	2.6	—	—	—	—	..	+ 1/100	Blood culture.	Typhoid vaccine during convalescence.
20	M.	21	W.	66	8,000	57.0	32.0	10.0	1.0	0	0	0	—	—	—	—	..	— 1/50	Blood culture.	
21	M.	18	W.	150	8,000	62.8	28.5	8.5	0	0	0	2.0	—	—	—	—	..	+ 1/100	Blood culture.	
22	M.	25	W.	100	8,500	39.0	50.0	10.5	0.5	0	0	0	—	—	—	—	..	0	Blood culture.	
23	M.	25	W.	44	7,600	54.5	31.5	13.5	0	0	0	0	—	—	—	—	..	— 1/50	Blood culture.	
24	M.	13	W.	60	7,200	43.5	42.0	14.5	0	0	0	0.1	—	—	—	—	..	+ 1/50	Blood culture.	
25	M.	41	W.	100	6,400	58.3	35.3	5.6	0.33	0.33	0	8.0	—	—	—	—	..	+ 1/50	Blood culture.	
26	M.	2	W.	50	14,000	48.8	32.5	17.8	0.5	0	0	0.2	—	—	—	—	..	— 1/50	Widal.	
27	F.	25	C.	52	6,000	50.0	35.0	14.66	0.33	0	0	0	..	—	—	0	..	+ 1/150	Widal.	
				72	7,844	49.8	35.1	12.6	1.89	0.16	0.03	1.97	..	..	..	..	..	....		Averages.

TABLE 3.—GALL-BLADDER AND POST-MORTEM CASES

ase No.	Sex	Age	Color	Duration of Disease (Days)	Leukocyte Count.	Differential Count						O. I.	Feces	Urine	Saliva	Prostate	Gall-Bladder	Widal	Laboratory Diagnosis Confirmed	Remarks
						P.	S. L.	L. L.	E.	M. C.	T.									
	M.	40	W.	12	13,000 to 17,000	60	16	23	—	—	1	0.9	+	0	0	0	+	Widal negative.	Blood culture negative.	Typhoid seven years previous; cholecystitis on entering hospital; died 36 hours after operation.
	M.	40	W.	26	—	—	—	—	—	—	—	—	0	0	0	0	+	0	0	
	M.	17	W.	38	—	—	—	—	—	—	—	—	0	0	0	0	+	Widal positive.	Blood culture negative.	Died on thirty-eighth day, with complication of pneumonia.
	M.	30	W.	15	—	—	—	—	—	—	—	—	0	0	0	0	+	0	0	Died on fifteenth day, of hemorrhage.
	F.	18	W.	43	—	—	—	—	—	—	—	—	0	0	0	0	+	0	0	Died on forty-third day, apparently of exhaustion.

in this way shall we be doing our duty in the prophylaxis of typhoid epidemics.

That this may be done thoroughly, we believe that the saliva, urine and feces and, of all male patients, the prostatic secretion should be examined.

CONCLUSIONS

1. A large percentage of typhoid convalescents leave the hospital as carriers.
2. The gall-bladder is the harboring place of the bacilli which are excreted in the feces.
3. The prostate gland is a factor to be considered in the male, as it excretes bacilli into the urine.
4. People may expectorate typhoid bacilli.
5. Hesse's semisolid medium, as modified by Stokes and Hachtel, may be used to advantage for the examination of urine and prostatic secretions.
6. The solid color-reaction mediums are better adapted for stool examinations, because of the large variety of motile organisms contained in the stools.
7. The leukocyte count of carriers is normal, averaging 8,000.
8. The opsonic index and percentage of large mononuclear leukocytes were increased in our series of cases.
9. The agglutination of typhoid bacilli on the part of the serum in convalescents from typhoid or in the chronic carrier bore no relation to the carrier.

We are much indebted to Dr. D. L. Harris, under whose direction and through whose courtesy this work was done. Dr. Harris also suggested the carrying out of the differential leukocyte count during convalescence.

653 Candler Annex.

STREPTOCOCCUS VACCINES IN SCARLET FEVER PROPHYLAXIS *

W. H. WATTERS, Ph.D., M.D.
BOSTON

Much has been written concerning the cause of scarlet fever during the past two decades and a vast amount of research has been pursued in order to ascertain a possible etiologic agency for the disease.

In spite of the writings and the necessarily preceding researches our knowledge is essentially the same as when the studies were first undertaken. In practically all of the work one organism has sooner or later been encountered by all workers, the streptococcus. A few seem to consider this to be a sufficient cause, but the majority look on it as a secondary infecting organism. More are probably inclined to consider the peculiar bodies described by Mallory and named by him *Cyclaster scarlatinale* to be an adequate explanation of the various phenomena. However this may be, we must decide that at present the cause of the disease is not definitely known.

Recognizing the almost constant association of the streptococcus with scarlet fever, a Russian, Gabritschewsky,[1] conceived the idea of treating the disease as though it were in truth a streptococcus infection. This method as described consists in the administration of broth cultures of streptococci in doses of about 0.5 c.c. previously killed by heat and phenol (carbolic acid). These doses are repeated in about a week. After using the vaccine in about 700 cases he concluded that it has a decided value from a prophylactic standpoint and that the method deserves further study. A number of his fellow countrymen did pursue the matter further and with similar conclusions, but outside of Russia the subject seems to have received scant attention as far as practical investigation is concerned.

Influenced by this article I decided to give to the theory a practical test in actual work. About four years ago the Haynes Memorial Hospital for Contagious Diseases was opened as a department of the Massachusetts Homeopathic Hospital, with accommodation for about 150 beds. Among others, wards were reserved for the exclusive use of scarlet fever patients. These wards have been continuously occupied to a varying degree since, sometimes containing from fifty to seventy-five patients and at others falling as low as ten or fifteen, dependent on the prevalence of the disease in the community.

The addition of the contagious department brought new problems for the training-school, as in this were 110 nurses who had enrolled themselves as pupils without planning for contagious work and often not desiring it. In connection with scarlet fever the problem was only with the smaller number, those who had never previously contracted the disease, as the others were, of course, practically immune. Very little difficulty was encountered in spite of the fact that many of these non-immunes contracted the disease. At the end of two years more than 35 per cent. of such non-immunes had been thus afflicted.

TABLE SHOWING EFFECT OF STREPTOCOCCUS IMMUNIZATION OF NURSES

Year	No. Non-Immune Nurses	Receiving Vaccine	Not Receiving Vaccine	Contracted Disease				
				Receiving Vaccine		Not Receiving Vaccine		In Favor of Vaccine
				No.	Per Cent	No.	Per Cent.	Per Cent.
1910....	21	10	11	1	10.0	2	18.0	8
1911....	15	11	3*	0	0.0	3	100.0	100
	36	21	14*	1	2.7	5	35.7	31

* Incomplete immunization in one case.

It was then suggested that this Russian idea of immunization be tested and with the hearty cooperation of Dr. Mann, the superintendent, it has been carefully followed for two years. The object of this paper is to give the results. Each year's results will first be given separately and then both will be combined.

In the first place cultures were made from a number of throats of scarlet fever patients and many strains of streptococci were isolated. These were combined in the manufacture of a polyvalent vaccine standardized at five hundred million per cubic centimeter. The project was then explained to all the nurses interested and they were allowed to choose the vaccine treatment or to reject it as they preferred.

In 1910 twenty-one non-immune nurses, those who had never contracted the disease, went on duty in the scarlet fever wards. Of these, ten took the treatment, eleven did not. In 1911, fifteen performed similar duties. Of these, eleven received vaccines and three did not. One received a single dose the day she went on duty and in twenty-four hours had contracted the disease. As she was not immunized, her case is entirely omitted. The method was as follows:

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* After this communication was written, at about Christmas time, one nurse, who had received three inoculations of a stock streptococcus vaccine, made from several strains not coming from scarlet fever cases, contracted a mild case of the disease.

1. Centralbl. f. Bakteriol., 1906, xli, 719.

About two or three weeks before a given nurse was going to the scarlet fever wards, usually while on diphtheria duty, she was given fifty million of the polyvalent streptococcus vaccine. This was usually followed by some local reaction, soreness of the arm, and occasionally by some general manifestations, such as headache or malaise. In about a week, one hundred million were given and a week later two hundred million. The results are shown in the accompanying table:

The vaccinated nurse who did contract the disease came down with an unusually mild attack.

In short, during two years but one case, and that a very light one, has occurred among a number of nurses who have received vaccines, while among a considerably smaller group under identical conditions and environment, five times as many cases have occurred, and those not particularly light.

Of course it would be folly to attempt to draw any conclusions from such a small number of cases. The results are, however, very suggestive and they are reported in the hope that they may help to make, with others yet to come, a series from which definite data may be obtained.

Thanks are here expressed for the very cordial cooperation and suggestions of Dr. W. O. Mann, superintendent of the hospital, Dr. J. A. Haywood and Miss Martin, who in their various departments have made the work possible.

80 East Concord Street.

THE SAND-FLY AND PELLAGRA *

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For more than 200 years the etiology of pellagra has been a subject of serious inquiry. This problem, formerly an Old World question, now concerns us, and it still awaits solution. Though the disease is positively known to have existed in this country for less than thirty years, it is now found in almost one-half the states of the Union, becoming in the South a grave disorder.

Briefly, it may be said that the causation of pellagra is purely conjectural. Since 1776, when the Patriotic Society of Milan offered a prize for the determination of the cause, an immense amount of work has been done by worthy investigators, but as yet its real cause is unknown. We do not know whether the disease is toxicochemical, toxico-infectious or due to a specific infection by molds, bacteria, or protozoa. The solution of this problem has at various times been proclaimed, but subsequent investigations have failed to furnish corroborative material.

Three theories have been advanced as to the cause of this disease: (1) the zeistic theory based on the work of Ballardini, in 1845, giving corn poison due to the excessive use of corn products as the cause, supplanting the old theory of faulty metabolism; (2) the cotton-seed products poison theory of Mizell, in 1911; and (3) the sand-fly theory of Sambon, dating from 1910. The first two rest on malnutrition, the last on the action of a parasite.

Since this paper deals with the parasitic theory, the grounds on which Sambon bases his theory may properly be outlined here:

> A. The endemic centers of pellagra in Italy have remained the same since the disease was first described.
>
> B. The season of the recurrence of pellagra coincides with the season of the appearance of the full-fledged sand-fly, even to the extent that if the spring is early or late, the sand-fly is early or late in appearing, and pellagra cases are correspondingly early or late in their appearance.
>
> C. In centers of pellagra infection whole families are attacked at times simultaneously.
>
> D. In non-pellagrous districts the disease never spreads to others with the advent of a pellagrin from a pellagrous district.
>
> E. In the case of a family which has removed from a pellagrous to a non-pellagrous district, the children born in the former district are pellagrins, while the children born subsequent to removal to a non-pellagrous district do not develop the disease.
>
> F. The disease is not hereditary, although infants a few months old may become infected, especially if taken to the fields in pellagrous districts, where their mothers work during the season when sand-flies are in evidence.
>
> G. Pellagra is not contagious, but is transmitted to each individual by an infected sand-fly.[1]

In Kansas, in the latter part of July, 1911, the first authentic cases, those of a mother and child, were diagnosed by Dr. E. E. Liggett of Oswego, the attending physician. Dean Crumbine, of the medical school of the University of Kansas and secretary of the state board of health, expressed an earnest desire to have the presence of the sand-fly ascertained for that locality. Accordingly I began, on August 1, a survey of the region. The streams were high and muddy from recent rains so that adults were first sought. An extended opportunity which I enjoyed for study of this insect some years ago in the Mississippi Valley, between Keokuk and Fort Madison, Iowa, rendered familiar the workings of the adult females on horses, especially young colts, on which after warm rains the attacks were so numerous and severe as to denude the animals' ears and throats, exposing patches of raw flesh.

Accordingly, the first day at Oswego, specimens were taken from the ear of a brood mare. Later, when the local streams had fallen, abundant larvæ and pupæ were found. A small stream which passed within 400 yards of the home of the pellagrins had a large colony attached to the tree roots forming riffles in the water. About a mile farther down the same stream a series of rock riffles were well covered with larvæ and pupæ. Here seemed to be an excellent opportunity for a serious endeavor to apply the Sambon theory.[2]

The lines of investigation which I determined to follow were: transfusions on guinea-pigs and monkeys and transference of flies, exposed to the pellagrins, to monkeys and guinea-pigs. In the experiments with each exposed animal there was a check or an unexposed animal.

The transfusions and inoculations gave no positive results. Temperatures of the guinea-pigs and monkeys were taken twice a day without any appreciable change. As this subject has been covered in a paper by Anderson and Goldberger,[3] 1911, who obtained the same

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* Presented before the Entomological Branch of the American Association for Advancement of Science, Washington, D. C., Dec. 27, 1911.

[1] Sand-Fly Transmission of Pellagra, THE JOURNAL A. M. A. Nov. 26, 1910, p. 1898.

[2] In the subsequent work we had the hearty cooperation of the attending physician, Dr. E. E. Liggett and Dean Crumbine. I have also had the valuable assistance of W. T. Emery, one of my graduate students.

[3] Public Health Rep., 1911, xxvi, 1003-7.

results, as will pass to what we consider the more important phase of the Sambon theory, viz., the rôle of the sand-fly.

His theory is protozoal and from analogy with the etiology of malaria, the parasite of pellagra in all probability would have to pass one stage in the body of its intermediate sand-fly host before it could resume its life in the human body. This hypothesis being true, transfusions obviously would be without results.

Taking up the sand-fly, then, the only species found in Kansas thus far is *Simulium vittatum* as determined by Johannsen. *S. reptans* is the species referred to by Sambon and reported on this continent from Greenland only. *S. vittatum* is distributed in Kansas, as far as our survey has proceeded, along Turkey Creek, a tributary of the Kaw in Wyandotte County, along the Marais-des-Cygnes in Franklin County, along the Neosho and its tributaries in Labette County and along the Arkansas in Sedgwick County. A careful survey of the southwestern part of the state has thus far revealed no breeding-places or adult forms of this insect. The most western point, then, is in Sedgwick County. The survey is not yet complete, but will be continued until the entire state has been covered.

For the location of the pellagrins we have Allen, Chautauqua, Labette, Meade and Montgomery Counties. All cases are in the midst of sand-fly territory, except the Meade County case, and this man, a resident of that region for twenty years, spent the year of 1910 in the South. The Allen and Labette County cases are endemic. None of these patients has ever been out of the state, so it would seem that the cause now exists in the state.

For our experimental work the Oswego pellagrin, a woman aged about 35, now in the second season of the disease, was used, and she very willingly did her part.

In this study some interesting observations were made on the life-history, methods of oviposition, character and number of eggs deposited by each female. In all, 1,282 live sand-flies were used and this phase of the work extended from August 21 to November 4. The plan was to divide the number of flies intended for each experiment into two lots, the one lot to be exposed to the pellagrin and then to the subject of experimentation, and the other exposed to the check.

Ten guinea-pigs and two monkeys were used and the temperatures of all were taken morning and evening daily. The number of live flies exposed to the pellagrin and then to the guinea-pigs was 499, the number of live flies exposed to the pellagrin and then to the monkeys was 197. A part of those exposed to the pellagrin were reserved for fixation and sectional microscopic examination in the laboratory, now, during the winter period. Since only the females bite, the relative number of the sexes is important. In a count of 488 specimens, 219, or 42 per cent., were females.

Earlier in the season the flies did not seem to bite the patient, but beginning with October 12 they attacked her, biting freely, drawing blood perceptibly from the pellagrin's arms. These flies were then divided, part placed in the fly-proof cage with the male monkey; part with the guinea-pigs. Repetitions of the same experiment were made almost daily during the stated period.

November 7 the male monkey began to be less active. On the morning of November 8 he appeared decidedly ill, crouched on the floor of the cage and was both unwilling and unable to ascend to his perch. He remained ill all day, getting worse till late in the afternoon he became flaccid and motionless save for a high rate of respiration, ranging from 45 to 60 per minute. His temperature was 103.6 F., a little above normal. He appeared about the same the next morning, but improved a little during the day and continued the same until November 12, refusing all food, but drinking water freely. He was placed in charge of Dr. Boughton, pathologist, and Dr. Skoog, neurologist of the university. He was chloroformed, autopsied and the brain and spinal cord are now being studied by the nerve specialist.[4]

As far as our information goes this is the first recorded instance of an endeavor to apply the Sambon theory along these lines.

The work of the past summer has served to establish a satisfactory technic and to furnish material for this winter's examination. Arrangements are already perfected for the setting aside of one ward in the Kansas University Medical Hospital, at Rosedale, next season for pellagrous patients, and Turkey Creek, which flows near by, is well stocked with immature stages of the sand-fly. It is our purpose then to use a larger series of experiments dealing especially with rhesus monkeys in greater numbers, in continued endeavor to ascertain the validity of the Sambon parasitic theory of pellagra. When once the susceptibility of the animals under experimentation is determined, it would seem that evidence for or against this theory ought to accrue.

UNEQUAL PUPILS AS AN EARLY SIGN IN PHTHISIS

J. L. TUECHTER, M.D.
CINCINNATI

A pupillary difference as a phenomenon in unilateral pulmonary tuberculosis has been recognized for some time, still we find that, in most text-books and writings on this subject, it receives little or no mention. This is probably due to the fact that this difference is not always present, and its diagnostic significance has not been sufficiently worked out, nevertheless when this sign can be elicited, it carries with it a good deal of importance.

In examining for the pupillary difference the room should be only moderately light or the background of a well-lighted room may be used. Direct daylight or a bright artificial light obscures the difference because of an existing hypertonus of the sphincter pupillæ. The pupils are examined in the ordinary way by covering the eyes with the examiner's hands, thus relaxing all hypertonus and then, in diffused light, quickly watching the reaction. If there is a difference it will be noted that one pupil is dilated more than the other and that it reacts less completely and less sluggishly. In other words, it seems to lag. In a large number of cases it is not necessary to test the reaction of the pupil, but the difference can readily be noted with the eyes at rest, provided again the light be not too strong.

In a large majority of the cases in which the sign occurs, the pupil is wider on the side of the pulmonary involvement, and this led Geza Fodor, who first described this phenomenon, to the belief that the reaction is due to a stimulation of the sympathetic nerve fibers, causing on that side a spastic mydriasis. Nevertheless, in many cases the opposite is true, namely, that the pupil of the unaffected side is wider, and it is this fact which led many observers to discard the phenomenon as having no definite value. It remained for Leo Wolfer to determine the real cause of the pupillary difference. He came to the conclusion that the widening of the pupil is due to a stimulation of the sympathetic fibers caused by pressure exerted by enlarged bronchial glands of the affected side.

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[4] This monkey was taken from the University Hospital group. It now appears that some eighteen months ago this monkey was exposed to poliomyelitis. While the time is remote, nevertheless, the exposure obviously introduces a complication which will make it unsafe to depend on this instance, unless substantiated by many pure culture corroborations.

For this reason it is not necessarily observed in the pupil corresponding to where our objective findings lead us to locate pulmonary process, in so far as the glands on this side are not invariably and of necessity sufficiently enlarged to stimulate the corresponding sympathetic fibers.

After observing a large series of cases I have been able to substantiate these latter findings, and I am satisfied that a comparative dilatation of one pupil signifies an enlargement of the bronchial lymph-glands of the corresponding side. As such glandular involvement is usually tuberculous in character and takes place at a time when the lung itself does not as yet show destructive changes, I feel that this sign is most valuable in the early diagnosis of pulmonary tuberculosis. Before drawing a definite conclusion as to the significance of this phenomenon, it is of course necessary to rule out affections of the eye which may cause pupillary differences, as well as certain conditions of the thorax, such as tumor or aneurysm.

Several case reports may serve to show the value of this pupillary difference when observed.

Case 1.—A man, aged 25, a bank clerk, consulted me for a stomach trouble of long standing, which would clear up at times and then return. While examining the patient I noticed the inequality of his pupils, the right being wider than the left and reacting more sluggishly. In view of the fact that there was a marked tuberculous family history, I made a chest examination but found nothing, nor did the patient have any other subjective symptoms which might indicate a pulmonary trouble. The stomach condition persisted for two months and gradually cleared up after sending him away on his summer vacation with strict injunctions as to rest. He returned to me several months later, greatly worried over the fact that he had had a very slight hemorrhage and for two subsequent days his sputum was tinged with blood. On chest examination I was able to find a very early involvement of the right apex.

Case 2.—A man, aged 28, with an early tuberculosis involving the left apex has been under my care for several months. He is under tuberculin treatment so I have the opportunity of seeing him twice a week and examining him frequently. This man shows a dilatation of the right pupil—in other words, not on the same side as the lesion. Even though the examination for dulness on either side of the spine gives us rather doubtful results in the adult because of the normal dulness over this area, nevertheless, in so far as the patient was not very muscular, I felt that I was able to elicit a more or less localized area of dulness over the right side. An *x*-ray examination of this case confirmed these findings and showed an involvement of the left apex, together with an enlarged glandular mass about the size of a pigeon's egg at the right hilum, which accounted for the pupillary enlargement.

Case 3.—A girl of 18 years presented the various subjective tuberculous symptoms, such as decreasing strength, shortness of breath on exertion, subnormal temperature in the morning, together with a rapid pulse, and afternoon rise of temperature. There was a dilatation and sluggishness of the left pupil. The chest examination was at first negative except for increased muscular rigidity over the left apex. About a month later I was able to elicit crepitation over this area. I had the opportunity to have an *x*-ray examination made and it showed a marked infiltration about the left hilum sufficient to cause pressure on the sympathetic of that side.

This phenomenon, if we look for it, can very frequently be found in tuberculosis of the bronchial lymph-glands in children. It forms a valuable point in diagnosis, in that type of the disease in which the onset is insidious, and in which the child has not as yet acquired the characteristic paroxysmal attacks of cough. An interesting case of this kind came under my observation on my service in the children's ward of the Ohio Maternity Hospital.

Case 4.—A child, 2½ years old, had been exposed before admission to a tuberculous mother. The child passed almost imperceptibly from a condition of health to one of disease. The appetite became poor, the cheeks pale, and there was apparent loss of flesh. Irregular pyrexia pointed to some systemic affection, but examination disclosed nothing. The child began to cough very slightly and a Pirquet skin reaction was markedly positive at the end of twenty-four hours, which at this age meant that we were dealing with an active tuberculosis somewhere in the body. There was a marked dilatation and lagging of the left pupil and I made a diagnosis of tuberculosis of the tracheobronchial and pulmonary lymph-glands. The child was placed out of doors and did fairly well, but later developed a severe ulcerative enteritis, which proved fatal. The autopsy showed, besides the ulcerative condition of the bowel, a marked enlargement of the lymph-glands around the left hilum and bronchus. The lungs were not involved.

These cases serve to illustrate that a pupillary difference which is not caused by a pathologic condition of the eye forms a valuable early sign in phthisis, both in the absence of other signs and symptoms as well as in their presence. It is not necessarily found on the side corresponding to the pulmonary involvement, in so far as it is due to pressure on the sympathetic of enlarged bronchial lymph-glands.

124 Garfield Place.

A CASE OF TETANUS WITH RECOVERY

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History.—Last September I was called in consultation with Dr. J. D. Price, of Wanatah, to see a boy 10 years old suffering with a well-marked case of tetanus. Ten days previously he had stepped on a nail in the cow-shed. The wound had healed, and the incident was forgotten, until brought to mind by the questions of the attending physician.

Treatment.—When I saw the boy, he was having convulsions every few minutes and was in a serious condition. Antitoxin (5,000 units) was administered at once, and a like dose daily during the next few days, with smaller doses when temperature and pulse became normal, which occurred about the tenth day. In all he was given 46,000 units. His improvement was steady and marked after the third day of treatment. Convalescence was interrupted by the development of an abscess in the hip on the side where the infection occurred. Meantime he was greatly emaciated. With evacuation of the abscess his daily improvement was marked, and in two months from the beginning of his illness he was back in school.

Comment.—This case is not remarkable in itself. It is the third consecutive case, however, in which I have observed recovery following the liberal use of antitoxin. In the two preceding cases (one a boy and the other a man, and both severe) much larger total quantities were employed. In the boy, 150,000 units were injected, and in the man 220,000 units. It seems to me possible that in the antitoxin treatment of tetanus we have erred in the matter of dosage. These cases all appeared hopeless, and in at least two I think the quantity of antitoxin administered was in excess of the amount usually employed.

TREATMENT OF PAROXYSMAL TACHYCARDIA

SUPPLEMENTARY NOTE

HERBERT M. RICH, M.D.
DETROIT

Since my last communication on this subject,[1] I have had an interesting experience in another case, and my success in stopping the attack leads me to record it and to state the rationale of the method.

Patient.—Miss C. has had many attacks of paroxysmal tachycardia during the last five years, during which time she has been under my observation. The case has been previously described in detail.[2] The method successfully tried in my other case[1] had been described to her, but she had been unable to influence any one of her infrequent attacks and I had not seen her during an attack in the interval.

Treatment.—January 18, at 4 p. m., the patient came to my office complaining of a rapid heart. It had begun at 8 o'clock in the morning. I counted the apical systoles with a stethoscope and found the rate 220 per minute. A colleague, Dr. F. C. Kidner, was called in and corroborated the count. (The rate has been the same in every attack in which I have seen this patient.) After trying the method described in my last communication several times unsuccessfully, I seated myself in front of the patient. Putting my right hand flat over her heart, and my left on her back directly opposite, I directed her to take a deep breath, close her glottis and fix strongly the walls of her chest. I then squeezed the chest-walls with some force, attempting to exert some pressure on the upper part of the heart. Instantly she expressed relief, and, grasping her wrist, I found the pulse to be 110, whereas fifteen seconds previously it had been 220. After resting a few minutes in my office, she went home on a street car, perfectly relieved.

It seems certain, in this instance, that relief was obtained by direct pressure on the heart itself. If the pathology of the condition is, as Keith found, a fibrosis of the primitive cardiac streak, then the attacks are probably due to an occlusion of one or more blood-vessels with a consequent derangement of the circulation in this highly important tissue.

It seems not improbable that a squeeze of the heart at this time might reopen the occluded vessel or vessels and reestablish the normal circulation with a consequent relief of the dependent phenomena. If this explanation should prove to be the true one, the method would be worth trying in early cases of angina pectoris. The pathology is similar and it seems not unreasonable to believe that an occluded coronary artery might also be opened by squeezing the heart and the anginal attack cut short.

32 Adams Avenue, West.

A CASE OF NITROGLYCERIN POISONING

E. S. EVANS, M.D.
GRINNELL, IA.

I believe that there are many men to whom the idea of nitroglycerin poisoning will be a new one, and to whom chance may in the future bring such cases. I have been unable to find reports of a similar case in the meager literature at my disposal, but I cannot but believe, from the nature of things, that these cases must be common in certain localities under certain conditions.

Patient.—F. F., male, aged 21, worked during the summer of 1910 on a farm. In the latter part of the summer his work consisted of blasting stumps in a clearing. He used a giant blasting-powder of the nitroglycerin variety, and worked at the blasting about two weeks. After about a week he noticed that his head would begin to ache after he had worked for an hour or two, and if he persisted in his work he would become quite ill. His head would ache and throb. He would become dizzy and nauseated, and occasionally he vomited. He ascribed it at first to the heat, and finally gave up the work and came to town, where he worked at odd jobs and went to school. For a number of weeks he experienced no return of the difficulty; but one morning he undertook to carry a pile of ashes out from a cellar, during which labor the throbbing headache with dizziness and nausea returned.

Examination.—He sought advice, and a careful examination of his chest, head and urine was made. The examination yielded no information that we did not already possess, and nothing which gave, at that time, any clue to the difficulty. Incidentally, it was noticed that the patient's hands were moist, and he remarked that the soles and palms perspired under stress of labor or excitement. The symptoms complained of were those of poisoning by some cardiac agent and reminded me strongly of an experience of my own with an overdose of amyl nitrite. At first we assumed that the inhalation of gases from the exploding dynamite had caused the symptoms by reason of any nitrites they might contain; but the fact that he had suffered an attack while not subject to the possibility of inhaling the fumes from the explosive, caused the idea to be abandoned. Further investigation revealed the fact that he had worn cotton flannel gloves during the blasting operations, and that he had worn the identical gloves during his work on the ash pile in the cellar at the time of his last attack.

Course.—In order to fix the responsibility definitely on the gloves, which we assumed to have been impregnated with dynamite, or nitroglycerin from it, it was arranged that he should wear the gloves at definite times and under definite circumstances. These experiments revealed the fact that on wearing the gloves when not exercising or when not in a warm room, the symptoms were absent or very slight; but on exercising, they recurred with severity. In other words, it was found that the degree of perspiration present on the hands while wearing the gloves determined the degree of severity of the symptoms; free perspiration being accompanied after the lapse of a little time, by a very severe distress as before described, which disappeared in an hour or two after the gloves were removed. It was concluded that the case was one of poisoning by nitroglycerin, produced by absorption through the skin of the hands.

This case is unique only for those of us who seldom or never are brought into contact with those who handle explosives.

TWO CASES OF OVULATION AND CHILD-BEARING WITHOUT MENSTRUATION

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Patient.—K. C. H., white, aged 23, of Scotch parentage, well developed, weight, 145 pounds, height, 5 feet 6 inches, married at the age of 13. At that time she weighed 180 pounds. She has had three children, the first being born ten months after marriage. The patient has never had the least show or sign of menstruation, or menstrual molimina, one part of the month being the same as the other in regard to sexual matters. Sexual appetite was normal in early married life, but absent recently.

Family History as Regards Menstruation.—Mother was normal. Of the patient's three sisters, two are normal; the other has been married three times and has had eight children without the least sign of menstruation.

Comment.—I am led to report these two cases because I believe them to be very rare, as in my personal experience, which has been quite extensive as medical examiner for life insurance companies, having interrogated perhaps tens of thousands of women without having come across a similar case and in my search of the literature available, I have only been able to find one other case reported.[1]

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[1] THE JOURNAL A. M. A., Jan. 13, 1912, p. 111.

[2] Rich, H. M.: THE JOURNAL A. M. A., June 4, 1910, p. 1861.

[1] Hoover, A. R., and Marden, J. K.: Surg., Gynec. and Obst., March, 1911; abstr. in THE JOURNAL, April 8, 1911, p. 1069.

COCAIN IN CHANCROID AND SLUGGISH ULCERS

G. Frank Lydston, M.D., Chicago
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In using cocain as a preliminary to cauterization of chancroids I have arrived at the conclusion that the drug is useful aside from its anesthetic properties. By the application of a tablet containing one-fourth to one-half grain of the drug the ulcer within a few minutes is transformed into a vascular, healthy surface from which exudes a bloody serum. The soluble tablet is applied with a small cotton swab, moistened to facilitate the dissolving of the tablet. The drug is "rubbed" into the ulcer lightly with the swab. The application of cocain in this manner once or twice daily is of great service, especially when the sore is inclined to be sluggish. Its use is of necessity restricted to small areas, but is not confined to chancroid. The drug acts in effect by inducing hyperemia. The change in the appearance of the ulcer is really marvelous. The action of the drug in combating infection is quite obvious. The exosmosis is so marked that I question whether cocain might not be safely used on larger surfaces than would at first sight seem wise. The action of cocain on superficial ulcers is a beautiful demonstration of the manner in which the drug favors hemorrhage in operations of the urethra, nose, etc. The rationale of the action of cocain in the manner above suggested obviously is the same as that of the Bier method.

As I have but recently begun the use of cocain in chancroid I am not prepared to give a final conclusion as to its value in expediting healing. From my experience to date, however, I am led to believe that it is a remedy of great value. Carefully used in sluggish ulcers of any kind, the drug should be of great service. Infection cannot long withstand the hyperemic assaults induced by the cocain.

I have found the following formula to be of especial service in the use of the cocain by the patient:

℞

Cocainæ mur.	Gr.xx
Carb. animalis	ʒi

M. Sig. Apply twice a day. Cleanse ulcer carefully with hydrogen peroxid and dry thoroughly before applying powder.

CEREBROSPINAL MENINGITIS

Emil Krulish, M.D., Galveston, Tex.
P. A. Surgeon, U. S. Public Health and Marine-Hospital Service

The present epidemic of cerebrospinal meningitis in various portions of the state of Texas and the prevailing fear of its contagion by the public demonstrate that the question of prophylaxis is of most vital interest and importance. It is encouraging to those interested in public health work to note the interest that the public is taking in preventive medicine. The profession is consulted daily by the laity about some prophylactic which would ward off the disease.

All epidemics teach the inhabitants of the invaded sections that "prevention is better than cure," and the people of Texas have realized this fact, for wherever a case of meningitis has occurred the health authorities have improved the sanitary conditions of that locality. The late plague infection in San Francisco is responsible for the fact that it is considered to-day to be the cleanest city in the United States.

The preventive measures against cerebrospinal meningitis usually advocated by the profession are: isolation of patients and contacts; prompt report of cases and suspects to the proper health authorities; disinfection of premises previously occupied by the diseased; closing up of places of public gatherings and antiseptic gargles and nasal sprays.

It is to the last measure, the application of antiseptics in any form to the nasopharynx as a preventive in cerebrospinal meningitis, that I take exception. I am of the opinion that these applications used promiscuously, as they are by the public, are worthless, if not directly injurious.

In order to direct a successful and an intelligent campaign against any epidemic it is essential for us to understand precisely the manner in which the disease is transmitted from one individual to another and, in infectious diseases, the method of invasion of the organism. Prior to the demonstration of Lazear and his associates that yellow fever was transmitted by the mosquito, our efforts to eradicate this disease were in vain. We know the exciting cause of cerebrospinal meningitis to be the *Diplococcus intracellularis meningitidis*, and it appears that the primary seat of attack is in the nasopharynx, but the connecting link between the nasopharynx and the spinal canal is still missing and until this is established we are at sea when considering the subject of prophylaxis. The meningococcus has been demonstrated in the secretions from the nasopharynx, both in typical cases of the disease, as well as in persons who developed no symptoms at all.

Advocates of the nasal spray presumably anticipate the destruction of the microorganisms *in situ*. It is, however, obvious that any antiseptic in a solution sufficiently powerful to destroy these germs would be deleterious to the mucous membrane. The nasal chamber with its turbinate bodies and mucous membrane lined with ciliated epithelium is especially adapted to prevent germs from passing into the system, which is demonstrated by finding the tubercle bacillus, pneumococcus, diphtheria bacillus and, as previously stated, the meningococcus in the secretions of apparently healthy individuals. The nasal mucous membrane, therefore, possesses a high degree of phagocytic power.

The frequent spraying and douching of the nose has a tendency to injure this very delicate membrane and to destroy its function, thus defeating the primary object in view. The specialist has long recognized this fact and has discarded the use of the compression tank and pump.

It is an accepted fact that the exciting cause of phthisis is the tubercle bacillus which is taken into the respiratory tract by inhalation through the nose and one is almost constantly exposed to this infection, yet no one prescribes antiseptic nasal sprays for the prevention of tuberculosis; we endeavor to promote the function of the nasal mucous membrane and restore it to its normal condition if diseased.

Let us consider the use and results of the so-called antiseptic spray and douche. Spraying of the nose is accomplished by means of various forms of atomizers; their action is chemical or mechanical. The solutions recommended for this purpose are aqueous, as Dobell's, or oily, as liquid petrolatum, with eucalyptus or menthol. The oily solution is introduced into the nose in the form of a very fine vapor and, therefore, any benefit derived is necessarily chemical in nature, depending on its antiseptic properties. Taking for granted, however, that it is germicidal, we know from experience how difficult it is to reach the posterior portion of the nasal cavity with any form of a spray. The germs which may be present in these parts would, therefore, be beyond the firing line and remain undisturbed.

The aqueous solutions when used in the form of a spray can act but chemically, but if introduced in sufficient quantities or as a douche the chief action is mechanical; the germs may be dislodged and perhaps washed out with the fluid. But what actually occurs in the majority of cases is this: The bacteria are perhaps dislodged; the nasal cavity then contains more or less of the solution and the person invariably attempts to expel it by blowing the nose. Instead of closing one nostril and blowing the other, which is the proper way, the act is performed by closing the mouth and compressing both nostrils simultaneously, using the expanded lungs as a bellows. This forces the air up into the nasopharynx where it is condensed under more or less pressure, the Eustachian tubes open and some of the secretions with the organisms are very liable to be forced into the middle ear and perhaps into the accessory nasal sinuses. Thus the germs instead of being expelled are distributed through the head where they usually find a favorable culture medium for their growth and infection is likely to develop.

If the theory of the nasal douche were efficacious, the postnasal douche would be the proper method of cleansing the nasal chamber and expelling organisms which may be present; a small catheter or the tip of a syringe introduced through the mouth into the postnasal space and the solution allowed to flow through the cavity forward and out, thus actually washing *out* the nose. This method, of course, is not practical for the general use of the laity except under the direction of a physician.

CONCLUSIONS

Nasal sprays as ordinarily used for prophylaxis against cerebrospinal meningitis are unnecessary because of the obscure etiology of the disease. They do not destroy the germs. It is impossible to reach every portion of the nasal chamber and a normal nasopharynx is usually able to take care of itself. They are injurious from the facts that their use is likely to give the person a sense of false security and he is apt to consider other measures as being of minor importance and that the frequent use of the spray injures the delicate mucous membrane and lowers its vitality. Therefore, let us leave well enough alone as regards the nose.

The use of the spray may be justified or prove of value in but one condition; in those cases in which the patients through fear of contracting the disease have become exceedingly neurasthenic; then the oil spray may be prescribed for its psychologic effect, as its use is practically harmless.

THE RELATION OF RESEARCH TO TEACHING IN MEDICAL SCHOOLS

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SAN FRANCISCO

Much of the future development of medical education will depend on a proper solution of the problem of the relation of research to teaching. In the course of the last decade our medical schools have made great strides in advance. In many of our best institutions the teaching of the fundamental, more theoretical branches is as good as, if not in some respects better than, in the old centers of medical culture in Europe, and we are just about to apply to our clinics what we have learned in our laboratories. It is at this point that we should pause for a moment and consider seriously in which way our desire to place the teaching in the clinics on the same level with that in the laboratories can best be accomplished.

There are certain points about which there should be general agreement: first of all that nobody can be a good teacher of medicine, surgery or its various branches, any more than of any other branch of the biologic sciences, who is not an investigator and endowed with that natural power of observation and that inborn curiosity in regard to the phenomena which he does observe which necessarily leads to research. This does not, of course, mean inversely that every good investigator is a good teacher. To some extent, at least (the true investigator is born and he cannot be entirely the result of training even from the most ambitious material.

It is only through research that the atmosphere of scientific enthusiasm can be created in which the work of the student prospers. It is also through research only that the necessary bridle is placed on an exuberant scientific imagination, and the great temptation to too rapid logical generalization is happily avoided. Through it one is led to the proper degree of conservatism in juding results, and as a consequence of it one develops that state of simple-mindedness and true humility which we admire so much in all our truly great men.

It also goes without saying that no man, however great, can attempt to do research by proxy, which, however, seems to be a common delusion. The most important part of the work must be done personally, which means that the teacher in medicine and surgery must devote much time to his academic duties; how much exactly, is, to my mind, a matter of less importance. Time and experience only can tell whether it is wise to shut off such men entirely from active practice on the outside; but that they must devote the larger part of their time to teaching and research, if they wish to be effective, nobody will deny.

The question then resolves itself into this: How can we attract the men who have the necessary qualifications to take teaching positions in medicine and surgery in our medical schools?

There is one answer which we can dispose of fairly summarily and this is to better present conditions by offering high salaries to the clinical teachers. The argument has been made that, because a physician or surgeon may earn much money in private practice, therefore the chairs of medicine and surgery must be very highly endowed to attract the best men. The fallacy of this argument is at once apparent, if we look at similar cases which have long been settled. Is not what has been said of medicine and surgery equally true of chemistry and engineering? Industrial chemists and practicing engineers may make, and often do make, vast fortunes, larger by far than even the best practitioners could hope to accumulate, still there is no dearth of professors of chemistry or of engineering. The right man will never be prevented from choosing an academic career by such considerations. He must be paid a good living salary according to his surroundings, but nothing more or less. The salaries paid for professorial positions in general are inadequate, especially in the larger cities, but from $8,000 to $10,000 a year would certainly be ample at the present time.

What the clinical teacher, however, can require and what he must require are facilities for work. He must have the necessary material to work with, the necessary laboratories to work in and the necessary assistance to make his own work effective. If money is to be spent, it is best invested in this direction and it will take much money to provide the professor in the clinical branches with the necessary beds under his absolute control, with the necessary laboratories and their expenses for equipment and supplies and with the necessary assistants. On this account the provision of these necessities is the one object on which those who are in control of our medical institutions should concentrate their efforts. On account of the strong appeal which the development of such clinics would make not only to those who are primarily interested in education or in the development of medical science, but even more to all who are interested in charity, since a proper medical treatment of the poor is perhaps the one form of charity which is free from all objections, the necessary funds should be obtained with comparative ease, if only the crying need for such institutions was well understood by the laity.

On account of the large means, however, which are necessary and on account of the urgent, one may say even vital, need of our medical educational institutions for such well-equipped and properly run clinical services, one is justified in watching with some apprehension certain recent developments which may seriously interfere with this object and withal with the healthy growth of medical thought and knowledge in the United States. I mean the overhasty establishment of special institutes for medical research and of special professorships of research medicine.

One may be surprised at the thought that special institutes for medical research may carry with them a danger to general medical education. What I wish to say does not apply so much to those larger institutes which are independent and endowed liberally, like the Rockefeller Institute in this country, the Pasteur and Jenner institutes in Europes. The dangers there are more evidently dangers to the men within the institute than to those outside. It is true that the men connected with them are relieved of the drudgery of teaching and examinations; they are not interfered with in any way with their scientific aims and aspirations, but they must miss the vitalizing influence of youth, of the constant stream through the laboratories of classes of students with their still undeveloped, potential energies, of students from whom after all, the future investigators recruit themselves. It is true that the younger assistants replace them to a certain extent, but only very imperfectly. These men must lose in course of time somewhat the sense of relation between their own work and the rest of medical knowledge. They must lose in breadth by not being compelled to pay some attention to any part of the field except the part in which they happen to be interested. Marvelous results may follow such intensive cultivation, but there also is, at least, the danger which is common to all types of forced cultivation.

There is no doubt that under certain circumstances and for certain men such institutes are a necessity: the Pasteur, the Jenner, the Rockefeller institutes and others have justified their existence over and over again, but, to my mind, it is the exceptional work which demands them and it is the exceptional character who thrives in such surroundings. At any rate, they should not be multiplied unnecessarily at the expense of funds which might be available for more general purposes.

Such institutes constitute a real menace when they are coupled up with an educational institution, unless they assume an educational function and do their share of teaching as well as research. As a general principle, the research institute has as much the duty to teach as the true teacher has the duty to keep his information alive by research. The separation of research from teaching in an educational institution is fraught with real danger because it takes away from the teacher that which is his just due. How does one imagine that it will be possible to fill the teaching position with the very best man if there is side by side with him another for the express purpose of doing that part of the work which should be nearest his own heart? It is true that experience shows that even under these adverse conditions the "teacher" often does as well if not better than his research fellow, but I am sure the average board of trustees will hardly understand why, after having so splendidly equipped the research department or after having it equipped for them by an endowment, they should do much more for the teacher than to give just what is absolutely necessary for teaching purposes. If the best man must choose under such circumstances he is sure to select the research work and so the student, who should certainly be entitled to instruction by the best man available, loses.

The trouble, of course, in some cases, is that research in the abstract appeals more strongly to those who are willing to give the means for such purposes; still I believe that with proper information such individuals would be perfectly willing to give the money in such a way that it could be used for research without crippling teaching.

If we apply this to the conditions in medicine and surgery it is evident that, far from putting such a discouragement in the way of our future professors of medicine and surgery, we should carefully see to it that whatever means are available for research are at their direct disposal. It is possible by good assistance to relieve a man in many ways from unnecessary drudgery and in this way give him ample time for that most important part in the pursuit of new knowledge in his department, which he must do himself. In fact, when we look at the life-history of our great men, we find that they have found time for such work in spite of almost insurmountable difficulties, in the way of time and equipment, and who will say that the tremendous struggle was not part of their success? Still I firmly believe that unnecessary friction should be avoided, all clerical and administrative work, if necessary, examinations, etc., got out of the road; then it will become apparent that it is not so much teaching as a mass of other much less important detail which has clogged the machinery.

In other words, for our teaching positions in medicine and surgery we must get the best men available, and in order to get them we must carefully guard the positions which are to be filled by them, and see to it that they really become attractive to the best talent.

From this point of view the establishment of chairs of research medicine is an even more serious mistake. Research medicine is no special branch of medical knowledge that is worthy of a representation in a medical faculty. The mere existence of such a chair in a way reflects on the work of the rest of the members of the faculty. But one may say: Your objections are directed against words rather than against facts. The title is merely a misnomer and experimental pathology or pathologic physiology is really what is meant. Even then the experiment remains objectionable because it places something between pathology and medicine which should not be there. There is no doubt that our medical schools will prosper just so much as they will do work in "research medicine," but that this type of work should be intimately connected with the clinics no one will doubt. Investigations of this character are the one thing necessary to rejuvenate our teaching in medicine and surgery. Why increase the existing evils by giving the men in the so-called practical chairs an excuse for not doing what it is plainly their duty to undertake? The only reasonable step to take is to force our laboratories into our old musty clinics. We must get fresh air, a different atmosphere and a truly scientific spirit into them, and the only way to do this is by making residence in them congenial to the true investigator.

I do not wish to be understood as saying that the only qualification which the clinical professor of the future needs is proficiency in laboratory work; far from it. There are only few laboratory workers who possess that additional experience and those additional gifts of talent and character which can rightly be demanded of a leading clinician, but that he should have a fundamental training in the methods of investigation in physiology and pathology seems self-evident. The life-history of all our great clinicians is sufficient warrant for this assertion; and I also believe that another assertion cannot be easily challenged, namely, that the experimental investigation of those physiologic problems which are intimately connected with the manifestations of disease can be best done in laboratories directly connected with the clinics and not on the outside in separate institutions.

I present these views for the consideration of the members of the medical profession at large with the hope that they will take a real interest in the matter, first, because in the long run we shall get those conditions in our medical schools which the consensus of the great body of well-trained physicians demands; and second, because the endowments which are to realize our ideals must come largely through the personal influence of those who in active practice come in contact with wealthy individuals who are anxious to use what they possess for the immediate benefit of their fellow men and for the common welfare of humanity.

Sacramento and Webster Streets.

New and Nonofficial Remedies

The following additional article has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Its acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

SODIUM SUCCINATE, EXSICCATED — Sodii Succinas Exsiccatus.—Exsiccated sodium succinate is the disodium salt of succinic acid containing not less than 95 per cent. anhydrous sodium succinate, $NaOOC.CH_2.CH_2.COONa$.

Exsiccated sodium succinate occurs as a white, granular, odorless powder, possessing a characteristic saline taste. It is readily soluble in water, but insoluble in alcohol, ether and chloroform. When heated it chars and burns, leaving a residue which responds to tests for sodium and carbonate.

If 10 c.c. of a 1 per cent. aqueous solution of sodium succinate be treated with 10 c.c. of diluted sulphuric acid no precipitate should form; if this solution be extracted with an equal volume of ether, the ethereal extract on evaporating should leave a white crystalline residue of succinic acid.

If to 10 c.c. of a 1 per cent. aqueous solution of sodium succinate a few drops of ferric chlorid solution be added a voluminous reddish brown precipitate should be formed.

If 10 c.c. of a 1 per cent. aqueous solution of sodium succinate be treated with 1 c.c. of diluted nitric acid, the addition of a few drops of silver nitrate solution should produce not more than a slight opalescence.

If 10 c.c. of a 1 per cent. aqueous solution of sodium succinate be treated with 1 c.c. of diluted hydrochloric acid, the addition of a few drops of barium chlorid solution should produce not more than a faint turbidity within ten minutes.

If 10 c.c. of a 1 per cent. aqueous solution of sodium succinate be acidified with 1 c.c. diluted hydrochloric acid and saturated with hydrogen sulphid no coloration or precipitate should appear.

If about 0.5 gm. sodium succinate be heated with 5 c.c. of sulphuric acid U. S. P. until dissolved, not more than a darkening but no distinct charring should be observed.

If 0.75 to 1.5 gm. exsiccated sodium succinate be dried at 150° C. to 200° C., the loss in weight should indicate the presence of not more than 4.0 per cent. moisture; the dried residue treated as described in U. S. Pharmacopeia VIII for sodium acetate should yield an amount of sodium carbonate equivalent to 99 per cent. anhydrous sodium succinate ($NaOOC.CH_2.CH_2.COONa$). (1 c.c. of half normal sulphuric acid is equivalent to 0.0402 Gm. pure, anhydrous sodium succinate.)

Actions and Uses.—Sodium succinate is a saline cathartic. It has been claimed on not very good evidence that it has an antiseptic action in the biliary tract. It is claimed by some clinicians that sodium succinate is useful in combating infections of the gall-bladder and biliary passages.

Dosage.—0.3 Gm. (5 grains) three or four times a day.

Non-Proprietary Preparations:

Sodium Succinate, Exsiccated, Fairchild.—Manufactured by Fairchild Bros. & Foster, New York. No U. S. patents or trademarks.

Sodium Succinate, Exsiccated, Merck.—Manufactured by Merck & Co., New York. No U. S. patent or trademark.

Therapeutics

ANESTHESIA AND ANESTHETICS

(Concluded from Vol. lvii, page 1997)

LOCAL ANESTHESIA

The introduction of general anesthesia with nitrous oxid by Wells, in 1844, with ether by Morton, in 1846, and with chloroform by Simpson, in 1847, was an incalculable blessing to patients who had to submit to operations, but this general anesthesia did not satisfy all patients. Some were unwilling to undergo the risk or to incur the discomfort of taking a general anesthetic, in some cases it was distinctly contra-indicated, and there was a considerable and growing demand for some local application which should prevent the patient from feeling pain while he was submitting to incision, the handling of the tissues, and the insertion of sutures.

Probably the first successful local anesthesia was produced by the application of ice, or a mixture of salt and ice, to the site of the incision until the part became frozen and its sensibility thus abolished. This sort of anesthesia was adapted only to the most superficial operations, such as the opening of abscesses, incising felons, operations on ingrowing toe-nails, etc.

The next step in local anesthesia was the freezing with ether of the part to be operated on. The ether was applied in the form of a fine spray by means of an atomizer until the part became frozen so that sensation was abolished. This was less cumbersome than the use of mixtures of ice and salt, and it was capable of more definite limitations to the part where the incision was to be made, and in this respect was superior to freezing by ice; but neither of these methods was entirely satisfactory, because when the congelation passed away and the circulation was restored in the part the patient often suffered more pain than he would have experienced from the cutting operation if the part had not been frozen and if no effort had been made to benumb the sensibility of the part.

A later remedy included in the same category of freezing mixtures is ethyl chlorid. This is dispensed in small glass containers with a small metallic outlet, the opening of which is covered by a stopper held in place by a spring. When this is opened, the glass being held in the hand, the warmth of the hand vaporizes the ethyl chlorid in the bottle so that it emerges from the metallic opening in the form of a fine spray, which, when held several inches away, freezes the part with which it comes in contact. This is easier to handle and more elegant in application than either of the other methods already mentioned, and is considerably employed for slight operations like the opening of abscesses.

Local anesthesia did not attain very marked popularity, however, until Koller, in 1884, demonstrated many of the anesthetic properties of cocain. His first observations were made on the effect of solutions of cocain on the mucous membranes of the eye. These observations were extended to other mucous membranes, and the announcement of them was received by the profession throughout the world with the greatest interest. Many experimenters followed the lead of Koller and extended their experiments in many directions. It was soon found that while solutions of cocain obtunded the sensibility of mucous membranes, they had no effect on the unbroken skin; but injected beneath the skin by means of a hypodermic syringe they produced abolition of sensation.

As the knowledge of the action and effects of cocain increased, it was found that, if used too freely, it often produced alarming symptoms. This was especially the case when the drug was administered hypodermatically. It was then soon discovered that if the circulation of the part to be operated on was brought to a standstill by the application of bands, applied for instance around the limbs, if that happened to be the seat of operation, a smaller quantity of cocain was necessary to bring about anesthesia, the anesthesia continued longer, and if the circulation was then restored gradually, the effect of the drug on the entire body was less likely to produce unpleasant symptoms.

At first the strength of cocain usually employed was a 4 per cent. solution in distilled water. Later, it was found that a 2 per cent. solution was effective, and still later solutions of less than 1 per cent. were found to act satisfactorily.

Still further observations with cocain and other local anesthetics led to the conclusion that often the sensibility of the part might be sufficiently benumbed by the hypodermatic injection into the tissues of sterile water. The anesthetic effect of these injections was believed to be due to the pressure on the terminations and trunks of the nerves. S. Gant, of New York, has, during the last ten years, advocated this means of producing anesthesia and has employed it especially in surgery about the rectum. He maintains that the water should be injected into the lower layers of the skin, and that it is only when the skin becomes pale and apparently edematous that the most efficient anesthesia is secured.

On account of the unpleasant effects sometimes witnessed after the hypodermic injection of solutions of cocain, other drugs have been sought which might replace cocain. Among the earliest substitutes proposed were two preparations of eucain, distinguished as alpha- and beta-eucain. It was soon determined that the latter of these was the one best fitted for use in producing local anesthesia.

In 1905, novocain was discovered. It has been found to possess some advantages over cocain. It is extremely soluble in an equal amount of water. It can be sterilized by boiling without undergoing change. Cocain, on the other hand, is liable to be disintegrated if it is boiled. Novocain does not injure the tissues, does not interfere with the healing of wounds after operation, and is estimated to be from one-sixth to one-seventh as toxic as cocain. It may be used in distilled water or in a physiologic salt solution, and it may be combined with a small amount of the vasoconstricting principle of the suprarenal glands, viz., epinephrin (adrenalin, suprarenalin, etc.). This combination with adrenalin chlorid, by contracting the vessels and lessening the rapidity of the circulation, intensifies the action of the drug so that much less is required than when the adrenalin is not used with it. The drug may be used in strength of one-half of 1 per cent. solution. On mucous membranes its action is inferior to that of cocain.

In 1907, a mixture of quinin and urea hydrochlorid began to be used as a local anesthetic. This was at first used in 1 per cent. solution, but it was found that this produced an exudate of fibrin which interfered with healing, so that later weaker solutions were used, and it was finally determined that 0.25 per cent. solution was ordinarily sufficient to produce local anesthesia. This produces a more protracted anesthesia than the other drugs mentioned, often lasting for several days. It is said to have no toxic effect. The drug may be dissolved in water or in physiologic (0.7 to 0.9 per cent.) salt solution.

A large variety of operations may be done under local anesthesia. We have already spoken of operations on the rectum in which sterile water anesthesia has been extensively employed. Anesthesia by means of quinin and urea hydrochlorid has been used in operations on the tonsils with considerable advantage because it not only abolishes the pain, but also by the exudate of fibrin diminishes the tendency to hemorrhage. Local anesthesia has been used especially in operations for hernia, on the genito-urinary organs, exploratory laparotomy, abscesses of the vermiform appendix and of the gall-bladder.

PRESCRIPTIONS

The following prescriptions, which have been taken from various sources, may be of interest:

GASTRIC FERMENTATION

℞	Gm.			
Sodii salicylatis	6			ʒiss
Bismuthi subnitrat's	4		or	ʒi
Pulv. sacchari	2			gr.xxx

M. Fac pulveres xxx.
Sig.: One after each meal.

HYPERACIDITY

℞	Gm.			
Prepared chalk	5			gr.lxxv
Magnesia	2		or	gr.xxx
Bismuth subnitrate	0	5		gr.viii

M. Fac pulv.
To be taken at one time. (*Bull. Gén. de thérap.*)

VERRUCÆ

℞	Gm. or c.c.			
Acidi salicylici	1			gr.xv
Alcoholis	1			♏xv
Etheris	2	5	or	fl.ʒss
Collodii	5			fl.ʒi

M. Sig.: Apply one drop once daily.

℞.	Gm. or c.c.			
Acidi salicylici	1			gr.xv
Acidi lactici	1		or	♏xv
Collodii	ad 10			ad fl.℥i

M. Sig.: For external use.

℞	Gm. or c.c.			
Resorcinolis	10-20			ʒiiss-ʒv
Glycerini			or	
Petrolati	āā 25			āā ℥i

M. Ft. pasta. (*Merck's Archives.*)

PSORIASIS AND CHRONIC ECZMA

℞	Gm.			
Salicylic acid		6		gr.x
Chrysarobin	1	3		gr.xx
Green soap	1	6	or	
Lanolin	1	6		gr.xxv

To be applied every morning. (*Tribune Médicale.*)

CHILBLAIN

℞	Gm. or c.c.			
Ichthyolis	1			fl.ʒss
Resorcinolis	1			gr.xxx
Acidi tannici	1		or	gr.xxx
Aquæ dest.	50			fl.℥iii

M. Sig.: Apply at night.

℞	Gm. or c.c.			
Camphoræ	0	5		gr.viii
Ceræ albæ	20			ʒv
Olei lini	40		or	fl.℥i ʒii
Balsami peruviani	0	75		fl.ʒiss

M. F. ung.

℞	Gm. or c.c.			
Iodi (vel. ichthyolis)	0	2		gr.v
Collodii	20		or	fl.℥i

M. Sig.: Apply once daily.

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SATURDAY, FEBRUARY 24, 1912

THE SUSCEPTIBILITY TO INFECTION IN DIABETES

That there is a lowered resistance to certain forms of infection in diabetes is not questioned. The susceptibility is shown in various ways: Pulmonary tuberculosis runs a rapid and unfavorable course; there is a pronounced tendency to furunculosis and to other forms of suppurative infection, notably phlegmons and carbuncles, which often become complicated with gangrenous processes; gangrene of the lung is a relatively frequent complication of pulmonary infection in diabetes; and finally, the gangrene of the extremities in diabetes may be regarded as a result, at least in part, of lessened resistance to infections and toxic agents.

The exact cause of this definite diminution in resistance to infection has not been determined. The view has been expressed that the lowered resistance may be due to the abnormally high sugar content of the blood, which might favor the growth of various bacteria or possibly neutralize the bactericidal and other anti-infectious powers of the blood. There is no experimental evidence in favor of the view that increasing the amount of sugar in the blood within reasonable limits produces either one of these effects. Thus Handmann[1] finds that the addition of glucose to the blood to the extent of 0.5 per cent. to 1 per cent. does not render it a better culture medium for staphylococci than normal blood; furthermore, that the addition of sugar to the blood does not diminish its bactericidal power for staphylococci, nor does it reduce the opsonic power of the serum with reference to this coccus. It may be noted, however, that Sweet in pancreatectomized dogs found that the serum in the later stages loses its bactericidal power especially with reference to colon, typhoid and dysentery bacilli, and also to a large extent, its hemolytic power. Furthermore, Da Costa and Beardsley observed a distinct diminution in the opsonic power of the serum in diabetics for streptococci, staphylococci and tubercle bacilli. They did not, however, determine whether this diminution in opsonic power was due to a diminution in the thermostabile opsonic element or in the thermolabile element or complement; neither did they make repeated observations on the same patients over long periods of time so as to determine what relations, if any, exist between the changes in the opsonic power of the serum and the occurrence of complications due to the usual diabetic infections.

It has been suggested that diminished alkalinity of the blood in diabetes reduces the anti-infectious power of the blood, but this possibility has not been investigated with sufficient thoroughness to develop any definite facts. It has also been urged that there is no change in the general anti-infectious powers of the blood and other fluids in diabetics, but rather a local loss of resistance concerning the exact nature of which no explanation at all has been advanced. The latter view is based largely on the fact that diabetic patients do not seem to be much more liable to general infections and to miliary tuberculosis than other individuals. It may be pointed out, however, that the observation by Sweet that the serum of pancreatectomized dogs loses its bactericidal power and the observation by Da Costa and Beardsley of the diminution in opsonic power of the serum of diabetics point distinctly to general diminution in the anti-infectious powers in diabetes; hence further and more comprehensive investigations are indicated along these lines and especially, it would seem, with reference to the complement content of the blood in the course of diabetes and to the phagocytic and other powers of the leukocytes. The investigations to the results of which reference has been made clearly are not sufficiently comprehensive and thorough to go to the bottom of the matter.

BODY CELLS AND FOOD SUBSTANCES

"The cells of our body never learn what the character of the food which we eat really is." With this sentence, delivered at a recent meeting of Swiss men of science, Professor Emil Abderhalden[1] has concisely defined a modern point of view on nutrition which is rapidly becoming prominent. Before they leave the alimentary tract the foodstuffs which we eat are disintegrated into common fragments that serve as the real nutrients of the organism. Complex carbohydrates are resolved into indifferent sugar molecules like those of glucose; fats are split into glycerol and fatty acids; proteins yield an aggregation of characteristic amino-acids. Indeed, the main function of digestion is to put these comparatively simple "building-stones" at the disposal of the internal tissue cells so that they can select, synthesize or further rearrange them as the special functions require. Whether it is the proteins of meat or of cereals that we ingest is, after all, largely a matter of indifference to the organism; for they all furnish similar digestion fragments, so long as the alimentary processes perform their duty. It is not meat or wheat, but amino-acids that are offered for nutritive appropriation. Quoting Abderhalden again: "The gastro-intestinal canal with its digestive ferments forms a mighty barrier against the outer world. That which is distinctly foreign cannot penetrate into our bodies."

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[1] Handmann: Deutsch. Arch. f. klin. Med., 1911, cii, 1.

[1] Neuere Anschauungen über den Bau und den Stoffwechsel der Zelle, Berlin, 1911, Julius Springer.

If this conception is correct, namely, that our metabolic activities are really carried out at the expense of comparatively few definite, related and unvarying disintegration fragments of the widely divergent foodstuffs, it ought to be quite possible to fulfil the nutritive needs of the organism with mixtures of these fragments supplied in place of ordinary highly complex food. The experimental evidence that this can be done is rapidly accumulating. Animals have been maintained in nutritive equilibrium for considerable periods when fed on mixtures of predigested foodstuffs.[2] Even more suggestive, however, is a very recent study of the metabolism of growing animals fed with meat or the products of the complete digestion of meat respectively.[3] The dogs showed not only maintenance, but typical growth as well, on the products which were offered in the form of digestion fragments. There is a tendency for the occasional "escape" of some of the latter unchanged in the urine; but this "alimentary aminosuria" is not widely different from the explicable alimentary glycosuria which often follows the administration of undue amounts of sugars.

These newer facts of nutrition help us to understand why substances not widely removed in character from those which serve as foods may nevertheless awaken such marked reactions in the organism when they are introduced unchanged directly into the circulation. To the cells these complexes in their undigested form appear as objectionable foreigners; and the untoward effects which we often perceive are the outcome of the struggle to master or utilize a stranger to the living protoplasm.

SPICES AS PRESERVATIVES

The controversy in regard to the use of chemical preservatives may serve to remind us of the little-valued properties of some of the familiar food condiments. It is a matter of common knowledge that fruits and vegetables prepared with the addition of vinegar and spices keep far better than do those put up alone. One need merely recall the well-flavored home-made catsups and pickles. But something more than the "impression" of success is necessary to convince the up-to-date food-consumer. He has been trained to demand exact scientific evidence for the validity of the most hallowed traditions of the culinary art. It is interesting—comforting, we are inclined to add—to find available data on some of these points at the present moment.[1]

Just what condiments have value as food preservatives has not been conclusively determined. According to the observations of Hoffmann and Evans on apple-sauce (which they used as material for study), ginger, black pepper and cayenne pepper do not prevent the growth of microorganisms; whereas cinnamon, cloves and mustard are valuable preservatives, and nutmeg and allspice delay growth. Cinnamon and mustard are particularly valuable, for they are palatable even when used in proportions that prevent all growth.

The active antiseptic constituents of mustard, cinnamon and cloves are their aromatic or essential oils. Cinnamon, for example, yields cinnamic aldehyd, which appears to possess a preservative action superior to that of benzoic acid, and aids materially in preventing the spoiling of foods to which the condiment is added. In view of these experiments it seems rational to urge the more liberal use of the delicious cinnamon and cloves in place of such ineffective spices as pepper and ginger. The latter are commonly irritating to the mucous membranes; and now that we know condiments which quite surpass them as preservatives, the use of the irritating type in preserved foods may appropriately be restricted to the purposes of flavor alone. As Hoffmann and Evans remark, it is a "lucky coincidence" that some of the most attractive flavoring spices also help to keep the food from spoiling.

THE RELATION OF RICE TO CERTAIN DISEASES

Enough evidence has been gathered in very recent years to make it clear that at least one of a series of diseases which occur in more or less epidemic form is not infectious. Among the group including scurvy, pellagra and beriberi, the close relation of which to the food supply has long been appreciated, the etiology of beriberi has become sufficiently elucidated to point the way to effective curative as well as prophylactic measures which have already been successfully tested. Since Eykman pointed out that beriberi is not attributable to rice in general, but that certain kinds of rice or better rice prepared in certain ways are more liable to produce the disease, the progress in the effective investigation of the problem has been rapid. These advances have further been greatly facilitated by the finding that it is possible to induce in birds fed on white or polished rice a disease characterized by a degeneration of the peripheral nerves (polyneuritis gallinarum), and resembling beriberi in several respects. Furthermore it is interesting to note that the same changes in diet which either avoid or cure beriberi in man act in a similar manner in respect to the polyneuritis of the fowl. Here once more animal experimentation has become linked with the beneficent art of healing.

The story of the successive steps which have led to an effective mode of eradicating beriberi would make an interesting chapter. We cannot give the details here;[1]

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[2] Rona: Oppenheimer's Handbuch der Biochemie, 1910-11, iv, 540.

[3] Buglia: Unters. über die biologische Bedentung und den Metabolismus der Eiweissstoffe, Ztschr. f. Biologie, 1911, lvii, 365.

[1] Hoffmann and Evans: The Preservative Action of Spices, Jour. Home Economics, 1911, iii, 452; Jour. Industrial and Engineer. Chem., November, 1911, p. 835.

[1] Interesting facts may be gathered from the following papers: Aron: Phosphorus Starvation with Special Reference to Beriberi, Philippine Jour. Sc., (B.), 1910, v, 81; Heiser: Practical Experiences with Beriberi and Unpolished Rice, ibid., 1911, vi, 1237.

but it is established that the same kind of rice which causes beriberi, if the diet of the people is based almost exclusively on this foodstuff, is without any ill effect if a sufficient amount of other things such as fresh meat and vegetables are taken with it. The additional curious fact is that the "polishing" of the rice, i. e., the removal of the outer layers by the milling processes, changes a harmless foodstuff into a harmful one. Obviously the cortical layer or pericarp of the grain or more probably the discarded embryo contains something essential for nutritive equilibrium.

An early suggestion was that the bran furnished an antidote to some toxic substance in the polished or white rice; but it is far more reasonable to assume that by the milling or preparation of the rice for food, constituents of importance are taken away or changed so that they no longer serve their purposes. The marked difference in the composition of the harmless undermilled rice and the harmful polished rice is shown in the low phosphorus and potassium content of the latter.[2] These elements are concentrated, so to speak, in the outer layers or bran, so that an analysis of rice with reference to them will indicate to what extent the decortication has been carried out in milling. In the East these analytic facts have become a good guide in the selection of a beriberi-preventing rice; and though no absolute standard has been adopted, rice is regarded as unsafe if it indicates a content of less than 0.35 per cent. phosphorus pentoxid.

The practical experiences with beriberi and unpolished rice in the Philippines, as they have been reported by the director of public health, Professor Victor G. Heiser, leave little doubt that medical science has placed a "weapon in the hands of prophylactic medicine for the eradication of another of the world's serious and costly diseases." Henceforth, in addition to spreading the gospel of prevention and promoting a campaign of education in places where traditions are difficult to eradicate, the physiologic and chemical intricacies of the problem must be further unraveled. Rice-polishings contain a substance which cures the polyneuritis produced in birds by feeding on white rice. Is it the lack of phosphorus compounds or potassium salts *per se* which leads to the degeneration of the nerves, or are these elements merely an index of some accompanying compound? It is true, according to Chamberlain, Bloombergh and Kilbourne, that in neuritis-producing rice and in beriberi-producing dietaries both phosphorus and potassium are remarkably reduced in amount, the latter in greater degree than the former. Despite the earlier promises of success with certain organic phosphorus compounds like phytin, however, it appears that the polyneuritis of fowls is not prevented by adding to a diet of polished rice various salts of phosphoric acid or of potassium. A complicating factor further arises from the fact that inanition may lead to symptoms of multiple neuritis or increase the susceptibility to it. Chamberlain and Vedder[3] have already tentatively established the fact that the polyneuritis of fowls may be prevented by means of an extract of rice-polishings containing only those substances soluble in water and alcohol. The neuritis is probably not due to lack of phosphorus compounds in the diet, as has been claimed. The neuritis-preventing substance is capable of dialysis and thus colloids are excluded from consideration.

Close on this announcement from the U. S. Army Board for Study of Tropical Diseases has followed the report of Dr. Casimir Funk of the Lister Institute in London.[4] A careful chemical search for the effective agent shows that it is present in minute amounts only, probably not more than 0.1 gram per kilo of rice. "The substance which is absent in polished rice and is contained in rice-polishings is an organic base which is completely precipitated by phosphotungstic acid and by silver nitrate and baryta. The curative dose of the active substance is small; a quantity of substance which contains 4 milligrams of nitrogen cured pigeons." If further investigation substantiates these claims it will afford another evidence of the profound importance of the hitherto underestimated "accessory" components of our diet, even though they are present in what may be termed minimal amounts.

THE IMPROVEMENT OF OBSTETRIC TEACHING

In a recent article Williams[5] forcibly calls attention to the deplorable state of obstetric teaching in our medical schools. The lesson to be drawn from this condition of affairs is that obstetric teaching must be made more practical. He outlines the essentials for the improvement in this regard, but does not emphasize sufficiently, perhaps, one important feature which may be commented on here.

In the practice of medicine, obstetrics has heretofore occupied a position of subordinate importance, and yet in the light of modern scientific medicine, childbirth should be regarded as of equal importance with the most vital operation in surgery. Consequently it should be treated in all respects with the same care and asepsis and with the same attention to perfect technic. Every case of labor presents possibilities of sudden and grave seriousness. Under the complex conditions of modern life, and even among people who live nearer to Nature and under less complex conditions, as among the Indians, as shown by two recent letters[6] in THE JOURNAL, many serious obstetric complications occur—complications that often mean death to the mother or child if not rightly managed. In the large cities particularly, untrained midwives attend a vast proportion of obstetric cases. Viewing these as surgical cases, every patient should be attended by a person practically trained in obstetrics.

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[2] Chamberlain, Bloombergh and Kilbourne: Rice Diet, Philippine Jour. Sc., (B), 1911, vi, 179.

[3] Chamberlain and Vedder: Etiology of Beriberi, Philippine Jour. Sc., (B), 1911, vi, 251.

[4] Funk: The Chemical Nature of the Substance Which Cures Polyneuritis in Birds Induced by a Diet of Polished Rice, Jour. Physiol., 1911, xliii, 395.

[5] THE JOURNAL A. M. A., Jan. 6, 1912, p. 1.

[6] Shoemaker, F.: THE JOURNAL A. M. A., Jan. 6, 1912, p. 31. Krulish, Emil: Ibid, Feb. 17, 1912, p. 504.

Yet (and this is a point brought out in strong relief in the interesting correspondence[3] elicited by our otherwise regrettable article[4] on the management of normal labor), conditions must be dealt with as they are, not as they should be. One man cannot lay down rules drawn from the conditions of his own practice, to be followed implicitly and without modification by another practitioner in wholly different circumstances; and this brings us to the suggestion which was the purpose of this editorial.

The employment of midwives in the large cities, for the present at least, seems almost a necessity, and especially so long as there is such a large foreign-born population in these cities. But is it not possible to make available for teaching purposes in the practical training of physicians and midwives a large number of the cases that are now attended by untrained midwives? Is it not a fact that midwives are employed in the majority of instances because their services can be had at less cost than those of a physician? The problem is to bring about a condition in which a large number of such patients can be treated in hospitals under the best of conditions and be used for teaching purposes. It should be possible also to utilize much of this material outside of the hospitals by having out-patients attended by students, accompanied of course by trained physicians. These methods have reached the fullest development in European countries. The aim in the teaching of obstetrics above all things should be to make it practical; at the present time practical teaching is impossible, simply because what should be available material for the purpose is not available. Can it not be made so?

Current Comment

MRS. EDDY AND THE NATIONAL LEAGUE FOR MEDICAL FREEDOM

Mrs. Mary Baker Eddy, the founder of Christian Science, years ago, forbade her followers to enter into any league with "occultists, mesmerists and venders of patent pills." If she were alive to-day, she would undoubtedly have prevented the organization of which she was the head from making the fatal tactical blunder of an alliance with the pseudomedical cultists, sectarians and faddists, patent-medicine fakers, food adulterators and quack doctors, who go to make up a part of the motley crowd which calls itself a "League for Medical Freedom." This injunction on the part of Mrs. Eddy, evidently overlooked by her successors, has been pointed out by Mrs. Augusta E. Stetson, insurgent Christian Scientist and ex-reader in one of the leading eastern churches of this cult. Mrs. Stetson says, according to the Rochester (N. Y.) *Evening Times*, that such an alliance is in direct violation of the injunction of the founder, who wrote, "By rendering error such a service, you lose much more than can be gained by mere unity on the single issue of opposition to unjust medical laws." It has been recognized for some time that the alliance of "Christian Science" with all sorts of medical fads and fakes was rendering error a great deal of service. In fact, it has generated about as much error as a single organization possibly could. Whatever one may think of Mrs. Eddy's religious and philosophic vagaries, no one familiar with her life has ever questioned her practical shrewdness and farsightedness. That those who have succeeded her as leaders are not her equals is not strange. History is full of causes and crusades which, after the death of the prophet who inaugurated them, went to pieces through the blunders of disciples who succeeded to the leadership.

IDENTIFYING THE MANUFACTURER

Last week we called attention to a new organization, composed of a number of the large pharmaceutical manufacturing companies, the National Association of Manufacturers of Medicinal Preparations. Here it is worth noting that at least one manufacturing company was unable to stomach this newest cabal in the pharmaceutical world and refused to join it—although its representative was present at its organization. As we then recorded, with sorrow, this association is apparently opposed to legislation in the interest of public health and safety whenever such legislation would result in decreased profits for the manufacturers. For instance, it opposes the law that would prohibit the making of exaggerated and misleading therapeutic claims; it opposes the law that would regulate the transportation of habit-forming drugs and it opposes a law requiring the weight of drugs, sold in package form, to be printed on the label. To all this we called attention last week. The National Association of Manufacturers of Medicinal Preparations also opposes a law that would compel the manufacturers of all medicinal preparations to put their own names on their own products. Those of our readers who remember an article published in The Journal a year and a half ago, entitled "Pharmaceutical Manufacturers and the Great American Fraud," will realize at once why this association of pharmaceutical manufacturers is opposed to any law that would permit the public and particularly the medical profession, to know the class of trade some of its members cater to. It would naturally prove embarrassing, if not positively painful, if some of the members of this association should have to put their names on such of their products as "Nyal's Headache Wafers," which were declared misbranded under the Food and Drugs Act; "Robusto," the "true bracer for young men"; the pills that were sold by the Nutriola fraud; the "patent medicines" that were supplied to "Professor" Adkin of the notorious New York Institute of Physicians and Surgeons; "Cascarets," which "work while you sleep," or "Danderine," which "grows hair and we can prove it." Under the circumstances, then, it is not surprising to learn that the secretary of the National Association of Manufacturers of Medicinal Preparations characterized the bill which would permit the public to identify the manufacturer as "a foolish provision," or that the president of this organization should look on the bill as one "that we can conscientiously oppose." If one's sense of humor can stand the strain, this fact is worth noticing: The president of this new organization, who thus opposes a law that will throw light on the connection between pharmaceutical manufacturers and the "great American fraud," was nominated for his position by a manufacturer who has long shouted from the house-tops that he made "no dope for quackery"! Verily, politics and the nostrum business make strange bed-fellows!

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[3] The Journal A. M. A., Feb. 3, 1912, p. 428; also this issue, Correspondence Department.

[4] The Journal A. M. A., Jan. 27, 1912, p. 274.

WALDEMAR KOCH

The untimely death of Dr. Waldemar Koch, associate professor of pharmacology at the University of Chicago, at the age of 36, removes another of the group of younger American workers whose high ideals and devoted application to investigation are bringing credit to biologic and medical science in this country. Koch began his studies on the chemistry of the nervous tissues early, entering a difficult field of investigation which few older men have ventured to approach. Realizing that the virgin soil must be tilled by new methods in order to obtain its best offerings, he prepared himself through years of untiring energy for the promising tasks ahead. While Koch's published contributions were in no sense epochal, they show an independence of thought and a convincing earnestness which compel attention. Unfortunate indeed it is that he should have been denied the opportunity of reaping the harvest for which he had been preparing for so long and which was almost in sight. There is something refreshing in the contemplation of the modest mien which characterized the two Chicago colleagues, Ricketts and Koch. Without display of feeling, without thought of popular acclaim, yet with unbridled enthusiasm, these young men trudged along the tiresome path of the real investigator. How different from the ways of those pseudoscientists, unfortunately too numerous, who seek the public eye at every turn, proclaiming their unfailing judgment and oblivious of the real work which the search for truth demands! We may well pause to pay a deserved tribute to those unheralded workers in the advancement of knowledge.

EDUCATIONAL RESEARCH IN LONDON

A Royal Commission on University Education was created in London a few years ago for the purpose of inquiring into the present organization of the University of London and the other facilities for advanced education, general, professional and technical, existing in that city, and to recommend such changes as would appear desirable. The "Appendix of the Third Report" contains articles and testimony from a number of well-known university men and others bearing on all phases of educational work. Among those called on for information in regard to medical education are Dr. Friedrich von Müller, professor of clinical medicine at the University of Munich; Sir William Osler, regius professor of medicine at Oxford University and Mr. Abraham Flexner, of the Carnegie Foundation for the Advancement of Teaching. A review of the statements submitted by these gentlemen appears on another page of this issue of The Journal.[1]

CLINICAL PROFESSORS AND PRIVATE PRACTICE

Of particular interest are the opinions expressed in the statements referred to in the preceding comment, in regard to the limitation of the private practice of clinical professors — a matter much discussed in this country at present. Neither Osler nor von Müller favors cutting off entirely the clinical professor's private practice, but both advocate that such practice be limited. As von Müller points out, the clinical professor should be selected because of his ability as a scientist and not because of a successful private practice. The clinical professor's attainments should have a wide scientific foundation, so that he would know how to conduct, not only the work of his hospital wards, but also the work in his laboratories. Although a large private practice is not a recommendation, nevertheless some private practice is helpful, since it helps to keep the clinical professor in touch not only with scientific progress, but also with general professional life and with medical practitioners. He must himself be "a good physician because he has to instruct the young generation in practical medicine." Again, should he be "confined entirely to his laboratory and hospital he would be liable to make mistakes and come to wrong conclusions."

THE EFFECTS OF RADIUM EMANATIONS ON THE URIC ACID OF THE BLOOD

Recent investigations by Gudzent[2] indicate that the monosodium urate of the blood exists in two forms, (1) a more unstable laktam urate, and (2) a more stable laktim urate. This observer found that, in the blood of gouty persons containing an excess of uric acid, it is the more insoluble form, or laktim urate, which is responsible for the deposits in the tissues. On experimentation, Gudzent discovered that radium emanation (apparently "radium D") is capable of splitting off nitrogen from the laktim form, making it more soluble, and even decomposing it with formation of carbon dioxid and ammonia. Fofanow, working with Gudzent, introduced monosodium urate experimentally into animal tissues and found that he could make it disappear by means of radium emanation. Further studies by Gudzent showed that the metabolism of human beings, on a purin-free diet, could be markedly affected by inhalations of radium emanation. He found an increase in the excretion of endogenous uric acid and of purin bases. It is his belief that the emanation activates the ferments which make and which destroy uric acid. Gouty patients exposed to the radium emanation showed an increased excretion of exogenous purins, and the uric acid disappeared from the blood. It is also asserted that tophi actually became smaller or even vanished under the influence of the emanation.

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[1] Department of Medical Education and State Boards of Registration, page 580.

[2] Gudzent, F.: Einiges über die biologischen Eigenschaften der Radiumemanation und ihre Anwendung bei Krankheiten, Radium, 1911, i, No. 1, p. 1434; abstr. in Zentralbl. f. Biochem. u. Biophysik, 1911, xii, 402.

A PROFITABLE "BUSINESS"

The St. Louis *Post-Dispatch* reports that Dr. Waldo Briggs of the St. Louis College of Physicians and Surgeons has brought suit for $200,000 damages against the Missouri State Board of Health for placing that school on the board's discredited list. Particularly interesting is this statement in the *Post-Dispatch*: "Dr. Briggs alleges that he has been proprietor of the college forty years and that his annual income from it was $15,000 to $20,000 a year until September 27 last, when the board placed the school on the discredited list."

A GOOD WAY TO PREVENT ACCIDENTS

An interesting method of educating the public in the prevention of street accidents, which possesses possibilities in other directions, has been employed by the Boston Elevated Railway Company. The railway company offered a large number of prizes to high-school pupils for the best specimens of verses containing instruction and caution in the way of prevention of traffic accidents on the streets, which would appeal particularly to children. The plan created great interest among the school children, and a large number of answers were received. The company awarded about two hundred prizes, the largest being for $50. It is safe to say that practically every pupil in the Boston public schools knew of this contest and its purpose; and interest in its object was thereby communicated to the parents. The company printed a number of the poems offered, the pictures of the authors and a list of the prize-winners in a neat pamphlet. By this plan practically the whole population of Boston was taught a useful lesson in caution.

SHALL WE REFORM OR BE REFORMED?

The question of the secret division of fees for medical or surgical services, which has agitated physicians in various parts of the country for some time past, has reached such a point in New York that it is being discussed by laymen and by newspapers. A little over a year ago, the Erie County (N. Y.) Medical Society appointed a committee to investigate the causes and extent of this evil. The report of this committee appeared in THE JOURNAL,[1] and we then pointed out that, unless this question was promptly settled by physicians themselves, it would be taken up by the public. This prediction has come true. At a recent meeting of the Board of Regents of the University of New York, Mr. Draper, the State Commissioner of Education, in his report abstracted on another page,[2] discussed the subject and recommended a law forbidding the secret payment of commissions, and empowering the Board of Regents to revoke the licenses of any physicians or surgeons found guilty of such practices. The Brooklyn *Eagle*, in a lengthy editorial on Mr. Draper's report, demands that physicians institute a radical reform, and, if this be not done speedily, that the state put an end to secret commissions. THE JOURNAL has repeatedly condemned this practice. It has repeatedly warned physicians that, unless they themselves put a stop to this evil, the public would do it. Under the present plan of organization, the discipline of members and the enforcement of ethical conduct lies with the county society, which alone can call its members to account for wrong-doing. It is the duty of each county society in which such practices are suspected, publicly to declare, in no uncertain terms, where it stands on this question and then to apply its principles to its members. No amount of sophistry or of discussion of the "rights of the family physician" is going to obscure the plain fact that the secret payment of commissions for referred cases, or the secret division of fees among physicians—division, that is, without the knowledge of the patient—is a moral offense which every self-respecting physician or surgeon should consider beneath him. Financial arrangements between patient and physician are, to an extent, necessarily commercial. When fees are secretly divided, however, the issue ceases to be commercial and becomes a moral one.

PUBLIC PARKS AND THE PHYSICIAN

The value of public parks and playgrounds to the great mass of city dwellers is now generally recognized, but in the rapid growth of our cities timely provision for parks is usually overlooked until business and material interests have so much encroached on the available spaces that their conversion into parks is so expensive as to be almost prohibitory. In consequence, these lungs of the cities are utterly inadequate in too many places. While it is true that the health of the workers in a city is one of its most valuable assets from a purely material point of view, as conducing to efficiency and increased output, yet it is a matter of slow and difficult progress to bring the business portion of the community to realize the direct importance of a matter which, at first sight, seems to affect them so remotely. The movement for parks and playgrounds belongs to preventive medicine, in the modern conception of that subject. It is, therefore, the opportunity and the duty of the physician, as a public-spirited citizen, to exercise foresight in this matter, and to use his influence in securing adequate parks, playgrounds and breathing-spaces for the people. Physicians have not been entirely remiss in this matter, as in many places they have been the leaders in this work. Many American cities have realized the value of parks and playgrounds and have spent large sums of money in providing them. Some are splendidly equipped in this respect; so much so that in the recent meetings in Europe, concerning the town-planning and city beautification movement, some of our cities were cited as models to be imitated by the older urban centers of Europe. Berlin is one of these cities, having recently taken up the matter of providing a system of forest reserves or parks just outside the city, as well as several within the city limits, to give greater opportunity to the people for outdoor air, exercise and recreation — a *receptaculum oxygenii,* as it has been termed. The chairman of a committee having in charge this park promotion enterprise in Berlin recommends that the physicians, with the architects, should be the leading spirits in the hygiene of the masses, and says that it is a matter of reproach that millions are spent on sanatoriums for the treatment of tuberculosis, while no adequate provision is made for giving the masses the air and light and opportunity for recreation which would largely help to prevent the conditions which these sanatoriums try to cure at such great expense. The physician is the leader best fitted to direct such movements and he should not lag and leave to the publicist, the social worker, or others less well equipped the appreciation of the real requirements of the situation.

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[1] Medical Economics, Jan. 7, 1911, p. 59.
[2] Medical Economics, this issue, p. 582.

PHYSICIANS AND "PATENT MEDICINES"

A few weeks ago,[1] we called attention to the fact that the medical profession of the United States was being circularized by a firm that was selling Formamint tablets. The matter is again referred to this week.[2] These tablets are heavily advertised in Great Britain in the newspapers under exaggerated and misleading claims. We predicted that, in this country, the old scheme would be worked — of enlisting the aid of physicians before going to the public. A Canadian subscriber has just sent us a Montreal newspaper that contains an advertisement of Formamint, "the Germ-Killing Throat Tablet." The Formamint advertisement appears in a logical position in the Canadian newspaper. It is bounded on the north by advertisements of Wincarnis and Na-Dru-Co Laxatives; on the east by Beecham's Pills, Hayes' Asthma Cure and Marshall's Catarrh Snuff; on the south by Dr. Roberts' Ointment and Tarolema, and on the west by Doan's Kidney Pills, Blair's Gout Pills and Grasshopper Ointment! Evidently the time is near when it will appear in the newspapers of the United States consistently lined up with Lydia Pinkham, Duffy's Malt Whiskey and Peruna. In this country it is—at present — advertised only in medical journals! All of which leads us to quote once more from an article by an old advertising man, which appeared in *Printer's Ink* a few years ago:

> "But the 'patent medicine' of the future is the one that will be advertised only to doctors. Some of the most profitable remedies of the present time are of this class . . . The medical papers will reap the harvest, and the physician himself, always so loud in the denunciation of 'patent medicines,' will be the most important medium of advertising at the command of the proprietary manufacturer. In fact, he is to-day."

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[1] Jan. 27, 1912, p. 294.
[2] Propaganda for Reform department, this issue.

Stammering, Stuttering and Lalophobia. — Cadwallader (*Cleveland Med. Jour.*) classifies all difficulties with consonants under the head of stammering. Stuttering, he says, embraces all trouble with vowels or words beginning with vowels and is eliminated through perfect control of the stroke of the glottis. Lalophobia he defines as fear of stuttering and lack of confidence in oneself.

Medical News

CALIFORNIA

Health Society Bulletin.—The Los Angeles Health Society has issued a *Monthly Bulletin,* which is free to citizens of Los Angeles and others interested in health matters, and the purpose of which is to disseminate information of the work done by the Health Department, to aid in the betterment of health conditions, and to give instruction as to the prevention of disease.

New Officers.—Fresno County Medical Society: president, Dr. Olline B. Doyle; secretary, Dr. Lamont R. Willson, both of Fresno.——Los Angeles County Medical Society, Pasadena Branch: president, Dr. Thomas J. Orbison, Pasadena; secretary-treasurer, Dr. Lewis B. Morton, Altadena (reelected).——Alameda County Medical Association: president, Dr. William A. Clark, San Leandro; secretary, Dr. Pauline S. Nusbaumer, Oakland.

Would Interest Physicians in Civic Work.—The San Francisco Chamber of Commerce has inaugurated a campaign to increase its membership and desires to interest the physicians of the city in the movement. To this end, Dr. Washington Dodge addressed the San Francisco County Medical Society on February 6 on the policy of the Chamber of Commerce, the ambitions it has for the betterment of San Francisco and the reasons why it is incumbent on all good medical men to join in these efforts.

Hospital Notes.—Indorsed by the Merchants' Association of San Diego and the San Diego County Medical Society, the Talent Workers of their city have planned a campaign to raise $50,000 for the erection of a public hospital in the city.——Dr. Fred W. McKibbon has purchased the Oakdale Hospital, South Oakdale, and will build an addition to the institution.——The sum of $211,000 recently awarded to the Merritt Hospital, Oakland, in the condemnation suit of the state against that corporation, has been deposited with the clerk of Oakland County.

Stanford University News.—A new library in Stanford University Medical College is being erected at the corner of Sacramento and Webster Streets. The new building covers an area of 60 by 100 feet and the book stacks will be four stories in height.——A sum of money has been given the university by C. A. Coffin of New York, to start a fund to be used for medical research work, with special reference to the investigation and study of the organisms which cause the infectious diseases of Asia.——Drs. Roy H. Morris and Louis D. Mead have been appointed assistants in medicine and assigned to the department of pediatrics of the medical department of Leland Stanford, Jr., University.

Personal.—The automobile of Dr. Wilton M. Mason, Lodi, was struck by a trolley car, near Lodi, February 7, and demolished, but Dr. Mason was uninjured.——Dr. A. Hieronymus has been appointed city physician of Alameda.——Dr. W. Taylor Cummins, who recently resigned as bacteriologist of the research laboratory of the New York City Health Department, has been made director of the Mary W. Harriman Research Laboratory of the Southern Pacific General Hospital, San Francisco.——Dr. Thomas W. Huntington, health commissioner of San Francisco, has resigned.——Dr. Alanson Weeks has been appointed chief surgeon of the Emergency Hospital service of San Francisco.——Dr. Charles L. Tisdale, Alameda, has taken a trip to Cuba, Bermuda and the Canal Zone.——Dr. John B. Rogers, Napa, has been placed in charge of the Napa State Hospital, pending the election of a successor to Dr. Elmer E. Stone, Napa.——Dr. Clarence A. Wills, Centerville, has been appointed superintendent of the Oakland County Infirmary, vice Dr. William A. Clark, San Leandro, resigned.——Dr. William C. Voorsanger has been elected secretary of the San Francisco Association for the Study and Prevention of Tuberculosis; Drs. George H. Evans, Richard G. Broderick and William C. Voorsanger have been elected members of the executive council, and Drs. Mariana Bertola, Walter B. Coffey, Attilis H. Giannini, Charles G. Levison, Harry M. Sherman and Walter S. Thorne, members of the board of directors.

COLORADO

Personal.—Dr. and Mrs. George L. Knapp, Denver, have returned from Europe.——Dr. Edward Delehanty has been elected president of the medical staff of St. Joseph's Hospital, Denver; Dr. Leonard Freeman, vice-president, and Dr. William C. Bane, secretary.

Corner Stone Laid.—The corner stone of the trade school of the National Jewish Hospital for Consumptives, Denver, was laid February 8. The directors of the hospital propose to teach out-door trades in this school.

Hospital News.—A sanatorium, to cost $40,000, is to be built at Longmont by the Sawyer-Elwood Sanatorium Company.——A number of members of the Southern Colorado Medical Society have leased a house at Alamosa and established a hospital.

Practical Nursing.—The Denver School of Practical Nursing was recently incorporated, with Dr. William J. Workman, president; Dr. Mary Elizabeth Bates, vice-president, and Dr. Edwin J. Rothwell, secretary-treasurer. Physicians connected with the school will give instruction every day in the assembly room of the Y. M. C. A. to women who may be interested in the subject.

New Officers.—Fremont County Medical Society, January 24: president, Dr. Otis Orendorff; secretary-treasurer, Dr. Wilbur T. Little, both of Canon City.——Mesa County Medical Society: president, Dr. Carl W. Plumb; secretary, Dr. Charles N. Needham, both of Grand Junction.——Pueblo County Medical Association, January 17: president, Dr. Madison J. Keeney, Pueblo.

Fellowship Meeting.—About one hundred physicians of the state were the guests of the Pueblo County Medical Society at a good-fellowship banquet in Pueblo, January 25. The object of the gathering was to promote interest in the state medical society meeting, which is to be held in Pueblo September 24-26.——A reception and luncheon was given by the members of the Fremont County Medical Society to the officers of the State Medical Society at Canon City, January 26.

ILLINOIS

Personal.—Dr. Samuel M. Wylie and wife, Paxton, have left for southern Alabama.——Dr. W. W. Wooley, Peoria, who has been ill with rheumatism, is convalescent.

Tuberculosis Day.—Tuberculosis Day was held in Joliet, February 14, and a meeting in the Joliet Theater, under the auspices of the Joliet Antituberculosis Society, was addressed by seven physicians.

Hospital Notes.—The officials of the Suburban Hospital Association, Oak Park, announce that in a short time work will be begun on the new hospital on Ontario Street and Austin Avenue, as the suit brought by property owners has been decided in favor of the Hospital Association.——A committee of twenty-seven has been appointed to solicit funds for the purchase of the Princeton Hospital, that it may be established on a permanent basis as a municipal institution.

State Nurses for Insane.—The State Board of Administration, the State Charities Commission, the State Civil Service Commission and the superintendents of the seventeen state institutions of the charitable group, at a meeting held in Springfield, February 8, recommended that the state should create a distinctive class of nurses especially trained for state service in the care and treatment of the insane and appointed a committee consisting of Drs. William L. Athon, Anna; Sidney D. Wilgus, Hospital, and Eugene Cohn, Peoria, to outline a constructive course of study for nurses in hospitals for the insane, to report at the November conference.

Chicago

Money for Babies.—The entertainment of the Infant Welfare Society, February 14, at the Marquette Club, netted $2,000 for the association.

Mother and Child Welfare.—The Medical Woman's Club of Chicago has completed arrangements for a bureau of information which will supply, free of charge, reliable information and advice regarding the welfare of mothers and children. The bureau will be operated in connection with the John Crerar Library.

Personal.—Dr. Lewis L. McArthur, while operating, February 16, at Michael Reese Hospital, was robbed of his watch and chain, a valuable ring and a considerable amount of money.——Dr. Carl Frischkorn was struck by a street car, February 14, but was not seriously injured.——Dr. Barney Velty is said to have recovered $3,500 damages from the Rock Island Company, the Supreme Court holding that railroad companies are responsible for the negligence of sleeping-car employees.——Dr. J. B. Murphy recently returned from a trip to Cuba and the Canal Zone. While in Havana he was tendered a banquet by the local profession.

Tuberculosis Day.—The Chicago Department of Health devotes much of its current Bulletin to Tuberculosis Day, April 28, which has been set aside by the National Association for the Study and Prevention of Tuberculosis. This is the third annual observance of this day and plans are being made to have the gospel of health preached more widely than ever before. There are approximately 14,000 tuberculosis cases in Chicago and a large number of these are still curable. Tuberculosis can be avoided by keeping up the resisting power; by getting large quantities of pure air, day and night, all the time, everywhere; by avoiding overcrowded, overheated and underventilated living rooms, work-shops, street cars, or amusement places; by avoiding contact with the careless consumptive; by having premises cleaned and disinfected before occupancy; by knowing the source of the milk supply; by avoiding dry sweeping and dusting; by teaching the dangers of putting coins, pencils and other things commonly handled into the mouth; by avoiding overindulgence in alcoholic liquors and by avoiding the use of drugs. In addition to the above statements regarding tuberculosis, the Department of Health Bulletin gives the following acrostic summary of the disease:

TUBERCULOSIS
Undermines the family,
Brings sorrow,
Empties the purse,
Reduces to poverty,
Comes to the careless,
Unfits for work,
Limits life,
Orphans children,
Scoffs at drugs,
Isolates from friends,
Scores 4,000 deaths yearly
in Chicago.

INDIANA

Hospital Association at Linton.—At a mass meeting held at Linton, it was decided to form a hospital association and to buy property worth $45,000, to be used for a city hospital.

Public Health Course.—The trustees of the Indiana University School of Medicine announce that they will introduce a course in public health training in their curriculum. This will be given as a post-graduate course, and will fit the students for the degree of D.P.H.—Doctor of Public Health.

Dispensary for Babies.—The Children's Aid Association of Indianapolis has opened a dispensary for babies in the Baldwin Block, with a physician and trained nurse in attendance and daily clinics. The work will be greatly extended during the summer, when so much more need for this work exists.

Duties of Health Commissioners.—A radical change in the duties of county health commissioners is proposed in a bill to be introduced in the next legislature. By the provision of this bill, the health commissioners will be directly answerable to the State Board of Health and will not be allowed to engage in private practice during their term of office.

Social Service Work.—The Indianapolis Board of Health at a recent meeting considered a request of the Indiana University School of Medicine for an appropriation of $2,500 to conduct social service work in connection with the city dispensary. It is planned to employ visiting nurses, who shall visit patients to see that they are receiving proper food, obtaining plenty of fresh air and observing other sanitary precautions.

New State Hospital.—The governor has authorized the employment of an architect and the purchase of a site for a new state hospital in Indiana, for which it is expected the next legislature will make an appropriation. As Indianapolis will probably provide the greatest number of patients for the hospital, the governor suggests that it pay one-half the expense. Owing to the objections made to the use of Military Park, Indianapolis, for this hospital, the selection of a new site was made necessary.

Personal.—Dr. David Ross, Indianapolis, is convalescent after an operation for appendicitis.——Dr. Michael A. Young, Indianapolis, was struck by a trolley block recently and seriously injured.——Dr. Glen E. Howe, Fairmount, who disappeared from Indianapolis ten years ago, has been found in a hospital in Mexico, suffering from injuries sustained while working in a mine.——Dr. Julius J. Grosvenor has resigned as intern in the Indianapolis City Dispensary to become a member of the staff of the Indiana State Reformatory, Jeffersonville, and has been succeeded by Dr. Robert C. Johnson.——Dr. Henry Jamieson has been reappointed a member of the board of park commissioners of Indianapolis.——Dr. James W. Birchfield, Indianapolis, has been appointed by the State Board of Health, supervisor of the inspection of public schools.——Dr. Morton L. Hunt, Winchester, is reported to be critically ill.——Dr. Isaac F. Sweeney, Milton, on the occasion of his seventy-seventh birthday, February 2, was presented by the Wayne County Medical Society with an ebony gold-headed cane.——Dr. John B. Williams, Anderson, fell on the ice, February 11, fracturing a rib and sustaining other serious injuries.——Dr. David C. Roney, Ridgeville, is reported to be seriously ill at his home.——Fire in the house of Dr. Stratford S. Dupee, Evansville, recently, caused damage amounting to $600.——Dr. Henry A. Sutton, Marion, who was struck by a trolley car in January, fracturing his hip, is reported to be improving.——Dr. James R. Anthony, Indianapolis, was reappointed physician to the Marion County jail.——Dr. Henry W. Eby, Goshen, has returned from Europe.——Dr. Charles Stoltz, South Bend, who was injured several days ago in a collision between his automobile and a street car, is reported to be convalescent.——Dr. John W. Crismond, Anderson, is reported to be critically ill.——Dr. John C. Jolly, Lake, has been reappointed a member of the board of control of the Nancy Hanks Lincoln Burial Grounds in Spencer County.

IOWA

Resolutions Eulogize Moerke.—At a recent meeting of the Iowa Board of Health, resolutions were adopted thanking Dr. Albert C. Moerke, Burlington, for his untiring efforts put forth in behalf of the State Board of Health and expressing regret at his resignation.

Prepare for State Meeting.—President Lawrence W. Littig, Iowa City, and Treasurer William B. Small, Waterloo, of the Iowa State Medical Society were in Burlington, February 5, conferring with the local committee on arrangements for the annual meeting of the society, which is to be held in Burlington, May 8-10.

Hospital Staffs Organize.—At the annual meeting and banquet of the medical staff of Mercy Hospital, Council Bluffs, Dr. Ray B. Tubbs was elected president; Dr. Albert V. N. Hennessy, vice-president, and Dr. James M. Barstow, secretary.——At a recent meeting of the staff of St. Joseph's Mercy Hospital, Fort Dodge, organization was effected and the following officers were elected: president of the general staff, Dr. Charles J. Saunders; vice-president, Dr. Robert Evans, and secretary, Dr. Charles H. Mulroney.

New Officers.—Waterloo Medical Society, February 7: president, Dr. Wayne M. Shirley; secretary-treasurer, Dr. Joseph R. Allen.——Clinton County Medical Society, January 10: president, Dr. Frank O. Kershner; secretary-treasurer, Dr. Cecil W. Brown.——Appanoose County Medical Association, January 16: president, Dr. James L. Sawyers; secretary, Dr. Charles S. James, both of Centerville.——Kossuth County Medical Association: president, Dr. Judson Laughlin, Ledyard; secretary-treasurer, Dr. Evert C. Hartman, Algoma (reelected).——Cedar Falls Medical Association, January 30: president, Dr. Lillian A. Arnett; secretary-treasurer, Dr. Ida G. Rhoades, both of Cedar Falls.

Personal.—Dr. Edward E. Dorr has been elected president of the Associated Charities of Des Moines.——Boone County Medical Society gave a banquet on February 7, in honor of two pioneer members of the society, Drs. George D. Rowe, Boone, who came to that city in 1868, and Dr. James H. Noyes, a resident of Ogden since 1867.——Dr. Leroy S. Groves, Creston, is reported to be critically ill at the home of his daughter in Shannon City.——A fire in Villisca destroyed the office equipment of Dr. Jay C. Cooper.——Dr. Ernest A. Jenkinson, Sioux City, has been reappointed physician of Woodbury County, and Dr. Roy M. Conney, Sergeant Bluff, physician to the county poor farm.——Dr. Herbert V. Scarborough, Grand Junction, has been appointed superintendent of the State Sanatorium for the Treatment of Tuberculosis at Oakdale, vice Dr. Harry E. Kirschner, resigned.——Dr. Lynn J. Putman has been appointed local surgeon for the Burlington System at Shenandoah.

KANSAS

State to Furnish Diphtheria Antitoxin.—The State Board of Health has made arrangements to furnish diphtheria antitoxin free to any patients unable to pay, on requisition from a physician.

New Officers.—Northeast District of Kansas Medical Association, February 8: president, Dr. Hugh P. Wilkinson, Kansas City; secretary-treasurer, Dr. Clarence C. S. Goddard, Leavenworth.

Health Almanac.—The Bulletin of the Kansas State Board of Health for December contains a health almanac, in which January is devoted to small-pox; February to pneumonia; March to measles; April to whooping cough; May to water pollution; June to infants' diseases; July to flies and mosquitoes; August to typhoid fever; September to diphtheria; October to scarlet fever; November to colds and influenza, and December to consumption.

Personal.—Dr. M. I. Hults, Hutchinson, who was recently operated on for appendicitis, is convalescent.——Dr. James Loughridge, Lincoln, who is about to locate in Grant's Pass, Oregon, was given a farewell reception by the residents of Lincoln and presented with a ring.

MARYLAND

Baltimore

Personal.—Dr. J. Thomas Nelson fell on the ice recently and injured his left knee.——Dr. A. Trego Shertzer has been reelected president of the Lakewood (N. J.) Hotel and Sanatorium Company.

Oppose Optometry Legislation.—At the February meeting of the Baltimore Medical Society the subject of discussion was medical legislation, and a resolution opposing any legislation extending the practice of optometry in Maryland was adopted.

Medical Orchestra.—Dr. Charles F. Nolen has issued a circular, inviting the physicians interested in music to join him in forming a medical orchestra, similar to those which already exist in several foreign cities. A vocal club is proposed in connection.

New Hospital.—A new hospital was opened in South Baltimore, February 19, known as the South Baltimore Hospital. It has accommodation for twenty-five patients and is under the charge of Drs. Clarence P. Erkenbrach, William D. Olmstead and Edward J. Miller.——The new home of the Baltimore General Dispensary was opened February 15. The building is two stories and a basement in height and has been erected at a cost of $19,500.

MISSISSIPPI

New Officers.—Forrest County Medical Society, February 8: president, Dr. Lawrence B. Hudson; secretary-treasurer, Dr. Charley C. Hightower, both of Hattiesburg.

Addition to Sanatorium.—A contract has been let for the addition of a one story to the Jackson Sanatorium and for the construction of two additional wards, which are designed especially for convalescents.

Personal.—Dr. Matthew J. L. Hoye, Meridian, has been appointed physician of Lauderdale County.——Dr. Benson B. Martin has been appointed surgeon to the Vicksburg Hospital.——Dr. James P. Wall, Jackson, has been elected secretary of the Mississippi Baptist Hospital.

State Board.—On February 3, the following members of the new State Board of Health were sworn in: First District, Dr. Theodore Borroum, Corinth; Second District, Dr. Samuel E. Eason, New Albany; Third District, Dr. Morris J. Alexander, Tunica; Fourth District, Dr. Joseph C. Armstrong, Water Valley; Fifth District, Dr. William W. Reynolds, Meridian; Sixth District, Dr. W. W. Hall, Lumberton; seventh District, Dr. Charles E. Catchings, Woodville; Eighth District, Dr. James R. Jiggitts, Canton; State at large, Drs. John Darrington, Yazoo City; Elbert A. Cheek, Arcola; Theophilus E. Ross, Hattiesburg; Giles S. Bryan, Amory, and Inman W. Cooper, Newton. Dr. Giles S. Bryan, Amory, was elected president; Dr. William W. Smithson, Jackson, secretary, and Drs. John Darrington, Yazoo City, Charles E. Catchings, Woodville, and Joseph C. Armstrong, Water Valley, were elected the executive committee.

Work of the State Board.—The State Board of Health has issued a pamphlet of information relative to the work done by the board during the year. The work has been along the lines of educating the people on the prevention of consumption, typhoid fever, malaria, hookworm and other diseases; of diagnosing certain diseases free of charge to the people through the State Board of Health Laboratory; of making a special study of hookworm disease in order to determine the amount of it in this state; of making sanitary surveys with a view to pointing out to the people conditions which cause disease, and that should be corrected, and of treating people who are found afflicted with hookworm disease. The educational campaign has been conducted by lectures, by the aid of the press, through correspondence and conferences, by health exhibits, health bulletins and placards on tuberculosis. During the year 968 of the 1,783 physicians in the state were interviewed, and 1,350 manifested interest in the work of the board; 16 lectures were given to physicians; 831 physicians were reached by these lectures; 5,836 letters and circulars were sent to physicians; 1,500 teachers were visited and letters were written to 1,226; bulletins were sent to all teachers in the state; lectures were delivered at institutes to 3,760 teachers; the health bulletins were sent to 310 newspapers and 150 articles were mailed to newspapers; thirty-seven sanitary editions of newspapers were issued; 130 papers, approximately, were personally visited by representatives of the board; 246,000 bulletins were distributed in the state; 25,726 personal and circular letters were sent out; 511 schools were inspected; 7,791 addresses were delivered to 100,213 people, and five public health exhibits were made, which were visited by approximately 32,700. In the work against hookworm disease, 15,390 patients were treated in dispensaries and 3,908 outside of dispensaries by representatives of the board, and 15,803 cases were treated by outside physicians. Fourteen infectious surveys and ten sanitary surveys were made.

NEBRASKA

Small-Pox in Hospital.—Eight cases of small-pox were reported in Ingleside Hospital, Hastings.

New Officers.—Sheridan County Medical Society: president, Dr. Zadok T. Daniel, Rushville.——Dawson County Medical Society, February 2: president, Dr. Earle C. Stevenson, Gothenburg; secretary, Dr. Calvert L. Emmons, Overton.

Personal.—Dr. Wilford H. Crutcher, Palmer, has been appointed a member of the staff of the Kankakee (Ill.) State Hospital.——Drs. George M. and Eliza B. Mills, Kearney, announce their retirement from active practice.——Dr. Harold Gifford, Omaha, who has been ill with pleurisy, is reported to be convalescent.

New Tuberculosis Hospital.—The plans for the new building for the State Tuberculosis Hospital, Kearney, call for a main building, 50 by 32 feet and two stories in height, with two one-story wings, 100 by 27 feet. The board has $16,000 remaining in the fund after the purchase of the building now in use and this, it is believed, will be sufficient for the construction of the new buildings.

NEW YORK

Personal.—Dr. Joseph J. O'Connell, Brooklyn, has been nominated by the governor as health officer of the Port of New York, vice Dr. Alvah H. Doty.——Dr. William T. Shanahan, Sonyea, sails for Europe, February 24, to visit special institutions for the care and treatment of the epileptic and feeble-minded in Great Britain and on the Continent.

State Hospitals for the Insane Overcrowded.—According to the annual report of the State Commission in Lunacy, there are 33,311 patients in the institutions for the insane in this state. Of these 31,051 are in state hospitals. The number of deaths among these for the year 1911 was 2,885, which is a slight increase over the death-rate of the previous year; and there was also a slight increase in the number who recovered over the total of 1910. The disbursements amounted to $7,931,966, while the sum collected from paying patients was $400,525. The commission urges the speedy development of the Mohansic State Hospital and the Creedmore Branch of the Long Island State Hospital and the extension of the lease of Ward's Island to fifty years.

New York City

Off for Europe.—Dr. and Mrs. Herman B. Baruch and Dr. and Mrs. Simon Flexner have sailed for Europe.

Measles and Scarlet Fever.—The number of cases of measles and scarlet fever reported in this city for the week ended February 10 shows a great increase in the prevalence of these diseases, there being 868 cases of measles and 332 cases of scarlet fever.

New Tuberculosis Home.—Plans have been filed for additional room for tuberculous patients on Blackwell's Island by building an entirely new building adjoining the present structure on the north end of the island. The main feature of the building will be four roof gardens and a solarium. The building will be constructed of stone and will cost about $180,000.

Fund Nearly Complete for Tuberculosis Preventorium.—Jacob H. Schiff has contributed an additional $5,000 toward the Tuberculosis Preventorium for New York Children at Farmingdale, N. J. Mrs. Schiff has also contributed $1,000 for the same purpose. There now remains but $4,000 to be collected in order to complete the $150,000 required for the new buildings.

Commission to Study Typhoid.—Commissioner Lederle has appointed a commission of physicians and sanitary experts to study the methods of the local Health Department in handling typhoid and to suggest, if possible, improved methods. Among those who were present at the first meeting of the commission were Prof. William T. Sedgwick of the Massachusetts Institute of Technology, Prof. George Whipple of Harvard, and Prof. C. E. A. Winslow of City College, Dr. John Winters Brannan, Dr. Alexander Lambert and Dr. Herbert D. Pease, and a number of representatives of the New York Health Department.

Academy Gets Portrait of Dr. Wyeth.—At the regular meeting of the Academy of Medicine on February 15 a bust portrait of Dr. John A. Wyeth, a former president of the academy, painted by J. Campbell Phillips, was presented to the academy by Dr. Simon Baruch, chairman of a committee of five appointed to procure the portrait. The portrait is to be placed in the gallery devoted to portraits of presidents of the New York Academy of Medicine.

Leprosy in New York.—The death of one of the members of the Blackwell's Island leper colony on February 12 has occasioned considerable discussion regarding the communicability of this disease, and Dr. George Henry Fox is responsible for the statement that his son, Dr. Howard Fox, has seen as many as thirty lepers in this city during a single year, and that a number of individuals are known to have suffered from leprosy for many years who still pursue usual avocations without communicating the disease to those with whom they come in contact. Dr. Walter Conley, who is in charge of the leper colony on Blackwell's Island believes that the fear of the disease is more harmful to a community than the few cases of the disease itself and that such a fear is entirely unwarranted in this climate and he urges the need of instructing the public as to the actual facts concerning leprosy.

Straus Makes a Challenge.—Before sailing for Rome to represent the United States at the Seventh International Congress on Tuberculosis, Nathan Straus has sent out the following challenge: "In the efforts that are being made to protect babies from milk-borne diseases, such as tuberculosis, typhoid fever, diphtheria, scarlet fever, sore throat and summer complaint, the well-considered policy of the public health service and of the foremost health officers of the country is seriously hindered by attacks based on ignorance. The statement is repeated with assurance, without proof, that the use of pasteurized milk causes rickets, scurvy and anemia. In order to bring this issue to an end I offer $1,000 for any case of scurvy or rickets or anemia caused by feeding a baby with properly pasteurized milk." The jury to decide in any alleged case is to consist of three officers of the U. S. P. H. and M.-H. Service, Dr. Rupert Blue, Surgeon General; Dr. Milton J. Rosenau, and Dr. John Anderson of the Hygienic Laboratory at Washington, or any other jury that they may decide on.

NORTH CAROLINA

Hospital News.—The McDaniels Memorial Hospital, Kinston, has recently made a material addition to its accommodation for patients.——The corner stone of the new Goldsborough Hospital will be laid with appropriate ceremonies, February 22.

Personal.—The board of directors of the State School for Feeble-Minded Children has elected Dr. Ira M. Hardy, Washington, superintendent. Dr. William H. Dixon, Edward, has been appointed a director of the school.——Dr. Numa D. Bitting, Durham, was painfully injured when his buggy was overturned in a runaway accident, February 8.

New Officers.—Fourth Councilor District Medical Society of North Carolina, February 13: president, Dr. Lacy D. Wharton, Smithfield; secretary-treasurer, Dr. Michael M. Saliba, Wilson.——Surry County Medical Society, February 13: president, Dr. R. E. L. Flippin, Pilot Mountain; secretary-treasurer, Dr. Edward M. Hollingsworth, Mount Airy.

OREGON

New Officers.—Baker County Medical Society: president, Dr. John W. Huff; secretary, Dr. Claude M. Pearce (reelected), both of Baker.——At the annual meeting of the State Board of Health held in Salem, Dr. Charles J. Smith, Pendeleton, was elected president; Dr. Alfred Kinney, Astoria, vice-president, and Dr. Calvin S. White, Portland, secretary.

PENNSYLVANIA

New Officers.—McKees Rocks Medical Society: president, Dr. Joseph G. Steedle; secretary, Dr. George A. Cartwright.——Dauphin County Medical Society: president, Dr. Harvey F. Smith; secretary-treasurer, Dr. Thomas S. Blair, both of Harrisburg.——Erie County Medical Society: president, Dr. Guy C. Boughton; secretary, Dr. Judson M. Burt, both of Erie.——Northampton County Medical Society, January 19: president, Dr. Walter D. Chase, Bethlehem; recording secretary, Dr. W. Gilbert Tillman, Easton.

Hospital News.—Plans have been made for the organization of the West Side General Hospital, Dorranceton, Wilkes-Barre. A site has already been secured for the hospital, on which there is at present a fifteen-room house. It is hoped to make the necessary alterations and have the hospital in operation not later than May 1. Dr. William H. Faulds is chairman and Dr. David H. Lake secretary of the committee of physicians which has the matter in charge.——The board of managers of the Reading Hospital has elected the following resident physicians to go on duty July 1: Dr. Frank Wrenn, Silver City, N. C.; Dr. C. J. Schmitz, Sterling, Ill., and Dr. Leon C. Darrah, Reading.——The Coppinger Private Sanitarium, Scranton, is to be converted into a hospital devoted entirely to diseases of women.

Personal.—Dr. J. Norman White, Scranton, has been appointed deputy coroner of Lackawanna County.——Dr. Leo O'Dell, Tylersburg, was thrown from his sleigh in a runaway accident, February 13, fracturing his leg.——Dr. H. W. Mitchell, formerly of Danvers, Mass., has entered upon his duties as superintendent of the Warren State Hospital.——Dr. Benjamin Pearson, Slippery Rock, is seriously ill.——Dr. John B. Mahon, Pittston, slipped on an icy pavement, February 8, fracturing his leg.——Dr. Samuel J. Waterworth, Clearfield, was slightly injured when a freight train on the Buffalo, Rochester and Pittsburgh Railroad demolished his automobile at Clearfield, February 6.——Drs. John B. Herr, Charles Howard Witmer, Philadelphia, and G. A. Sayers have been appointed members of the dispensary staff of St. Joseph's Hospital, Lancaster.——Dr. Samuel H. Heller, Lancaster, has succeeded Dr. Warren F. Kline, Lebanon, resigned, as assistant surgeon of the Fourth Infantry, N. G. Pa.

Typhoid at Coatesville.—On February 15, nineteen new cases of typhoid were reported at Coatesville, making a total of 111 cases. The Assistant Supervisor of State Nurses has been sent from Harrisburg to take charge of the emergency hospital at Elks Home. Eighteen men from the State Health Department are in Coatesville under the charge of Dr. Charles J. Hunt, Philadelphia, associate medical inspector, to investigate conditions. The epidemic is said to be due to the water supply and the first act of the state authorities was to construct a filter plant near the pumping station. The state inspectors have also inspected dairies within a radius of five miles of Coatesville and samples of milk have been taken for analysis. Dr. Samuel G. Dixon, State Health Commissioner, has notified the Water Department of Wilmington, Del., that it would be well to purify the Brandywine water used for drinking purposes at Wilmington, as Coatesville's drainage runs into the Brandywine creek.

Philadelphia

Lincoln Memorial Building.—On Lincoln's birthday, February 12, the first sod was turned, preparatory to the erection of the Lincoln Memorial Building of Mercy Hospital and School for Nurses, by the mayor of Philadelphia. The new building is to be five stories in height, of modern construction and with up-to-date equipment.

Jefferson Alumni Appeal.—The Alumni Association of the Jefferson Medical College issued an appeal, January 13, to the graduates of the college asking them to contribute to a fund to endow a room in the Jefferson Medical College Hospital, to be used by graduates who are unable to pay for hospital service. The response so far has amounted to $750.

Faculty Promotions.—Promotions in the Medical Department of the University of Pennsylvania were made February 12, as follows: Dr. Edward Lodholz, to be assistant professor in physiology; Dr. William H. F. Addison, assistant professor in normal histology; Dr. George H. Fetterolf, assistant professor in anatomy, and Dr. L. A. Ryan, assistant professor in chemistry and toxicology.

Personal.—Dr. W. Wayne Babcock escaped uninjured from what might have been a serious accident, when a train grazed his motor car, bending the front axle, at a railroad crossing near Woodbury, N. J., February 13.——Dr. Lewis W. Steinbach sailed February 13 for an extended trip to Egypt and the Holy Lands.——Dr. Joseph Cook, Jr., for the past year chief resident physician of the University Hospital, has resigned and intends to go to Persia as a medical missionary. Dr. John B. Nutt has been appointed to succeed him.

Gifts to Medical School in Canton.—It is announced that Mr. S. F. Houston and former Provost C. C. Harrison have given $1,000 each to the McCracken fund for the University Medical School at Canton, China. Both of these amounts were obtained through the efforts of George W. Pepper, who has also pledged $1,000 to the fund. Two faculty residences are projected to be built on the campus of the Medical School at Canton, one of which will be built by the members of the Society of Friends, of which Dr. William W. Cadbury, first assistant to Dr. George Y. McCracken, is a member. There is also a wing of the hospital just nearing completion, for which there are still some final payments to be made and about $3,000 will be needed for equipping this new building and the different classes of the University here are doing their part to raise this fund.

Dispensary Building Opened.—The new dispensary building of the Philadelphia Polyclinic and College for Graduates in Medicine was formally opened February 5, when a reception was tendered by the president of the board of trustees to the board, the incorporators of the hospital and the members of the medical staff. The building is constructed on the most approved fire-proof plan, with exposed plumbing, all corners and angles rounded, all floors made of concrete, the walls and woodwork finished with glazed surfaces and is as nearly hygienic as is possible. To each department of the dispensary is attached a laboratory equipment to aid in the study and diagnosis of disease. The accident emergency suite is thoroughly equipped and up-to-date. Arrangement has been made for the separation of the sexes, and modern bath appliances have been provided.

Medical Staff for Oncologic Hospital.—On February 16, the trustees of the American Oncologic Hospital announced the election of the following medical staff for the institution: surgeons, Drs. Samuel McClary, 3d, and Walter G. Elmer; gynecologists, Drs. P. Brooke Bland and Christian B. Longenecker; physicians, Drs. William S. Newcomet and Charles A. E. Codman; pathologist, Dr. Gordon J. Saxon; ophthalmologist, Dr. Edward Shumway, and laryngologist, Dr. Rufus B. Scarlet. The assistant staff is composed of Drs. Nelson M. Brinkerhoff, surgeon; George A. Knowles, physician; Frank B. Baird and Isaac W. Brown, clinical assistants; George L. DeWald, anesthetizer, and Asa Munson Chandler, odontologist. The consulting physicians include Drs. Edward E. Montgomery, Oscar H. Alli, William E. Hughes, Allen J. Smith, Charles K. Mills, G. Oram Ring, Milton B. Hartzell, Arthur Ames Bliss, Henry J. Off, S. McCuen Smith and Dudley W. H. Guilford.

Another Open-Air School Established.—The Pennsylvania Society for the Prevention of Tuberculosis has made all arrangements for establishing an open-air school on the roof of the Lighthouse at 152 West Lehigh Avenue, and the Board of Education has authorized the assignment of a teacher and the transfer of children to that school. It will accommodate twenty-five or thirty children and will be open during the last week in February. The roof of the Lighthouse is enclosed on all sides by large glass windows and doors which can be opened. The pupils will be anemic boys and girls between 8 and 13, and with the exception of an hour and a half at noon, when they go home to lunch, the children will be in the open air during the whole school period from 9 a. m. to 3:30 p. m. In order to gauge the effectiveness of the open-air treatment, the society will take weekly records of the weight and general condition of the children in this school and compare them with those of the children of the open-air school of the Phipps Institute and the children of the open-air school of the Board of Education at Twelfth and Wharton Streets.

SOUTH CAROLINA

New Hospital.—Work has been commenced on the Knowlton Hospital, Columbia, which is to cost $40,000 and will be completed early in September. This in addition to the old building will provide accommodation for seventy private patients.

New Editor.—In the January number of the *Journal of the South Carolina Medical Association*, the resignation of Dr. Julius C. Sosnowski, Charleston, as editor, and the announcement of Dr. Edgar A. Hines, Seneca, as his successor, appear. The office of publication of the journal will henceforth be at Seneca.

Personal.—Dr. Francis A. Coward has been elected city bacteriologist of Columbia.——The Columbia Medical Society, at its meeting January 8, adopted resolutions declaring its belief in the innocence of Dr. Lewie A. Griffith, Columbia, in the matter of the criminal charges brought against him, and expressing the full confidence of the society in Dr. Griffith's ultimate and complete exoneration.——Dr. Charles F. Williams, Columbia, has purchased 70 acres of land, three miles from the city, on which he proposes to establish a tuberculosis sanatorium.

New Officers.—Spartanburg County Medical Society, January 26: president, Dr. A. Dean Cudd; secretary, Dr. L. Rosa H. Gantt, both of Spartanburg.——Kershaw County Medical Association, January 10: president, Dr. Sidney C. Zemp; secretary-treasurer, Dr. William J. Burdell, both of Camden (both reelected).——Union County Medical Society, January 2: president, Dr. Joseph H. Hamilton; secretary-treasurer, Dr. Robert R. Berry, both of Union.——Greenville County Medical Society, January 1: president, Dr. Leland O. Mauldin; secretary, Dr. Charles O. Bates, both of Greenville.——Dorchester County Medical Association: president, Dr. W. P. Shuler, Grover; secretary, Dr. John B. Johnston, St. George.——Columbia Medical Society: president, Dr. Henry W. Rice; secretary-treasurer, Dr. William R. Barron, both of Columbia.——Saluda County Medical Association: president, Dr. Samuel M. Pitts, Chappells; secretary-treasurer, Dr. Jonathan D. Waters, both of Saluda.——Fourth District Medical Association: president, Dr. Theodore Maddox, Union; secretary, Dr. Ernest W. Carpenter, Greenville.——Lexington County Medical Society: president, Dr. Frank G. Roberts; secretary-treasurer, Dr. James J. Wingard, both of Lexington.

TEXAS

Senior Student Dies.—R. T. Wilson, Jr., Gatesville, a member of the senior class of the State Medical College, Galveston, died February 3 at the John Sealy Hospital.

House for Health Board.—To centralize all branches of the city government, the Emergency Hospital, health office and city chemist's department of Dallas have been estalished in the new house opposite the City Hall.

Hospital to Be Established at Dallas.—Dr. John O. McReynolds announces that $1,000,000 is to be raised for a new Methodist Hospital, Dallas, in connection with the Medical College of the Southern Methodist University.

Fewer Epileptics.—The report of the State Epileptic Colony, Abilene, shows at the close of the fiscal year of 1911 there were 231 men and 157 women in the colony, a decrease for the year of thirty-seven and twenty-two respectively.

Medical Society Organ.—The *Bulletin of the Travis County Medical Society* has recently been issued. It contains reports of the meeting of the society and the medical societies of adjacent counties, a list of new members, papers read before the society, personal notes, obituaries, etc.

Hospital News.—At a called meeting of the Denison County Medical Society a site on Brown avenue, between Main and Woodard streets, was proposed for the new City Hospital.——St. Paul's Free Clinic and Dispensary have been incorporated at Dallas without capital stock.——The Houston Antituberculosis League has opened a free dispensary at 55 Cable street.

Personal.—Dr. Manton M. Carrick, Dallas, accidentally took poison February 8, but is expected to recover.——Dr. Columbus Hyder, Commerce, was operated on at Greenville for appendicitis, February 8, and is reported to be doing well.——Dr. Alfred C. Trigg, Lockhart, is seriously ill on account of a cerebral hemorrhage.——Fire in Orange, January 30, destroyed the three-story building of Dr. Edgar W. Brown, including offices of Drs. William P. Coyle, Arthur R. Sholars and Samuel W. Sholars.——Drs. William N. Sneed and William N. Sneed, Jr., Fairfield, were thrown from their buggy in a runaway accident recently and received painful injuries.——Dr. N. H. Ellis, Midland, is reported to be ill with meningitis.

New Officers.—Austin County Medical Association, January 16: president, Dr. Justus S. Davidson, San Felipe; secretary-treasurer, Dr. Otto E. Steck, Bellville.——Panhandle Medical Association, January 16-17: president, Dr. Robert S. Killough, Amarillo; secretary-treasurer, Dr. Walter C. Dickey, Memphis.——Taylor County Medical Society, January 15: president, Dr. Thomas B. Bass, Abilene; secretary-treasurer, Dr. Clarence M. Cash, both of Abilene.——Harris County Medical Society: president, Dr. Harvin C. Moore; secretary-treasurer, Dr. Leonard Allen, both of Houston.——Galveston County Medical Society, January 5: president, Dr. William F. Starley; secretary-treasurer, Dr. William C. Fisher, Jr., both of Galveston.——Hale County Medical Society: president, Dr. Alexander H. Lindsay, Plainview; secretary-treasurer, Dr. E. F. McLendon.——Bexar County Medical Association: president, Dr. William A. King; secretary, Dr. Thomas Dorbandt, both of San Antonio.——Wise County Medical Society: president, Dr. John A. Embry; secretary, Dr. Peyton J. Fullingim, both of Decatur.——Guadalupe County Medical Association: president, Dr. R. Lee Knolle, Seguin; secretary-treasurer, Dr. Earlie A. Benbow, Kingsbury.——Tom Green County Medical Society: president, Dr. Andrew J. Marberry; secretary-treasurer, Dr. Carolina L. Mitchell (reelected).——Titus County Medical Society: president, Dr. Sidney R. Crabtree; secretary, Dr. William H. Blythe, both of Mount Pleasant.——Karnes County Medical Association: president, Dr. C. S. Lane, Cherokee; secretary-treasurer, Dr. Richard C. Youngblood, Cestohowa.——Hunt County Medical Society: president, Dr. James J. Coppedge, Lone Oak; secretary-treasurer, Dr. D. Richard Waddle, Greenville.——Falls County Medical Society: president, Dr. Burr G. Ward; secretary, Dr. N. D. Buie, both of Marlin.——Williamson County Medical Association: president, Dr. Green L. Robertson; secretary-treasurer, Dr. Columbus C. Black.

GENERAL

Eye, Ear and Throat Men to Meet.—Announcement has been made that the seventeenth annual convention of the American Academy of Ophthalmology and Oto-Laryngology will be held at Niagara Falls, Ont. August 20-22, with headquarters at the Clifton House.

First-Aid Packets in Canal Zone.—The Sanitary Department of the Canal Zone has issued first-aid packets of the standard army pattern to be placed on all locomotives, steam-shovels, dredges, cranes and boats of the Isthmian Canal Commission and the Panama Railroad Company.

French Physician Awarded American Medal for Exploration.—The Cullum gold medal, founded by the late General George W. Cullum, of the United States Army, and awarded annually for distinguished work in polar exploration, has been awarded by the American Geographical Society to Dr. Jean B. E. A. Charcot of Paris, the French Antarctic explorer. It has been presented to him by the American Ambassador to France.

Bequests.—The following bequests have recently been announced:

Mount Sinai Hospital, New York City, $100,000; Ladies' Auxiliary of Mount Sinai Hospital, $5,000; Jewish Children's Sanatorium, Rockaway, $20,000; the Neustadter Home (to be established for convalescents or persons in delicate health), $100,000, by the late Mrs. Caroline Neustadter.

Seney Hospital, Brooklyn, $10,000, by the late Roland D. Armstrong, for the maintenance of two free beds.

A hospital bed in a New York hospital, more than $5,000, proceeds of a concert by New York Symphony Society, February 6, in memory of Samuel S. Sanforn.

St. Vincent's Hospital, New York City, $15,000, by the late Eugene Kelly.

Lynn (Mass.) Hospital, $5,000; Free Home for Consumptives, Boston, $1,000, by the late Oliver I. Kimball, Newton, Mass.

FOREIGN

Transformation of the Annales des Maladies Génito-Urinaires.—As it enters on its thirtieth year, the *Annales des Maladies des Organes Génito-urinaires* changes from a fortnightly to a monthly, with the title *Journal d'Urologie Médicale et Chirurgicale.* The *Annales* was founded in 1882 and has been conducted by Dr. E. Delefosse. He now retires and a board of nine members carries on the work, with Marion and Heitz-Boyer of Paris as editors in chief and Saint-Cène secretary. It will be found listed regularly as heretofore in our foreign Current Medical Literature Department but under its new name.

New Year Honors to British Physicians.—The list of New Year honors in England contains the names of six physicians upon whom knighthood has been conferred. These are: Sir John Hawtrey Benson, president of the Royal College of Physicians of Ireland; Sir Robert John Collie, medical examiner to the London County Council; Sir James Mackenzie Davidson, consulting surgeon to the Roentgen Ray Department of Charing Cross Hospital; Sir George Henry Savage, consulting physician to Guy's Hospital and to Earlswood Asylum for Idiots; Sir Bertram Coghill Alan Windle, president of University College, Cork; and the Honorable Sir Charles Kinnaird Mackellar, a member of the Legislative Council of New South Wales. Dr. Arthur Newsholme, the vital statistician, was made a Companion of the Bath.

Death of Hansen, the Leprologist.—G. Armauer Hansen, the Norwegian biologist and zoologist, and the discoverer of the *Bacillus lepræ*, died in his native city, Bergen, Norway, February 13, aged over 70. As early as 1868 he entered the practical field as a physician for the lepers' home and in 1875 he assumed official charge of the hospitals for this disease in his native land. In 1873 he was able to lay before the scientific world the results of his pathologic-anatomic studies, isolating the bacillus which was thereafter named the bacillus of Hansen. As an active and authoritative worker in the elimination of this disease he worked out legislative measures which during the following years practically eradicated this disease in Norway and which were copied in other countries for the same purpose. In the eighties he made a visit to the United States, visiting Wisconsin, Minnesota, Iowa, North and South Dakota, for the purpose of studying the disease among immigrated countrymen. Besides his work in medicine, he has been active as a zoologist and won a solid reputation for his studies on the lower sea animals. In 1909, at the Second Lepra Conference, held at Bergen, he was elected honorary president of the permanent lepra committee, succeeding Rudolph Virchow. On his seventieth birthday, July, 1911, the *Medicinsk Revue* in Bergen issued a festschrift in his honor.

LONDON LETTER

(From Our Regular Correspondent)

London, Feb. 10, 1912.

The National Insurance Act

A grave crisis is approaching with regard to the national insurance act. The opposition of the profession is practically unanimous. The British Medical Association has received more than 27,000 pledges declining to work the act except on terms acceptable to the association. This amounts to practically all the physicians who are available for service under the act. A meeting is about to be held by the representatives of the British Medical Association when the question will be decided whether the profession will decline to work the act entirely or will endeavor to do so, and endeavor to obtain its six points by local regulations. As explained in previous letters, much dissatisfaction has been expressed at the failure of the council of the association to obtain the six points by negotiation with the government. But the council acted only in accordance with the instructions of the representative body, the members of which in turn received mandates from the local divisions of the association. Meetings of these divisions are being held throughout the country and the members have now the opportunity of altering the policy of the association, if so disposed. There are two parties in the profession, which favor a moderate and an extreme policy of opposition, respectively. The former contends that the policy of no service whatever, recommended by the latter, is dangerous, for it is a delusion to suppose that the profession can prevent the act from coming into operation, or even prevent medical benefits from being given in one form or another. Failing to obtain physicians to work the act, the commissioners have power to suspend benefit and give the insured the equivalent in cash. In such a case the friendly societies, strengthened in numbers and prestige, would undertake the organization of the separate medical services. They would be free from any of the restrictions which the act imposes on the insurance committees. They could appoint and dismiss physicians at their pleasure, and make individual bargains with them, playing off one against the other.

Lunacy in England and Wales

The "Annual Report of the Commissioners in Lunacy," for the year 1910, has just been published. It shows that Jan. 1, 1910, there were 130,553 certified insane, while on Jan. 1, 1911, there were 133,157—an increase of 2,604 as compared with an increase of 1,776 in the previous year. Compared with the total population, the ratio of the insane per 10,000 was 36.4 on Jan. 1, 1911; 36.1 in 1910, and 36.02 in 1909. These figures appear to show an increase in the prevalence of insanity, but on considering the ratio of first admissions, per 10,000 of the population, the results are more assuring. These are the best index of the increase or the decrease of insanity. The number of first admissions rose from 4.99 per 10,000 in 1901 to 5.26 in 1902, and then steadily fell to 5.16 in 1906, rose to 5.19 in 1907, and remained at the same figure in 1908, then fell to 5 in 1909, and still further to 4.96 in 1910. Thus it appears that the increasing figures of those certified insane is the result of such factors as accumulation from diminishing death- and recovery-rates and probably more frequent certification of recurrent cases of insanity. During the year 1910 the recovery-rate of the insane was 34.1 as compared with an average recovery-rate for the decade 1901-1910 of 36.49.

Sleeping-Sickness in Nyassaland

Sir David and Lady Bruce and the other members of the Sleeping-Sickness Commission appointed by the Colonial Office, under the auspices of the Royal Society are engaged in a most important investigation of sleeping-sickness in Nyassaland. Up to date, fifty-nine cases of trypanosomiasis have been found, and medical officers consider that at present they are unable to discover more than 10 per cent. of the cases in existence. The fly in this country is the *Glossina morsitans*. It has never been scientifically proved that this species is a carrier of the disease, and to prove or disprove this is the chief object of the commission. Sir David Bruce will, in addition, endeavor to discover what connection, if any, exists between wild game and trypanosome diseases in man and domestic animals. Wild animals will be shot, and their blood injected into susceptible animals, such as dogs, rats, goats, and guinea-pigs, in order to find out whether the blood of wild animals contains the harmful parasites. It is also desired that the commission should determine whether tsetse flies are naturally infected with disease germs. A number of flies from the fly country will therefore be allowed to feed on animals selected for the purpose of experiment; if disease germs are then found in the blood of these animals it will prove that flies are so infected. Sir David Bruce has already proved that several varieties of game common in Nyassaland can become reservoirs of the trypanosome which causes sleeping-sickness, and so become both permanent sources of infection and a means of spreading the disease. More recently Tante, in Uganda, has been successful in transmitting sleeping-sickness by means of the *Glossina morsitans*. Already experiments there are tending to confirm the belief, so long held, that this species of the tsetse is an agent in the transmission of the trypanosome. If this be proved, some means may be found for limiting the spread of the fly—or better still, for its extermination. It is to be hoped, too, that the commission will find some cure, or at least alleviation, for the at present mortal disease.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Feb. 2, 1912.

Aid for the Beyrouth Medical School

Prince Roland Bonaparte, who is a member of the Académie des Sciences, has presented $7,000 (35,000 francs) to the Faculté catholique et française de médecine de Beyrouth. The Académie des Sciences had desired to aid the Beyrouth school and had considered the question of donating to it the arrearage of the Desbrousses fund intended to be employed by the Institut de France in the interests of letters, arts and sciences. But it was doubtful whether this proposition would be ratified by the other academies of the institute. Prince Roland Bonaparte's gift has solved the difficulty.

Mental Anorexia in an Infant

On January 26, Dr. Buffet-Delmas of Poitiers reported before the Société médicale des hôpitaux de Paris an observation on a boy aged twenty-two months, who after normal development suddenly refused all solid or liquid food. He was with difficulty coaxed to nibble some morsels of bread and to suck a moistened sponge. He soon became frightfully thin and forced feeding had to be employed for three consecutive years. There were as many as 2,505 gavages given. It was only at the end of this period of time that the child consented to feed himself normally. At present he is entirely cured.

Dr. Jean Hallé of Paris reported the case of an infant aged 9 or 10 months which also manifested an invincible repugnance for all kinds of nourishment. The child was at first fed by gavage and then separated from its parents and put in charge of a nurse, after which it soon began to accept a little food from a spoon or a glass, and little by little artificial feeding was supplanted by natural. At present the child, now aged 5, is in very good health.

Appeal of the Suspended Students

The superior council of public instruction has just rejected the appeal of the students suspended by the council of the University of Paris for their share in the riots at the Faculté de médecine last December.

The Commission on Medical Instruction

A superior council of medical instruction, under the presidency of the minister of public instruction, has just been authorized. It will consider all questions laid before it by the minister, for which purpose it will meet twice a year, but may be summoned for extraordinary sessions by the minister. Every member has the right, in or out of session, of submitting to the minister propositions or resolutions on questions within the province of the commission.

A New Laboratory of Radiology and Electrotherapy

The prefect of the Seine has undertaken the erection at Paris of a departmental laboratory of radiology and electrotherapy, especially for the treatment of patients of the suburbs. There is now at the Salpêtrière a municipal institute of electrotherapy but it is not open to patients from the suburbs, and is insufficient even for those from Paris. In some hospitals, the laboratories of radiology, which moreover are presided over by non-medical men, are insufficient. The departmental institute will be established in the northwest of Paris not far from Saint-Denis, which is an industrial center.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Feb. 2, 1912.

Personal

It is rumored that Professor Krückmann of Königsberg has now been called to the chair of ophthalmology, after the refusal of Hess and Axenfeld.

Professor Ehrlich has been elected as an honorary member of the Belgium academy of medicine.

Medical councilor Dr. Frey, one of the proprietors of the well known sanatorium Frey-Dengler, in Baden-Baden, died January 18.

January 26 Dr. Jastrowitz died in Berlin at the age of 72. Jastrowitz was for many years a physician in the well known private sanatorium for nervous diseases, "Maison de Santé," one of the first institutions of that kind in Germany. In later years he was a consultant at Berolinum, an institution for nervous diseases in a suburb of Berlin. He wrote some notable articles in his specialty and had a large practice and was for many years secretary to the Verein für innere Medizin.

Death of the Medical Historian, Professor Pagel

January 31 occurred the death of the renowned medical historian of the Berlin medical university, Professor Pagel, at the age of 61, from an apoplectic seizure. Having risen from very needy circumstances he settled in the workingmen's quarter of Berlin as a practicing physician but continued his historical studies which he had begun during his university course, under the guidance of the renowned historian, Professor August Hirsch. His doctor's thesis treated of the history of the Göttingen medical school in the eighteenth century. Already in the eighties he was appointed by Hirsch as the principal collaborator in the latter's great biographical lexicon. In 1889 he published the "Anatomie des Heinrich von Mondeville." This was the first of his numerous publications of the works of the prominent anatomists and surgeons of the middle ages. There followed the surgery of the same author and the "Chirurgie des Congeinna," the "Concordantiæ des Johannes de Sanct Amando," the "Augenheilkunde des Alcoatim," etc. Pagel distinguished himself as the discoverer of lost or unknown manuscripts, among others that of Gordon on the Theriacum. Aside from the history of medicine, he treated in a number of publications the history of the medical profession and of medical education. Especially are to be noted his book "Introduction to the Study of Medicine," *Einführung in das Studium der Medizin;* "Medizinische Deontologie" in which he gave some excellent instruction in medical ethics; and his "Einführung in die Geschichte der Medizin." In his *Grundriss zu einem System medizinischer Kulturgeschichte,* "Basis for a System of Medical History of Civilization," he undertook to trace, on broad lines, the historical relations of medicine with the other sciences, especially theology and philosophy. Together with Neuburger he published a new edition of Puschmann's "Manual of the History of Medicine," *Handbuch der Geschichte der Medizin,* in which he himself worked as contributor. Also he published a biographical lexicon of distinguished physicians of the nineteenth century and wrote monographs on the development of medicine in Berlin, on the history of the Berlin medical society, etc. It is characteristic of the ethics which he preached that in his medical practice he made no use of his title as professor of the history of medicine. In his later years he was the librarian of the Berlin medical society.

Proposed Assumption of the Organized First-Aid Service by the City Administration

As I prophesied in my last letter objections are arising from all sides against the plan of the Berlin city government (*Magistrat*) to take over the first-aid service. In a session of the large Aerzteverein des Berliner Rettungswesens it was determined that the principle advocated by the municipality of a regular short alternation of physicians had not proved successful at the accident stations, as in them at times, either day or night, frequently no physician and no medical aid had been available. By the new regulation there is danger of very disagreeable competition between practicing physicians. The view was expressed that it was much to be regretted that the opportunity had not been given to the Aerzteverein, the "medical union," before the announcement of the Magistrat's plan, to express its opinion. The conclusions drawn from the defects of the present system were declared to be incorrect, and the proposed method of appointment according to the length of service was regarded as impracticable and inclined to be detrimental to the interests both of the city and of the medical profession to an equal degree.

Fees for Special Medical Skill

The question often treated by the courts as to whether specially skilled medical men should be permitted to demand a higher fee than is allowed in the medical fee table has again been decided judicially. A noted Berlin surgeon demanded a fee of $200 (800 marks)—a small fee for Americans—for an appendix operation. The father was willing to pay only $75 (300 marks). The court decided in favor of the surgeon, handing down the following opinion: It is generally known that those of the highest medical skill, among whom the plaintiff undoubtedly belongs, regularly demand fees that are higher than the highest allowed by the fee table (Gebührenordnung). Whoever seeks the advice and work of such medical skill must understand that he has to expect to pay unusual fees, and that the fee will correspond to that which is regularly demanded and collected in similar cases from patients in equally good circumstances, for instance from $200 to $250 (800 to 1,000 marks) for an operation. Such a medical authority can furthermore make it a condition that whoever demands his advice and help and takes his very valuable time must be in the position, if he has not previously informed himself in regard to the question of fees, to pay that fee which other patients are accustomed to pay in similar cases to surgeons of the reputation of the plaintiff, or at least the highest fee which the fee table accords to his position and means.

The Right to Operate on Minors

According to the law and many decisions of the highest German court, the imperial court (*Reichsgericht*), an operation on a minor can be made only with the permission of the parents or guardian—a provision which has often been a fatal one for physicians. A few days ago another case was tried in which a complaint was made against a surgeon for violating this provision. In this case the attending surgeon believed that the operation was justified as it involved the continuation of a treatment alrealy instituted by another physician with the consent of the parents. After the case had lasted three years and been decided by various courts, the physician was actually fined by the imperial court, on a claim for damages made by the parents, to the extent of $5,000 (20,000 marks). According to the decision of the imperial court, the surgeon must secure the consent of the parents to an operation. In addition, a personal injury suit was brought against the surgeon. In this case, however, he fortunately was acquitted because his opinion that the operation was justified was accepted, and because the seventeen-year-old patient, by his silence, had given consent to the anesthesia and operation. In the whole matter it appears that we have to do with a fleecing of the surgeon by the parents. Still, the decision given corresponds with the law.

Physicians in the Reichstag

The number of medical delegates in the Reichstag has been reduced to two by the elections which have brought about so great an increase of the social democrats. Especially the retirement of the Berlin physician, Dr. Mugdan, is to be regretted, since in consequence of social and political knowledge he enjoyed great respect from all parties except the social democrats. He was hated by the social democrats because naturally as the choice of the physicians he took a position in opposition to the Krankenkassen which are completely in the hands of the social democrats. This circumstance was the principal reason why he failed of election, for the conservatives were his opponents from political reasons, but the social democrats, who in many cases were allied to the liberals as opposed to the conservatives, were unwilling to give their assistance to return their hated opponent to the Reichstag.

Strike of Students

A quarrel broke out a few days ago between a number of students and Dr. Hasse, professor of anatomy of Breslau, which has led to a strike of his audience. Hasse has been for many years little liked by the students on account of his harsh manner, and unpleasantness has repeatedly been occasioned by it. For this reason, a short time ago, he resigned from the examination committee. It is to be assumed that Hasse, who has already passed his seventieth year, will resign his position in a short time.

The Review of Internal Medicine

The fact that the *Zentralblatt für innere Medizin*, which has been in existence for a number of years, has been for a long time insufficient for the requirements of scientific internists, led the members of the congress of internal medicine to develop a plan to found a new organ which should appear under the auspices of the organized internists of Germany. The plan has been developed and the first number of the organ will be published in a few weeks, under the title the *Zentralblatt für die gesamte innere Medizin und deren Grenzgebiete*, as already mentioned in my letter of January 12, p. 358. The journal which is published by a large Berlin medical publishing house (J. Springer) and is conducted by a committee appointed by the congress (for the present consisting of von Müller of Munich, von Noorden of Vienna, and His and J. Schwalbe of Berlin), will, like the *Chemische Zentralblatt*, contain no original articles but consist exclusively of abstracts. These will cover as completely as possible the whole extent of internal medicine and its allied fields. In this way the new Zentralblatt will be the most comprehensive in the world's medical literature. The annual subscription is to be about $30 (120 marks). The members of the congress for internal medicine receive a discount of 25 per cent. Furthermore the old *Zentralblatt für innere Medizin* will be continued under the leadership of A. Schmidt of Halle, but in its entire contents it will be intended more for the internist who is not engaged in scientific work and for the general practitioner.

Marriages

James W. J. Marion, M.D., Boston, to Miss Jean C. Cartwright of Nantucket, Mass., at Colorado Springs, Colo., Dec. 28, 1911.

Jabez C. Casto, M.D., to Mrs. Charlotte Elizabeth Planck, both of Sedalia, Mo., at Okmulgee, Okla., January 22.

Charles Moore Burrows, M.D., Albion, N. Y., to Miss Elizabeth Belle Moore of Lyons, N. Y., February 7.

Benjamin T. Nye, M.D., Williamsburg, Ky., to Miss Amanda Ward, at Jeffersonville, Ind., January 26.

W. D. McClung, M.D., to Miss Louise Kirby, both of Richwood, W. Va., at Baltimore, February 6.

Archie Burt Chappell, M.D., to Eveline Frances Morrison, both of Middletown, N. Y., February 3.

Cassius M. Ketcham, M.D., to Elizabeth Hall, M.D., both of Carthage, Mo., February 7.

Arthur J. Boyd, M.D., to Miss Rhue Croxton, both of Nocona, Tex., February 1.

Deaths

Arthur Norreys Worthington, M.D. McGill University, Montreal, 1886; colonel in the Canadian Army Medical Corps, with distinguished service during the Riel rebellion, and also a veteran of the Boer War and several times mentioned in despatches; afterward in charge of Canadian Field Hospital, No. 10; surgeon major of the Fifty-Third Regiment, Sherbrooke, Que.; made lieutenant-colonel in 1907 and placed on the reserve list with the honorary rank of colonel in 1911; for two terms a Member of Parliament for Sherbrooke County; died at his home in Sherbrooke, February 7, aged 49.

Harry Fretts Atkinson, M.D. Rush Medical College, 1891; Jefferson Medical College, 1892; a member of the American Medical Association and a trustee and member of the staff of the Cottage State Hospital, and local surgeon for the Baltimore and Ohio Railroad at Connellsville, Pa.; president of the board of health; died at his home, February 7, from the effects of a gunshot wound of the brain, self-inflicted, it is believed, with suicidal intent, aged 46.

Sidney Sigmund Graber, M.D. New York University, New York City, 1888; a member of the New York Medical Association and New York Academy of Medicine; associate surgeon to the Woman's Hospital in the State of New York; attending gynecologist to the Lebanon Hospital and chief of clinic of the Presbyterian Hospital Dispensary, New York City; died at his home February 8, from heart disease, aged 51.

Isaac T. Van Ness, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1871; a practitioner of Neola, Ia., for thirty-two years; died at the home of his daughter in Council Bluffs, Ia., February 6, aged 65.

Henry Jasper Winn, M.D. University of Pennsylvania, Philadelphia, 1858; assistant surgeon of the Tenth Alabama Infantry, C. S. A. for two years, and during 1864 and 1865 in charge of the Confederate Hospital, Montgomery, Ala.; health officer of Birmingham and Jefferson County for four years and at one time president of the Alabama Board of Health; died at his home in Staunton, Va., Nov. 16, 1911, from dysentery, aged 74.

Charles B. Raines, M.D. Louisville (Ky) Medical College, 1871; a member of the State Medical Association of Texas and a Confederate veteran; a pioneer settler of Palo Pinto County; one of the commissioners appointed to arbitrate with the hostile Indians soon after the settlement of that county; died at his home in Mineral Wells, February 4, aged 65.

Inslee Hopper Berry, M.D. Cornell Medical College, New York City, 1899; visiting physician to the German Lutheran and Metropolitan hospitals and the Northern Dispensary; surgeon to St. Elizabeth's Hospital and instructor in surgery in the Post-Graduate Medical School and Hospital; died at his home in New York City, January 30, aged 40.

Gustave A. Mueller, M.D. Hahnemann Medical College, Chicago, 1885; homeopathic member of the Pennsylvania Bureau of Medical Education and Licensure; a member of the staff of the Pittsburgh Homeopathic Hospital; died in that institution, February 9, from typhoid fever, aged 48.

Lewis Slocomb Horton, M.D. College of Physicians and Surgeons, New York City, 1862; who retired from practice sixteen years ago and lived alone with his son in Brooklyn, was found dead in the kitchen of his home, February 5, from asphyxiation by smoke, and burns, aged 76.

Edward Harley Buckland, M.D. Medico-Chirurgical College of Philadelphia, 1891; a member of the Medical Society of the State of Pennsylvania and recently a practitioner of Springfield, Mass.; died in Philadelphia, January 21, from cerebral thrombosis, aged 69.

Martin Hektoen, M.D. Rush Medical College, 1899; for more than twelve years assistant physician at the Kankakee (Ill.) State Hospital and for some time past night physician in that institution; died at his home in Hospital, January 29, from pneumonia, aged 43.

Rensselaer Ottman, M.D. Albany (N. Y.) Medical College, 1884; surgeon of volunteers throughout the Civil War; for sixty-three years a resident of Carbondale, Pa.; died at the home of his daughter in that city, January 29, from senile debility, aged 91.

Atwood E. Jacobus, M.D. College of Physicians and Surgeons, New York City, 1884; was found dead in his room in Newark, N. J., from the effects of cyanid of potassium, self-administered, it is believed, with suicidal intent, while despondent, aged 52.

William Shedd Richardson, M.D. Harvard Medical School, 1884; a member of the American Medical Association; a practitioner of Marlboro, Mass., for twenty-seven years; died suddenly at his home, February 8, from heart disease.

John P. Hecht, M.D. Jefferson Medical College, 1880; of Somerville, N. J.; a member of the American Medical Association; died suddenly in the operating room of the Somerset Hospital, Somerville, from heart disease, aged 54.

Fred Aldelle Beebe, M.D. University of Wooster, Ohio, 1877; for several years a contract surgeon in the Army and later proprietor of a sanatorium at Corry, Pa.; died at his home January 29, from heart disease, aged 65.

Thomas Patrick Coan, M.D. Johns Hopkins Medical School, Baltimore, 1910; resident physician at the New York Foundling Hospital; died in the Presbyterian Hospital, New York City, February 3, from pneumonia, aged 25.

Hamilton De Graw, M.D. Albany (N. Y.) Medical College, 1855; who, after ten years of practice, retired and became a banker in Brookfield, Mo.; died at his home in that city, February 1, from senile debility, aged 95.

John L. Moore, M.D. Atlanta (Ga.) Medical College, 1868; a member of the Medical Association of Georgia and a surgeon in the Confederate service during the Civil War; died at his home in Griffin, February 3, aged 74.

James H. Easley (license, Iowa, practitioner, 1886); a veteran of the Mexican and Civil wars and for nearly half a century a resident of Hamburg, Iowa; died at his home January 25, from senile debility, aged 89.

William Henry Tallmadge, Jr., M.D. Jefferson Medical College, 1905; of New York City; died at the home of his father in Stamford, Conn., February 7, from the effects of an accidental gunshot wound, aged 34.

Henry K. Whitford, M.D. Eclectic Medical Institute, Cincinnati, 1861; for sixty years a practitioner of Elgin and Chicago; for many years professor of principles and practice of medicine in his alma mater; died at his home in Elgin, February 15, from senile debility, aged 82.

George L. Wentz, M.D. University of Pennsylvania, Philadelphia, 1892; of Drifton, Pa.; died in the Germantown Hospital, Philadelphia, January 25, after a surgical operation on the stomach, aged 45.

Lewis P. Bailey, M.D. Jefferson Medical College, 1853; surgeon in the Confederate service during the Civil War; died recently at his home in Scottsburg, Va., and was buried January 20, aged 72.

E. H. Kies (license, Sixth Judicial District Board, Texas, 1886); a member of the hospital corps of the Army during the Civil War; died at his home in Paris, Tex., recently, from asthma, aged 71.

Arthur M. Walkup, M.D. College of Physicians and Surgeons, Baltimore, 1881; a member of the Medical Society of Virginia; died at his home in Gala, January 31, from cerebral hemorrhage.

Christopher Columbus Clear, M.D. University of Alabama, Mobile, 1885; a member of the Medical Association of the State of Alabama; of Noland; died at Gordo, Ala., January 30, aged 60.

John Howard Evans, M.D. University of Pennsylvania, Philadelphia, 1871; formerly a police surgeon of Philadelphia; died at his home in that city, from cerebral hemorrhage, February 7.

Joseph H. Scott, M.D. University of Louisville, Ky., 1855; for many years a practitioner of Kentucky and Texas; died at his home in Louisville, Ky., February 5, from nephritis, aged 79.

Joseph Linn Hetzel, M.D. Bellevue Hospital Medical College, 1891; a member of the Connecticut State Medical Society; died at his home in Southport, February 3, from pneumonia, aged 49.

Harry Waterhouse Oliver, M.D. George Washington University, Washington, D. C., 1911; of Washington; died in the George Washington University Hospital, January 26, aged 25.

Franklin A. Strong, M.D. Castleton (Vt.) Medical College, 1857; a practitioner of Brewerton, N. Y., for more than half a century; died at Southern Pines, N. C., February 3, aged 78.

Henry C. Wheeler, University of Nebraska, Lincoln, 1893; formerly city physician of Webster City, Ia., but more recently of Cleveland, Okla.; died recently in that city, aged 70.

John Rule Fritts, M.D. Kentucky School of Medicine, Louisville, 1875; a surgeon of volunteers during the Civil War; died at his home in Mexico, Mo., February 1, aged 71.

John Milton Gallery, M.D. University of Michigan, Ann Arbor, 1883; died at his home near Eaton Rapids, Mich., February 5, from cerebral hemorrhage, aged 54.

Anthony J. Moore, M.D. Maryland Medical College, Baltimore, 1900; of Philadelphia; died in St. Joseph's Hospital in that city, February 5, from pneumonia, aged 35.

Benjamin G. White, M.D. University of Tennessee, Nashville, 1884; for eight years sheriff of Conway County, Ark.; died at his home in Morrillton, February 4.

Elisha T. Schwilk, M.D. New York Homeopathic Medical College, New York City, 1899; of Albany, N. Y.; died in a hospital in Poughkeepsie, N. Y., January 9.

Thomas Henry Thornton, M.D. Queen's University, Kingston, Ont., 1870; died at his home in Consecon, Ont., Nov. 24, 1911, from cerebral hemorrhage, aged 69.

John W. Harvey, M.D. Medical College of Indiana, Indianapolis, 1893; a veteran of the Civil War; died at his home in Russellville, Ind., January 13, aged 78.

Isabel Pridham Haywood (license, Mass., years of practice, 1894); a practitioner for thirty-six years; died at her home in Lynn, Mass., January 27, aged 73.

George Franklin McClendon, M.D. University of Nashville, Tenn., 1895; of Hot Springs, Ark.; died at the home of his brother in that city, February 4.

Walter S. Glover, M.D. University of Missouri, Columbia, 1855; died at his home in Jefferson City, Mo., January 25, from senile debility, aged 79.

Hampton Stokes (license, years of practice, Illinois, 1877); a pioneer practitioner of White County; died at his home in Carmi, January 1, aged 70.

Charles Liessmann, M.D. Bennett Medical College, Chicago, 1901; died at his home in Chicago, February 7, aged 51.

William E. Chalstran, M.D. Keokuk (Ia.) Medical College, 1898; of Galesburg, Ill.; died recently and was buried at Galesburg, January 31.

Levi Potter, M.D. Queen's University, Kingston, Ont., 1870; died at his home in Bowmanville, Ont., January 11, from pneumonia, aged 69.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

CONVICTIONS UNDER FOOD AND DRUGS ACT

Reports of a Few More Frauds that the Government has Recently Exposed

FERRO-CHINA ANTIMALARICO

"Ferro-China, the Anti-Malaric Febrifuge, Upbuilder, Digestive and Strengthening Tonic," was shipped in interstate commerce by A. Saunig & Co. It was said to be prepared from the "best quality of quinin" and was sold as a "cure and preventive of malaria." On analysis, the stuff was found to contain no quinin but it did contain over 16 per cent. of alcohol. The government naturally charged that it was misbranded. The defendants pleaded guilty and were fined $50. [*Notice of Judgment No. 1222.*]

WELLS' HAIR BALSAM

This preparation was made and sold by E. S. Wells, Jersey City, New Jersey. It was said to be "a vivifying tonic" and the further assertion was made that "it is not a dye nor does it contain anything harmful to the hair or scalp." When analyzed by the government chemists, it was found to be a perfumed mixture of sulphur in a watery solution of lead acetate (sugar of lead) and glycerin. The stuff was declared misbranded, first, because it was called a balsam, which it was not; second, because it was said not to be a dye, when it was, and third, because it was labeled harmless, when it was poisonous. Wells pleaded non-vult and, for some reason not evident in the government report, the court, instead of imposing a fine, suspended sentence. [*Notice of Judgment No. 1228.*]

LAXATIVE BORO PEPSIN

The Senoret Chemical Co., a St. Louis nostrum house, manufactured a product which it fancifully called Laxative Boro Pepsin. The government declared the stuff misbranded because the name would naturally lead the purchaser to believe that the preparation possessed the therapeutic and medicinal properties of boron and pepsin, when, as a matter of fact, it contained neither substance in quantities that could be appreciated by chemical tests. It was further declared misbranded because it did not contain the amount of alcohol given on the label. The Senoret Chemical Company pleaded guilty and was fined $10 and costs. [*Notice of Judgment No. 1232.*]

KENNEDY'S WORM SYRUP, CHERRY BALSAM AND HERCULINE TONIC

These three products were made and sold by the Dr. David Kennedy Company, Rondout, New York. The "Worm Syrup" was sold as a "perfectly harmless" preparation that "cannot do the least harm." Analyzed by the government chemists, it was found to be a solution of santonin (partly deposited), sugar and oil of anise in a mixture of water and alcohol. The Bureau of Chemistry naturally held that the claims that the preparation was harmless were false and misleading and the product thereby misbranded. The judge, however, apparently believing that the study of law qualified him to express an opinion on the toxicity of drugs, asserted that he did not believe that the preparation was harmful merely because it contained santonin. He therefore suspended sentence in this instance, even though the manufacturer pleaded guilty to the offense.

"Cherry Balsam" was a "consumption cure" put out by the same company and was labeled a "harmless" preparation. When examined by the government chemists, it was found to contain alcohol, opium, bitter almond oil and sugar. The stuff was declared misbranded, first because it did not contain any cherry balsam and, second, because a mixture of opium and alcohol can hardly be declared harmless. The defendant pleaded guilty and was fined $100.

"Herculine Tonic" was a nostrum of the cure-all type that was said to have been discovered by David Kennedy, M.D. It was sold under the lying claim that it is "universally endorsed and prescribed by the medical profession." The therapeutic claims made were equally false. Analysis made by the Bureau of Chemistry showed it to have, essentially, the following composition:

Alcohol	16.00 per cent.
Quinin	0.065 per cent.
Sugar	19.98 per cent.
Water, glycerin and undetermined matter	64.765 per cent.

Herculine Tonic was declared misbranded because the percentage or volume of alcohol was not stated on the label. The company again pleaded guilty and was fined $100. [*Notice of Judgment No. 1234.*]

FORMAMINT

The So-Called Germ-Killing Throat Tablet

Formamint tablets have recently been put on the American market by the same concern that exploits Sanatogen, the "food tonic" or "tonic food"—according to whether one reads European or American newspapers. Formamint tablets are being introduced to the American public by that cheapest of all methods of advertising "patent medicines," through the medical profession. It is not advertised in American newspapers or lay magazines—at present. For some years this product has been advertised in newspapers and other periodicals in Europe under such claims as the following:

> "Formamint shields humanity against infectious disease."
>
> "Cures and prevents sore throat."
>
> "The dangers of infection from diseases like diphtheria, scarlet fever, measles, tonsillitis, sore throat, mumps, etc., have now been reduced to an absolute minimum. This is due to the discovery of Wulfing's Formamint—the 'germ-killing throat tablet'."
>
> "Cleanses the mouth and throat from disease germs as easily and rapidly as dirt is removed from the skin."
>
> "Formamint will certainly prevent diphtheria."
>
> "Quickly render the whole mouth and throat thoroughly antiseptic."
>
> "Formamint destroys these [diphtheria] germs so rapidly that when a physician mixed a little Formamint with water and added it to the germs taken from the throat of a patient dangerously ill with diphtheria they were all killed within ten minutes."

Such are some of the claims by which Formamint goes to the European public. Doubtless it will be only a matter of time when the required number of testimonials from American physicians are forthcoming when we may expect to find the newspapers of this country heralding through their advertising pages the fact that Formamint is "recommended by thousands of American physicians." The medical journals that are lending their pages to this preliminary advertising campaign are the following:

New York Medical Journal
Medical Record
American Medicine
American Journal of Clinical Medicine
Medical Review of Reviews.

How much longer will the medical profession permit itself to be used as an unwitting agency for the exploitation of "patent medicines"? The game has been worked so often that it has become transparently thin. It is evidently not worn out, however, or shrewd nostrum promoters would not waste their time or money on it. That it should still be considered workable is complimentary neither to the standard of advertising ethics of medical journals that accept the Formamint advertisements nor to the intelligence of the members of the medical profession who will "fall for it."

Miscellany

Imagination in Medical Research.—Many have heard of the two students who reported on the same patient in competition for a clinical prize. The patient presented, among other symptoms, a remarkable discoloration of a certain area of skin, and the first student described this discoloration with the most careful minuteness. He measured it in different directions and drew a rough sketch of its general outline. The second observed the phenomenon with equal care, but he exercised his imagination and formed a hypothesis which he proceeded to bring to the test of experiment. He asked a nurse for a wet towel, with which he wiped the discoloration away. It is evident that the faculty which he thus brought to bear on the problem before him would be likely to stand him in good stead in relation to many others of a more complicated character; and that his exercise of the art of diagnosis would be practically immune from the errors incidental to the habit of taking all appearances at their face value. Imagination at once points to the possibility of more than one explanation of any given occurrence, or alleged occurrence, and compels inquiry as to the existence of probable causes beyond the particular one which may at first sight appear to have been in operation. . . .

To take the most important and most conspicuous of modern examples, it was imagination that first pointed to the mosquito as an agent in the conveyance of disease to man. Dr. (now Sir) Patrick Manson was in practice at Amoy, and his attention was called to the occasional presence in the blood of the natives of the minute larval filaria which had been discovered by Bancroft and called after his name. This was seen under the microscope as a motile thread about 0.3 mm. in length by 0.008 mm. in diameter, completely enclosed within a capsule, and present in the blood in millions, but occasioning no apparent symptoms. Dr. Manson employed Chinese hospital assistants to obtain blood-smears from as many natives as possible in order to ascertain the degree of frequency of the creature among the population. One of his blood collectors was greatly more successful in obtaining the filariæ than others, and inquiry showed that his specimens of blood were taken chiefly in the evening. Further inquiry showed that the filariæ swarmed in the evening in the blood of the superficial vessels of those of their bearers who worked by day and rested at night, and that they swarmed in the morning in the superficial blood of those who reversed this process, such as watchmen and other followers of night industries. A post-mortem examination of a day worker who died suddenly in the morning showed the lungs, the heart and great vessels to contain millions of filariæ, while the superficial vessels were free from them; so that their usually nocturnal migration to the surface was presumably due to changes produced in the blood by fatigue. Why should this migration occur?

Dr. Manson brought his imagination to bear on the problem, and it suggested to him that the filariæ were parasites requiring the intervention of a second host in order to enable them to reach their next phase of existence, and that their nocturnal migration pointed to this host as being a nocturnal creature of blood-sucking habits. Among such the mosquito presented itself for inquiry, and a Chinaman infested by filariæ was hired to spend a night with a selected company of the insects. In the morning they were captured, gorged with his blood, and by dissections conducted in successive days the filariæ were seen to pass through the next stages of their existence in the muscles of the insect, and to return to the extremity of the sheath of its proboscis, ready to be deposited on the surface of the next human victim in the immediate vicinity of the puncture, and to make their way through the skin to his lymphatics prepared to undergo complete development into nematoid worms and to propagate their kind.

So far all that was done was to elucidate the growth of the parasites which produce lymphatic varicosities and elephantiasis; but shortly afterward Laveran discovered the parasite of malaria. Dr. Manson's imagination at once took fire, and he pointed out that, in all probability, a mosquito was the instrument of its conveyance to mankind. Unable to pursue the investigations himself, he explained his views to Major (now Sir) Ronald Ross, to whom he also imparted the technic of mosquito dissection which he had himself employed, and who, after much patient and laborious research, was able three years later to confirm what Dr. Manson had suggested, and thus to establish on a sure basis a discovery which will ultimately lead to the extirpation of a large group of serious or fatal diseases, and may rank with the discovery of anesthetics or of aseptic surgery.—*Lancet*, London.

The Chicago Medical Society and Criminal Abortion.—The criminal abortion committee of the Chicago Medical Society has made a report (published in the *Bulletin*, Jan. 13, 1912), outlining the proposed work for the year as follows: education of the members and public as to the status of criminal abortion in Chicago; active support of members of the profession subjected to danger from blackmail or unjust court proceedings when called to treat a case in which criminal abortion has been attempted; securing the active cooperation of hospitals and physicians in giving publicity to those engaged in doing abortions; cooperation of the coroner's office and the state's attorney's office; stimulation of the interest of the society in using every effort to clear up the ranks of the profession and expel offenders; addresses to interns and nurses in the large hospitals; calling attention to the aid which may be given to the committee and the legal authorities; an evening public lecture course conducted by the propaganda committee. Cooperation with the coroner and state's attorney have been promised. Notwithstanding the difficulty of securing a legally binding dying statement the committee has been successful in every case in which the patient was reached in time. It has been found that superintendents, interns and nurses in hospitals put obstacles in the way of clearing up investigations, being under the impression that attending men must be protected. Some hospitals evade responsibility in this matter by refusing admission to patients on whom abortion has been practiced. The committee expects to convince the hospitals that it is their duty to assist in the investigation of such cases. This will tend to deter those who might otherwise be tempted to engage in the practice. The state's attorney has furnished the committee with a form of dying statement which, it is believed will withstand the tests of courts. The committee finds that newspapers are willing to criticize the medical profession on account of abortion but do nothing to aid in suppressing the evil.

Culture of the Bacillus of Rat Leprosy.—Since the cultivation of the *Bacillus lepræ* in symbiosis with amebas and the cholera vibrio, Hollmann (*Public Health Reports*, Jan. 19, 1912) has attempted by the same method to cultivate the acid-fast bacillus found in the lesions of rats suffering with rat leprosy. The amebas used were taken from a guinea-pig and grown in symbiosis with cholera vibrios, isolating and growing in "pure mixed" culture by the method of Musgrave and Clegg. Five-day-old cultures were inoculated with blood taken from the heart of a rat which was a descendant of a rat inoculated with leprosy in 1909. Smears from the lesions, as well as from the heart-blood, showed numerous acid-fast bacilli. Transplants were made to new culture media and in the ninth generation attempts were made to separate and grow the acid-fast bacillus in pure culture. This was done by heating the mixed culture of amebas, cholera vibrios and the acid-fast bacilli for 30 minutes at a temperature of 62 C., which killed the cholera vibrios and amebas. Cultured for a period of twenty-one days, distinct colonies were observed. White rats were inoculated subcutaneously with a suspension of these cultures and from rats dying at different dates afterward the acid-fast bacilli were recovered from inflammatory lesions or abscesses. Guinea-pigs inoculated with the same suspension of acid-fast bacilli proved negative after 197 days.

Differentiation of Typhoid and Brill's Disease (Typhus Fever).—As mentioned in a recent editorial (The Journal, Feb. 10, 1912, p. 414), Anderson and Goldberger believe that Brill's disease is identical with the typhus fever or Europe and the tabardillo of Mexico. Inasmuch as the disease, prior to the description by Brill in 1908, was often diagnosed as typhoid and was, no doubt, regarded as an infection due to the colon group of bacilli, a comparison of the symptoms of the two diseases in the light of more exact knowledge concerning Brill's disease will be of interest. As compared by Brill (*Am. Jour. Med. Sc.*, April, 1910), they are as follows:

TYPHOID	BRILL'S DISEASE—TYPHUS FEVER
Usually long incubation.	Short incubation, four to five days.
Onset not commonly abrupt.	Commonly with chill or chilly sensation.
Fever; gradually increasing ascent of temperature to fastigium—in all, about 10 days.	Fastigium reached in three days.
Remissions of temperature occasionally more than a degree.	Rarely more than 1 degree.
Fall usually by gradations to normal, taking commonly one week.	Fall commonly by crisis, not longer than 60 hours.
Eruption, circumscribed, lenticular, papular.	Maculopapular, periphery indistinct and irregular.
Distribution, chiefly, back, and abdomen, seldom appearing on upper and lower extremities; almost unknown on palms and soles.	Distribution in addition to trunk on upper and lower extremities not infrequent, on palms and soles occasionally.
Eruption appears in crops throughout the disease.	Does not appear in crops.
Spots rarely confluent, and then confluence of but two spots.	Confluence may occur with three or four spots forming a number of patches.
Roseola disappearing on pressure.	Erythema, not disappearing on pressure.
Petechial spots (hemorrhagic) very rare.	Petechiæ occasionally.
Apathy and prostration late in development.	Apathy and prostration early.
Labial herpes rare.	Labial herpes in 6 per cent. of the group.
Diarrhea fairly common.	Constipation an almost invariable accompaniment.
Hemorrhages from the bowel often observed.	No intestinal hemorrhages or blood in feces.
Headache disappears in second week.	Is more intense and lasts throughout the disease.
Relapses observed by all observers.	Relapses have never occurred.
Widal reaction positive in over 95 per cent. of the cases.	Widal reaction invariably absent.
Blood cultures positive in over 90 per cent. of the cases.	Blood cultures invariably negative.
Convalescence slow.	Convalescence speedy.

Agar in the Treatment of Constipation and Diarrhea.—The use of agar in constipation was suggested by Adolph Schmidt in 1905. The experience of Dudley Roberts (*International Clinics*, 1911, iv) has convinced him that its use is an important advance in gastro-intestinal therapy. Cellulose, in any of its forms, relieves constipation by increasing the bulk of the feces and stimulating peristalsis, but agar is unique among the forms of cellulose. When allowed to soak for an hour it takes up twenty times its weight and five times its bulk of water. It has practically no odor or taste and when ingested causes scarcely any discomfort, and is in no way irritating to the intestine. When taken for constipation it stimulates peristaltic activity by its bulk but no habit is established and when the evacuations become regular it may be discontinued. Daily ingestion produces characteristic soft and well-formed stools of considerable caliber. The feces are not sticky but do not break up easily and do not tend to collect in the lower bowel. Agar undergoes no apparent change in the intestinal tract except to take up water, neither fermentation nor decomposition occurring. The feces lose their putrefactive odor and the bacterial flora of the intestine are reduced in numbers, and absorption of putrefactive products is lessened. In a few weeks there is a decidedly lowered bacterial content in the feces. Agar is not useful in constipation due to all causes, among which may be mentioned abnormalities of the anus, dilatation of the rectum and weakness of the abdominal musculature, or when it is due to a purely psychic inhibition. In constipation resulting from a highly refined diet with resulting fine residue, agar is useful; also in spastic constipation, which is met with in neurotics, the undernourished and the underfed. In constipation due to deficient peristalsis, dilatation behind angulations and constrictions of an organic or spastic nature, the results vary widely. When successful there is a decided change in the toxic evidences of fecal stasis. In some patients with regular evacuations who complain of symptoms of auto-intoxication or intestinal putrefaction, agar does good. It is valuable in the constipation of infants and children and Roberts has seen a broad field of abnormalities in children relieved by the addition of agar to the diet. In the treatment of long-continued diarrhea, trouble is experienced in the evacuation of the bowel when the stools become solid on account of the flaccidity of the rectum. The soft and bulky feces produced by the agar help to restore tonicity to the rectal musculature. Fecal stasis is prevented and outbreaks of diarrhea from irritation of the mucosa are obviated. In some cases of mucous colic and membranous colitis, the effects of the addition of agar to the diet are remarkable. Roberts has found the dose to be four to eight teaspoonfuls. Adults like the finely cut agar, while children take the ground variety in cereals without objection. It may be taken dry from a spoon and washed down with fluid, but as a rule, is taken better with vegetables, cereals and cooked fruits or with thick sauces. It may also be mixed with the dough of cakes, biscuits and cookies just previous to baking.

New Uses for the Urinometer.—According to a descriptive folder accompanying a urinometer bought by an eastern physician in a wholesale drug-store, the urinometer has many uses not hitherto suspected by the medical profession. In the scientific information given, this circular equals the "circular around the bottle." Here it is:

"A DESCRIPTION OF THE URINOMETER

"This small instrument is intended to ascertain the strength of acidity of the Urine and thereby determine the comparative health of the body, particularly with reference to the order called Diabetes, or the involuntary discharge of Urine.

"The graduated side of the scale is marked with degrees, by which the comparison may be made on the reverse side; at the upper part is marked the letter W, being the point at which the instrument rests when immersed in pure water. The next division, marked by the letter H, is the point at which it rests when immersed in Urine when the body is in good health; the letter S is marked to signify strong, but a less degree of health; and the last division, the point at which the instruments rests when disorders of the Diabetes have taken place, and its progress may be ascertained by the surface of the fluid marking an increased degree on the scale."

Method of Handling the Cholera Situation in New York.—The appearance of cholera among immigrants arriving in New York in June and July, 1911, stimulated quick and vigorous efforts on the part of the health authorities at that port and the New York state department of health, assisted by some of the members of the Public Health and Marine-Hospital Service. In addition to the strict quarantine and isolation of patients with cholera and the passengers of the boats on which they arrived, all subsequent arriving immigrants were examined at the quarantine station up to the close of quarantine, November 19. In carrying out this work two points were observed very thoroughly—a complete bacteriologic investigation and rapidity, so that passengers should not be held in quarantine for more than one day. The general method of procedure after a little experience was as follows: The arriving vessel was boarded by the regular boarding officer at the quarantine station and routine inspection made. On small yellow cards, the name, sex, manifest number, ship's name and date, were placed for each passenger. The director of the state laboratories then boarded the ship with tubes of culture media carried vertically in wire baskets covered with gauze, but the tubes not plugged. The passengers were then brought to him as rapidly as possible and the following procedure observed: The director was seated on a stool with the tubes of culture media placed on a stool beside him, and the stock of sterile swabs also at hand for taking rectal samples. Each passenger, with his clothing previously loosened and prepared, was told to bend over the back of a chair placed before the director and the anal orifice thus exposed, the director first entered on the passenger's card, the number of culture tube then to be inoculated, and then, taking the swab in the right hand, by a single motion, separating the left buttock suddenly from the right and at the same moment introducing the swab through the exposed anus, a suitable rectal sample was at once obtained and without the slightest difficulty. The swab, soiled with the fecal matter, was then dropped into the correspondingly numbered culture tube, and the same procedure was continued for the examination of each succeeding passenger. By this method it was found possible to take specimens and inoculate cultures from 265 passengers per hour. These cultures were incubated in the quarantine laboratory. At the end of six hours the surface growth of every such culture was inoculated in a second tube. By improving the method with experience, it was found possible to inoculate 500 subcultures per hour. The subcultures were then incubated another six or eight hours and a drop taken to make microscopic smears. These smears were made in successive numbers of five on microscopic slides, dried in the air, fixed by passing three times through the gas flame, and stained with carbol-fuchsin. In examining the smears it was not found possible for one examiner to report on more than forty smears per hour. A considerable amount of the bacteriologic work was carried on day and night. During this period of four months, the passengers of seventy-seven steamships arriving from ports infected with cholera were examined, with a total of 26,455 persons for primary examination and 458 secondary examinations, making a total of 26,913 examinations of persons and taking of rectal specimens, a total of 26,913 primary cultures, a corresponding number of secondary cultures and approximately 2,000 serial cultures of suspects detained, so that in figuring the total work devolving on the members of the staff, it is fair to say that 27,000 persons were examined and fecal specimens taken; 60,000 cultures were made, with 30,000 microscopic diagnoses. Of 26,455 passengers, examined bacteriologically, 150 were detained for further examination or because of sufficient evidence of their being infected with the vibrion of cholera. Of these 150 detained, twenty-six were proved to be actually infected with cholera vibrions. No passenger showing any evidence of cholera infection was discovered by this cholera investigation after August 18.

Capital Punishment Versus the Life Sentence.—A "wave of crime" in Vermont in 1911, which resulted in twenty homicides, leads the *Vermont Medical Monthly* to comment on the question of capital punishment. It says that the duty of society is to accomplish the greatest good for the largest number and that in respect to crime this right cannot be safeguarded without severe and summary punishment for those who are guilty. While the infliction of the death penalty is a serious procedure, the reluctance to inflict capital punishment on convicted murderers often results in the loss of innocent lives in exchange for the guilty and worthless criminal. It is said that the lower down we go in the scale of mentality, among the grades of intellectuality which furnish the greatest number of murderers, the greater is the restraint of capital punishment against these animal tendencies. The abolition of capital punishment removes the strongest motive for restraint. Life sentences have little terror for individuals of this type. Another rather unexpected result of life sentences is found in statistics from Rhode Island in which state capital punishment is not inflicted. From 1838 to 1884 all murderers in Rhode Island except two were sentenced to life imprisonment. The sentences were terminated as follows: One is still serving his sentence; eight died in prison, including one who hanged himself; one became insane but what became of him is not stated; nineteen were pardoned in from three to twenty-one years—quite a number being pardoned after only a few years of imprisonment. It is said that by leniency to these criminals on one plea or another we are adding the further peril of perpetuation of their stock after discharge from prison. This danger has become recognized in a few states like Indiana, which have adopted radical methods for producing sterility by vasectomy. The twelfth census of the United States shows that there were more homicides in Rhode Island and Maine, where murderers are punished by imprisonment, than in all the other New England states, where murderers are punished by death.

The Individual's Experience.—Rhazes, the Arabian philosopher-physician, speaking of physicians, says: "He alone merits your confidence who, having opportunely applied himself to the study of medicine, has frequented able masters and seen much of the sick; who joins to the assiduous reading of good authors his personal observations. For it is impossible to see all, to test everything one's self; and the knowledge, the experience of a single individual, compared with the knowledge, with the experience of all men and of all ages resembles a thin thread of water placed beside a great river."

Correspondence

The Army Canteen

To the Editor:—As an alumnus of Jefferson Medical College, 1886, of which Dr. Keen is emeritus professor of surgery, I wish to register my protest against the stand he has taken in favor of the restoration of the so-called canteen to the army. Most of the points he has raised in favor of the restoration have been successfully answered already, but there are a few points which I wish to take up.

Dr. Keen uses the argument that if the soldier is allowed beer in the canteen it will prevent him from going out to the low saloons and drinking and then frequenting houses of assignation, where he will contract venereal disease. He cannot establish this by logic. Alcohol lessens a man's self-restraint. It benumbs his higher sensibilities. It makes him more reckless. Now, where is the restraining influence of the canteen? I mean to say that the canteen is the recruiting office for the saloon and bawdy house located just outside the camp. The young man who has never known anything about the saloon or house of prostitution can get his first drink in the government canteen. His moral sensibilities are benumbed, his baser appetites are stimulated and he will go outside that he may "have a time." He comes back into camp diseased for life. He never would have fallen but for the initial drink he got in the canteen.

I learned long ago that although "figures won't lie," you can get almost any result with them you want, and so it is with statistics, you can make them prove almost anything.

There are so many things against Dr. Keen's claims and not a single one in favor of them that I desist from mentioning any more save one. The fact that the brewers are in favor of the restoration of the canteen should be sufficient argument against it. Whoever heard of a brewer being in favor of anything that would better humanity?

I want to say I think the medical profession as a body has been most shamefully disgraced by proclaiming to the world that 279 of its membership have memorialized congress to pass the Bartholdt bill. I think it is high time that we who are opposed to it should do some memorializing.

Now we are informed that Dr. George W. Webster's name appeared on the list of 279 without his knowledge, and who knows how many more there are on that list without the consent of the supposed signer? We are told further that Dr. Webster indignantly ordered his name stricken from the list. That he with the rest of us may show our hand and correct the impression that the medical profession is in favor of the restoration of the canteen I nominate George W. Webster, M.D., W. E. Quine, M.D., both of Chicago, C. B. Johnson, M.D., of Champaign, and George N. Kreider, M.D., editor of the *Illinois Medical Journal*, of Springfield, to formulate a plan whereby we may express our indignation at the move made by Dr. Keen.

W. A. Wiseman, Camargo, Ill.

[Comment: We have two remarks to make concerning the above letter.

1. We have omitted from it a portion discussing the wisdom or non-wisdom of the use of alcoholic drinks. We cannot open our columns at present to a discussion of this. The issue concerning the canteen is whether or not its reestablishment will be for the benefit of the soldiers as men and of the army as an efficient fighting force. Practically no one who writes on this question for publication speaks in favor of the use of alcohol as a beverage. All at least seem to agree that the use of alcohol is harmful. The question at issue is: If the soldiers are allowed to buy beer and light wines within the confines of the army's own territory, will the net result be to lessen intemperance and other attendant evils?

2. Our correspondent inquires, in the last paragraph of his letter, concerning the signers of the petition. This question was referred to Dr. W. W. Keen of Philadelphia, who sends photographic evidence on one of the points and writes as follows. We do not consider it necessary to print the photographs.—Ed.]

To the Editor:—Dr. George W. Webster of Chicago requested in December that his name should be withdrawn from the petition, and stated that he had "no recollection of ever having signed it." The *Congressional Record* of Jan. 17, 1912, p. 1097, shows that the name of Dr. George W. Webster (which must not be confused with that of Dr. J. Clarence Webster, also of Chicago) does not appear in the official publication of the petition; in other words, as soon as I received Dr. Webster's request withdrawing his name, this withdrawal was made, just before the petition was presented. I have received no other request for the withdrawal of a name, and not a single letter "repudiating" a signature.

That Dr. Webster's recollection was at fault is shown by the accompanying photograph of his letter to me and of his signature at the end of the petition.

The *Watchman* of Boston went so far as to state that Dr. Webster's name was appended to the petition "without his knowledge or consent." The photograph, I take it, is sufficient evidence that this is not the case.

In addition to this the *Watchman* calls attention to a letter of General Fred. D. Grant, dated Jan. 10, 1912, which first fell under my eye at the beginning of this month. In this letter General Grant states that "many times in the past he has recommended the restoration of the canteen," but has now changed his mind. Inasmuch as the petition was written in May, 1911, nearly eight months before the date of this letter, and when presented to Congress, as signatures had been received at various dates, was dated Dec. 4, 1911, it was impossible for me to know at that time that General Grant had changed his views, and yet this later letter is made the basis in the *Watchman* of Boston, for the charge that General Grant had made public a letter in which he says that the use of his name as being in favor of the canteen was unauthorized and exactly reverses his position—a statement which General Grant did not make.

In the original petition, including Dr. George W. Webster's name, there were 275 signatures. Since that time there have been received seven other signatures, the last one only this week, which, deducting Dr. George W. Webster's name, makes the number of signatures at present on file 281.

W. W. Keen, Philadelphia.

[Comment: The above matter was submitted to Dr. Webster and he stated that he did sign the petition, but that he did so without fully understanding it, and later, when his attention was called to the character of the petition and when he had more fully considered the matter, he requested Dr. Keen to remove his name from the petition, with which request Dr. Keen complied. Dr. Webster states that Dr. Keen's conduct throughout has been satisfactory, honest, and honorable, and Dr. Webster denies responsibility for any reports that may have arisen to the contrary.—Ed.]

The Management of Normal Labor

To the Editor:—I have just read the correspondence (The Journal, February 3, p. 428) concerning the article previously published (The Journal, January 27, p. 274) on "The Management of Normal Labor." After a country practice of thirty years, during which I have kept close watch of the literature on all lines, as is necessary for one so practicing, it is certainly quite amusing to note some of the suggestions made by these critics. I had read the original article when it came out and considered it quite explicit; while it was not exhaustive in its scope, yet it covered the points considered very well.

John J. Coffman, M.D., Scotland, Pa.

To the Editor:—I do not hesitate to express my surprise that you should have allowed the article on "Management of Normal Labor" to escape your eye—and blue pencil. I was pleased to note, in the following issue, several short but valuable letters concerning the article. What I wish to correct, however, is not the article itself, that having been thoroughly done, but the suggestion of the editor that this twenty-year-old summary was intended "for the country practitioner."

For more than ten years, I have practiced medicine in a western town of less than 2,000 persons, situated in a ranching community. During that time there has not been a death in the town or within many miles of it due to the lack of proper obstetrics, nor one case of serious puerperal sepsis known to me; and news travels far and fast in such communities. Our people have been educated to the idea that puerperal sepsis is a preventable disease, and most often directly chargeable to the obstetrician. We have graduate nurses in attendance in a comparatively small proportion of confinement cases. These being the facts, does it seem that we require such unsurgical advice as was contained in the article referred to?

It should not be forgotten that, while some of us practice in the country, we did not learn our obstetrics there, nor do we depend entirely on our own experience to keep abreast of the times, and it happens, at least in this western country, that the general average of ability appears to be rather above than below that in many large cities. Why the country practitioner should be so commonly looked on as behind the times, and in need of even poor instruction, is beyond my knowledge. He is required, by the absence of real and pretended specialists, to be of more diversified attainments than is his urban colleague; he must have no unexplainable deaths, as is possible in larger communities, where each member knows probably not even the name of his nearest neighbor; his material equipment must be much more complete and extensive than that of the practitioner of the city; among his patients he is usually not able to have such conveniences as are considered necessities by his city brother; still he must, and does, get results.

Looking at the subject then, from this point of view, I register this brief protest against the implied injustice to what we think are our abilities.

M. A. Walker, M.D., Dillon, Mont.

To the Editor:—I imagine your motto must be "worse and more of it." In The Journal for February 10, page 429, you have a comment, in which you first apologize for the article on "Management of Normal Labor," in the issue of January 27, and then say that the writer had in mind the country practitioner. Now, do you think that is a fair and just statement? Do you think that the country practitioner is so grossly ignorant of asepsis as to place a culture medium of petrolatum in the parturient canal during labor? Do you think that he is so far behind his city brother that he does not use gloves in all labor cases? Now, if you really meant what you said in your comment, I would ask you to carry your mind back to Danville, Ky., the home of Dr. Ephraim McDowell; he was a country doctor. The immortal O'Dwyer was also a country doctor in New York State. I think that if you look the matter up you will find that all our famous men have at one time been country doctors, and you will then conclude that another "comment" is due the country practitioner.

James Farrage, Warwick, N. D.

To the Editor:—Allow me to offer you a little first aid. I refer to that unfortunate article on the management of normal labor, in the department of Therapeutics, January 27. The advice was evidently intended for the benefit of the practicians of the small towns and of the country.

First, I would suggest not to blame the doctor if he has not seen the patient until she is already howling in labor. Again, don't blame him if she has fecal accumulations in her rectum, her legs swollen to her body, and a headache of four weeks' standing. Criticism of him is unjust if he find under her buttocks a dirty bed-quilt, under which is spread a six weeks' grey cotton blanket in lieu of a sterile white sheet; no sheet, but a varying number of heavy quilts over the patient; no nurse, just Granny; four women in a close hot room, each woman holding a baby. The women all call him "Doc."

There is no hot water; one tin basin, plastered inside and out with a dark plastic sediment of the foot-wash water of a family of seven children. True, the doctor should always carry a nest of basins with him, but he may be caught without them some time. If he be pushed for time he can remove the eye from the top of the kitchen stove, if there be a fire in it, and literally burn out the filth from the dirty basin by inverting it over the fire. I've done it many a time. The Kelly pad is a ludicrous fake in country practice. The critics of the article will agree with me when they reflect that the average woman in labor is apt to climb the wall backward, or leave the bed entirely and retire to the back of the house to urinate. The Kelly pad is hard to clean, and I can't afford to burn one for every obstetric patient.

Let's grant that the doctor sterilizes his hands and draws on the sterilized gloves, as we all do. He has done the palpation stunt. Then—but I forget the shaving of the pubis! I wish to whisper to the four critics of last week. In about three seconds after the doctor has made the first rake with his safety, he will find himself on his back out in the yard with the imprint of a woman's bare foot emblazoned on his manly chest, the window sash round his neck and a revolving vision of all the stars of the firmament presented to him. Tell him not to try to shave 'em.

None of these conditions necessarily indicates poverty. You may find these disadvantages in the family of a man who owns a half section. Or you may find everything clean in the tenant home of the poorest. But that tonsorial stunt—let it alone. I seldom get to that till after the baby is born, and then I make the excuse that there is the probable perineal tear, and the shaving must be done to prevent "child-bed fever." Don't blame the doctor if he ties the cord jam up against the skin, cuts it a half inch distal to the ligature and bathes it in camphor, instructing Granny to do this every time a napkin is changed, and to keep the antiquated abdominal band off the baby and give it a chance to breathe. This is good surgery and sound advice to Granny, who seldom relishes it.

Don't criticize Doc too harshly if he calls for a glass tumbler with a drop of 'lasses in the bottom of it. He probably wishes to stick a bit of cotton in the glass for a chloroform inhaler. In the South we think chloroform given this way is safe. The patient will let it tumble off as soon as she gets a little drowsy. In the North and East they use ether more. They may be right.

S. H. Landrum, Altus, Okla.

To the Editor:—I have been much interested in the article on "The Management of Normal Labor" and also in the comments and criticisms on it. I have had a very hard and strenuous obstetric country practice for something over sixteen years, during which time I have attended several hundred deliveries, and I say that normal parturients, attended in the manner described, will not become infected; they will not develop puerperal fever or septic peritonitis.

I came into private practice fresh from a two years' course of training in a well-appointed modern hospital, where we had been carefully taught that infection was the deadly enemy always lying in wait for the obstetric patient. My first obstetric cases caused me a great deal of worry and anxiety on account of being in constant fear that my patients would develop sepsis because of their unclean surroundings. They did not, however, and a few years' practice showed me beyond all doubt that the dangers of infection in a country practice are *nil* as compared to what they are in a large city or in a hospital.

The author of this article shows a very thorough knowledge of the dangers that threaten the country obstetric patient, and a good deal of skill is needed in guarding her from them. Not one of his critics said anything about protecting the patient from laceration of the perineum, which is one of her greatest dangers. The danger of "cord around the neck" is very great at the present time, for, during a part of 1909, the babies of six primiparæ whom I delivered instrumentally had short cords so tightly looped around their necks as absolutely to prevent delivery in the natural way. Too long delay in delivery means death to these children.

As 90 per cent. of births in this section are dry births, the amniotic fluid having been drained off hours or days before, the danger of having a dry, hot condition of the vagina impede the birth of the child is serious. The physician who wrote this article evidently knows just what to do in such emergencies, which demand obstetric skill, not surgical skill.

There are many grave dangers which threaten the obstetric patient in the country, but sepsis is among the least of them. Physicians who practice like the author of the article in question will not have septic infections. Of course, it is to be understood that even in the country, no physician who has been lately treating erysipelas, scarlet fever, abscess, or any disease caused by the pathogenic bacteria, should have anything to do with a case of obstetrics.

The men who criticized the article should remember that in a large percentage of cases in country practice, we see the patient for the first time when we are called to attend her in labor; we are not engaged in advance, and are not called until labor begins. Given a young primipara who has never been attended by a physician and who is terribly afraid of him, an attempt on the part of the physician to shave and scrub the external genitals, use the pelvimeter, etc., would cause such a violent attack of hysteria that the physician would cease to be of any further use to that family. It should also be remembered that in a country practice we very rarely have a graduate nurse to assist us in the care of the patient.

William M. Gregory, Berea, O.

Vegetarianism

To the Editor:—The editorial on vegetarianism (The Journal, Jan. 20, 1912, p. 194) gives me an occasion to discuss a few points of interest with regard to this subject.

As yet there is no such thing as an ideal diet. Except milk, nothing is intended by Nature to be a food as it is sometimes mistakenly thought. We are adapted more or less perfectly to a set of conditions and the perfection of our physical life depends on a number of factors, and food is not the only important one.

A vegetarian diet is not likely to be generally adopted in the near future. I believe, however, that we shall gradually approach it by the increased acceptance of its ethical and hygienic basis. It is quite possible, in my mind, that the diet of the future may not be comparable to a vegetarian diet of to-day. We can foresee improvements in the fruits, roots and seeds that are already in use. Eggs and milk will remain and are now an easy way to switch off from the carnivorous habit. Most critics of the idea persist in remaining on the academic ground of the quantity of protein necessary for life and work. They forget systematically other considerations that should be mentioned in connection with the use of meat. Meat is a more or less toxic food and its toxicity depends *in crescendo* on (1) the state in which the animals were when killed (fatigue, exhaustion, disease, etc.) and (2) on how the carcass is handled (length of time in storage or on the stall, possibility of bacterial contamination, etc.)

It is universally admitted that meat is injurious in some diseases, especially in defective elaboration and elimination. In other words, the toxicity of meat cannot be taken care of by defective organs. This toxicity, therefore, is not immaterial.

Professor Taylor's main contention is that vegetarianism could not be applicable universally. It reminds me of a friend who thought it necessary to eat meat because the Eskimos could not live without it. I do not think that the system needs to be considered in its universal application, any more than the habits and modes of life of a higher civilization need to be applicable to the whole earth, unless we grant many thousands of years and many changes in several directions. But, even if we follow him in his argument, his conclusions are based solely on his own words; no facts are offered as proofs of them and we have to accept him as an oracle on a question that would involve a considerable amount of figuring. The quantity of protein food that is wasted is enormous. Every pound of butter represents a pound of protein that has gone to the pigs and the pigs render only a small percentage back to circulation; they make lard out of the most of it. The average consumption of protein in this country is much superior to a fairly good margin over the absolute needs. Even the poor of this land have habits of wastefulness that are appalling if we compare to them the extreme carefulness of other lands. Then it is not at all logical to offer the proposition of changing radically our habits of life and nothing else. Of course we should expect to utilize better if necessary the ground and find new resources of all kinds. The sea can render protein food of a vegetable nature. The land that is occupied by poppy and tobacco growing might be used to better purpose. The grain that is turned into whisky and beer, the grapes that are made into wine with the destruction of their protein constituents would, if utilized as food, furnish many millions of pounds of surplus available nitrogen. Great wooded areas, non-productive of food at present, could be planted with walnuts, chestnuts, etc. Sheep and goats feed very well where cattle starve. The good ground that produces but hay might easily yield quantities of grains, vegetables or pulse. I have just read a book on travel in China in which is shown that vegetarianism is a matter of necessity in that country, because there is no room for cattle. The whole of the ground has to be cultivated to produce food for men. Thus as population increases, vegetarianism does not become more remote but more necessary. A Chinese or a Japanese family would manage to live on the empty city lot that I see from my window.

There is always a possibility of a *reductio ad absurdum* in matters that pertain to the great problems of life.

J. L. Buttner, M.D., New Haven, Conn.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

RUPTURE OF THE BLADDER

To the Editor:—J. L., aged 35, a farm hand, had diabetes insipidus. He drank, as a rule, from two to four gallons of water in twenty-four hours. One afternoon he also consumed one quart of whisky and in the evening was unable to void urine. He suffered intensely all night. In the morning I was called. I found his bladder ruptured, only a small amount (one-half pint) of urine being found in the bladder, while the lower abdomen was much distended. I operated that afternoon and found a prevesical rupture large enough to admit two fingers. There was no anatomic obstruction or trauma to produce this condition. It seemed to be caused solely by paralysis of the bladder, the paralysis being the result of the frequent overdistention produced by the ingestion of large quantities of liquids. What caused the rupture? Also, will you please refer me to the literature. A. J. Somers, M.D., Portal, N. D.

Answer.—In such a case of rupture of the bladder as the above, there are two important factors which readily explain the occurrence—the diabetes insipidus and the drinking of a quart of whisky. It is a peculiar fact that persons with diabetes insipidus are remarkably immune to alcohol in the sense that they can consume large quantities of alcoholics without becoming deeply intoxicated. This is due, as has been shown by Gerhardt, to the great rapidity with which the alcohol is eliminated on account of the diabetes insipidus. This does not mean that such a person cannot become intoxicated, but simply that it requires a much larger quantity.

It is well known that sensation of the bladder is much benumbed in one who has drunk freely of alcoholics, and it is not uncommon to find an overdistended bladder in normal individuals who are intoxicated, and rupture of the bladder has occurred a number of times under these conditions.

In the case mentioned, the conditions were particularly favorable. The drinking of a large amount of whisky, certainly sufficient to benumb all of the senses, and the very rapid excretion of a large amount of urine, such as occurs in the diabetic, caused the rapid overdistention and rupture of the bladder. It is more than probable, too, that, while suffering pain all night, the patient might have rolled over on his abdomen or have strained so hard in the attempt to empty the bladder that sufficient trauma was added to the overdistended bladder to cause its rupture. It will thus be seen that the possibility of trauma is by no means eliminated from this case.

The following are a few references on the subject:

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Fenwick, P. C.: Rupture of the Bladder Followed by Gangrene of the Bladder Walls, *Brit. Med. Jour.*, April 2, 1910.
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PHENOLPHTHALEIN

To the Editor:—Please inform me as to the value of phenolphthalein in constipation, its toxic properties, form of constipation in which it is indicated, contra-indications and dosage.

W. J. Zalesky, Charleston, S. C.

Answer.—Phenolphthalein was discussed in The Journal several years ago, but it seems of enough importance to justify a brief restatement of what is known about its clinical use.

Phenolphthalein is a definite chemical substance that has long been known as a reagent in the chemical laboratory, being used as an indicator in the determination of acidity and alkalinity. It is insoluble in aqueous acids but dissolves in alkaline solutions. For this reason it is probable that it has no action in the stomach but enters into solution in the alkaline juices in the intestine and is absorbed from the intestinal mucous membrane to a certain extent. It is, however, not ordinarily excreted by the kidneys in appreciable amount. So far as known, aside from a slight depression of the blood-pressure supposed to be due to the purgative action, it has no other physiologic action than that of producing purgation. From clinical experience it has been shown to be a fairly reliable purgative, acting without producing any marked irritation. It acts in doses of from 0.06 to 0.5 gm. (from 1 to 8 grains) and shows only a slight tendency to lose its power on continued use. It is regarded as useful not only as an occasional purgative but also in chronic constipation. For this purpose it should be used as small doses of other purgatives have been used and should be resorted to rather as a temporary expedient than as a curative treatment for the condition. It can be prescribed in pills, tablets, capsules or powder. A convenient method is the use of tablets, which are now put on the market by a number of pharmaceutical houses. It can be obtained in 0.06, 0.13 and 0.2 gm. (1, 2 and 3 grain) tablets. Probably a better method would be to prescribe it in capsules, each capsule containing a moderate dose, 0.06 gm. (1 grain), and to increase the dosage as is necessary to secure the desired effect. The dose may be placed at from 0.06 to 0.5 gm. (1 to 8 grains). There is one record of a toxic action produced by a dose of 1 gm. (15 grains). Aside from this no toxic symptoms have been reported.

In phenolphthalein we have a valuable addition to the physician's armamentarium. Phenolphthalein (see New and Nonofficial Remedies, 1912, p. 180) is a non-proprietary article which can be procured from any up-to-date pharmacist. There is no occasion, therefore, for the use of any of the preparations of it which are sold under proprietary names. Of these a large number have been put before the public. Since its action is so simple, there appears to be no reason for combining it with other drugs, unless it seems desirable to add a little belladonna, as is done in the case of other purgatives, for its sedative action.

The subject of phenolphthalein has been discussed in the following issues of The Journal: Jan. 5, 1907, p. 70 (a small item on the physiologic action); March 30, 1907, p. 1133 (a longer article on the use of this drug as a purgative); April 20, 1907, p. 1351 (in the Department of New and Nonofficial Remedies a statement is made as to the method of preparation); Jan. 29, 1910, p. 343 (an article on a clinical use of the drug).

A SHOTGUN FORMULA

To the Editor:—Kindly give me a good working formula for the following, to be used in making up a pound of the mixture:

Peroxid of zinc	2 parts
Powdered alum	3 parts
Oxid of zinc	5 parts
Ichthyol	1 part
Phenol	1 part
Menthol and aromatic oils with pure petrolatum and stearin.	

In making up a pound would you use two drams or two ounces, etc.? How much petrolatum, stearin, menthol and aromatic oils would you suggest?

X. Y. Z.

Answer.—It is obviously impossible to determine the original formula intended by the partial prescription given above. It is apparently devised for the treatment of skin diseases, especially those accompanied by itching. Considering that phenol is a prominent constituent, it would be necessary to make the mixture so that the proportion of phenol would be safe. Phenol can be prescribed in such mixtures in the strength of from 1 to 2 per cent. Assuming that the proportion of phenol is to be 1 per cent., the other ingredients could be prescribed in the relative proportions given in the formula. Menthol may be used in the same amount as phenol. The proportion of stearin and petrolatum would depend on the degree of stiffness required in the ointment. Reasoning in this way we might devise the following:

	Gm.	
Phenol	5	75 gr.
Menthol	5	75 gr.
Ichthyol	5	75 gr.
Peroxid of zinc	10	150 gr.
Oxid of zinc	25	6 dr.
Powdered alum	15	225 gr.
Pure petrolatum	300	10 oz.
Stearin	125	4 oz.

Such a formula, while not absolutely incompatible, is too complex; it is a combination of sedatives and stimulant or irritating substances, not all of which are likely to be serviceable in the same case. Before making such a mixture it would be well to consider whether it is the effect of alum, of peroxid of zinc or of ichthyol that is required in the individual case. The use of such a mixture can hardly be regarded as proper treatment either for a condition which requires a sedative or for one which requires a stimulant; and the routine prescribing of such shotgun mixtures is almost as reprehensible as the use of nostrums, the composition of which is unknown; for while one would have a knowledge of what one is giving in the complex formula, the presence of one or another ingredient is practically certain to be overlooked.

THE VALUE OF WINDOW-TENTS

To the Editor:—Please inform me as to the value of window-tents, both in health and disease. Is the indiscriminate use of the window-tent to be advised?

W. T. Parrott, Kinston, N. C.

Answer.—The window-tent is recognized as a useful device in securing fresh air without cooling too greatly the air of the room. No objection to its use occurs to us except the possibility of a person's "babying" himself and thinking that he cannot stand cold air in the room. The greatest value of the window-tent is found in its use by patients who have be waited on during the night and by those who are unable bear sleeping entirely in the open air. To open windows or ors and cool the entire sleeping-room is a hardship not only r nurses and attendants, but also for persons in comparative alth who are unable to keep warm during the night, by ason of low vitality, or because, being restless, they fail keep snugly covered. Some object to dressing in a cold om; others are troubled by the weight of the bed-clothes cessary to keep them warm in a cold room. Domestic rangements are not always such that one can be allowed cool off one's whole sleeping-room; for example, it may not possible to close the sleeping-room off from the rest of e house. In all such cases the window-tent allows the fresh r to be admitted freely where the person can breathe it. his is, of course, the object for which one wants fresh air.

OSIN-SELENIUM NOT A CURE FOR CANCER IN HUMAN BEINGS

To the Editor:—In a recent editorial you wrote concerning exper- ents being carried out on guinea-pigs, for the cure of malignant owths. My father is suffering from a scirrhous carcinoma, which as removed, but involvement of the glands had already taken ace and the disease is slowly progressing. Would it be asking too uch for further particulars or how to reach the parties mentioned ove? My father is willing to take a chance if there is a ray of pe. V. R. S., M.D.

ANSWER.—Since the publication of our editorial, Jan. 13, 11, on "The Application of Chemotherapy to Cancer," we ve received a number of inquiries similar to the above. We ve even been in telegraphic communication with laymen ho grasped at any possible ray of hope for relatives afflicted ith this almost hopeless disease. From loose or incorrect atements in the newspapers many people, even physicians, ve gained the impression that a new remedy for cancer has en discovered. This is not the case. So far the method still in the experimental stage and all the work reported s been done on mice. It was distinctly stated by those who nducted the experiments and in our editorial that the eosin- lenium method had never been employed in human beings d in the present stage of the experiments it would not d could not be so employed.

GRADUATE WORK IN EUROPE

To the Editor:—Undoubtedly there have been numerous articles ritten on travel subjects which are descriptive of the hospitals of urope and South America. Please inform me where I can secure ch articles or books. I remember reading some articles on "Med- al South America" by Dr. Nicholas Senn in THE JOURNAL several ars ago, but there are probably more recent and up-to-date articles it now. I am more especially interested in the European surgical d gynecologic hospitals. J. F. ADAMS, Aberdeen, S. D.

ANSWER.—THE JOURNAL, April 8, 1911, contained about a ge and a half devoted to graduate work in the hospitals d clinics of England, Berlin, Paris and Vienna, giving the dresses of men from whom further information could be tained, and citing a number of articles that had appeared the literature. The following additional articles may be interest:

Osler, William: Impressions of Paris, THE JOURNAL, Feb. 27, 1909, p. 701, and March 6, 1909, p. 771.
Kutner, R.: Postgraduate Medical Instruction, Its Present Status and Future Objects, *Post-Graduate*, March, 1910.
McMorrow, F.: Postgraduate Work for Americans at Budapest, THE JOURNAL, July 29, 1911, p. 407.
Paling, Albert: A Long Vacation, *West. Canada Med. Jour.*, November, 1911.

HE PROPRIETY OF THE PROFESSIONAL CARD IN THE NEWSPAPERS

To the Editor:—I am young in the practice of medicine and take e privilege of asking your advice. The physicians in my town e opposed to my running a professional card in the papers. Please lvise me. C. W. H.

ANSWER.—The publication of an ordinary, simple, business rd is largely a matter of personal taste and local custom. ut the latter is very important. Our correspondent leads to infer that the custom in his community is against "a rofessional card in the papers." This being true, he should nform to this custom cheerfully. Even from a purely com- ercial standpoint, it is bad business to forfeit the friend- ip of those whose sense of right the card would offend—his ofessional brethren. He would pay too much for his whistle. the end, the esteem in which a physician is held by his nfrères is that which establishes him in his community. It impossible to force this; it must be the outcome of the aracter and conduct of the individual as these become known rough his daily contact with the profession and the public.

The Public Service

Medical Department, U. S. Army

Changes during the week ended Feb. 17, 1912.

Stallman, G. E., dental surgeon, February 7, reports for temporary duty at Fort Sill, Okla.

Lauderdale, C. C., dental surgeon, February 10, left Fort Logan, Colo., en route to Walter Reed General Hospital for treatment.

Ingalls, R. E., dental surgeon, February 7, left temporary duty at Boise Baracks, Idaho, en route to station, Fort Douglas, Utah.

Hill, Eben C., lieut., February 8, relieved from further duty at Madison Barracks, N. Y., further temporary duty at Fort Monroe, Va., and from further treatment at Walter Reed General Hospital, D. C., and ordered to Fort Porter, N. Y., for duty.

Davis, William R., captain, February 9, ordered to Cleveland, Ohio, on official business.

Rich, E. W., captain, February 9, in addition to his other duties, designated as medical superintendent of transport at San Francisco, vice Colonel Rudolph G. Ebert, medical corps, relieved.

Skinner, G. A., major, February 10, granted thirty days' leave of absence, to take effect on relief from duty at Fort D. A. Russell, Wyo. Major Skinner, on expiration of his leave, will proceed to the Philippine Islands for duty.

Slater, E. F., M.R.C., February 12, ordered to repair to this city for temporary duty in the office of the adjutant general of the Army.

Clayton, J. R., major, February 14, granted thirty days' leave of absence, about May 15, 1912.

Brooks, W. H., major, February 14, relieved from duty at Fort McDowell, Cal., and ordered to duty at presidio of San Francisco.

Henry, Z. L., M.R.C., February 14, granted thirty days' leave.

Straub, P. F., major, February 15, orders amended to relieve him from duty in this city on July 1 instead of March 15, 1912.

Woodruff, C. E., lieut. col., February 5, in addition to his other duties is assigned to duty as assistant to the chief surgeon of the western division, San Francisco.

U. S. Public Health and Marine-Hospital Service

Changes for the week ended Feb. 14, 1912.

White, J. H., surgeon, granted one month's leave of absence, without pay, from Feb. 15, 1912.

Cobb, J. O., surgeon, detailed to represent the service on the Lake Michigan water commission.

Hunt, Reid, and Franklin, E. C., professors of the hygienic laboratory, designated to represent the department on organizing committee of the Eighth International Congress of Applied Chemistry.

White, R. C., A. A. surgeon, granted thirty days' extension of annual leave, on account of sickness, from Jan. 1, 1912, and thirty days' leave from Jan. 31, 1912.

Board of medical officers convened at Manila, P. I., for the physical examination of Assistant Surgeon Robert Olesen, to determine his fitness for promotion to the grade of passed assistant surgeon. Detail for the board: Passed Assistant Surgeon Victor G. Heiser, chairman; Passed Assistant Surgeon Carroll Fox, recorder.

Board of medical officers established to meet at such times as may be necessary at the Marine Hospital office, 410 Chestnut Street, Philadelphia, for the medical re-examination of aliens. Detail for the board: Surgeon J. H. Oakley, chairman; Acting Assistant Surgeon H. Horning; Acting Assistant Surgeon W. H. Walsh, recorder.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CONNECTICUT: Regular, City Hall, New Haven, March 12-15. Sec., Dr. Charles A. Tuttle; Homeopathic, Grace Hospital, New Haven, March 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Grace, New Haven, March 12. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

MAINE: City Council Rooms, Portland, March 12-13. Sec., Dr. Frank W. Searle, 776 Congress Street.

MASSACHUSETTS: State House, Boston, March 12-14. Sec., Dr. Edwin B Harvey, Room 159, State House.

WYOMING: Riverton, March 13-15. Sec., Dr. Albert B. Tonkin.

Annual Conference on Medical Education, Medical Legislation and Public Health

Annual conferences under the auspices of the Council on Medical Education and the Council on Health and Public Instruction will be held in the Florentine Room of the Congress Hotel, Chicago, Monday and Tuesday, Feb. 26 and 27, 1912.

On Monday morning, beginning at 9 o'clock, the Council on Medical Education will hold its eighth annual conference. The following is the program:

Address of the Chairman, Dr. Arthur Dean Bevan, Chicago.

Report of the Secretary, Dr. N. P. Colwell, Chicago.

Address—"The Organization and the System of Examinations of the Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England," Mr. Frederic G. Hallett, London, England.

Discussion—Dr. George Dock, Dean of Washington University, Medical Department, St. Louis; Dr. Richard C. Cabot, Assistant Professor of Clinical Medicine, Harvard Medical School, Boston; and Dr. George H. Matson, Secretary of the Ohio State Medical Board, Columbus.

Address—"Some Administrative Phases of Entrance Requirements," Prof. K. D. Swartzel, Preliminary Examiner of the Ohio Medical Board, Columbus.

Discussion—Mr. Augustus S. Downing, First Assistant Commissioner of Education, Albany, N. Y., and Dr. Beverly D. Harison, Secretary of the Michigan State Board of Registration in Medicine, Detroit.

Address—"The Relation of the Medical School to the Intern or Hospital Year," Dr. Reuben Peterson, Professor of Obstetrics and Gynecology of the University of Michigan, College of Medicine, Ann Arbor.

Discussion—Dr. John B. Murphy, President of the American Medical Association, Chicago; Dr. Victor C. Vaughan, Dean of the University of Michigan, Department of Medicine and Surgery, Ann Arbor; Dr. William J. Means, Professor of Surgery, Starling-Ohio Medical College, Columbus, Ohio; Dr. Samuel W. Lambert, Dean of Columbia University College of Physicians and Surgeons, New York City; Dr. Edward Jackson, Professor of Ophthalmology, University of Colorado, School of Medicine, Denver; Dr. Egbert Le Fevre, Dean of the University and Bellevue Hospital Medical College, New York City; and Dr. Isadore Dyer, Dean of the Tulane University Medical Department, New Orleans.

Symposium on "Medical Education in the South"—President, E. B. Craighead, of the Tulane University of Louisiana, New Orleans; Chancellor, James H. Kirkland, of Vanderbilt University, Nashville, Tenn.; President, S. E. Mezes, of the University of Texas, Austin.

Discussion—Dr. Richard H. Whitehead, Dean of the University of Virginia Department of Medicine, Charlottesville.

On Tuesday, the Council on Health and Public Instruction will hold its Conference on Medical Legislation and Public Health. The following is the program:

Address by the Chairman, Dr. Henry B. Favill, Chicago.

Report of Secretary and Presentation of Reports from Members of the National Legislative Council.

Introduction of New Business, Resolutions, etc.

Appointment of Committee on Resolutions.

"The Present Status of Vital Statistics in the United States." Dr. Cressy L. Wilbur, Washington, D. C.

"The Essentials of State Legislation on Foods and Drugs," E. F. Ladd, State Commissioner of Foods and Drugs, Fargo, N. Dak.

Discussion.

"What Is Railway Sanitation and How Can It Be Obtained? Dr. Arthur M. Hume, Owosso, Mich., Chief Surgeon, Ann Arbor Railway Company. Discussion opened by Dr. T. R. Crowder, Superintendent of Sanitation, Pullman Car Company, Chicago.

"Federal Inspection of Dairy Products," Dr. H. M. Bracken, St. Paul, Minn. Discussion opened by Major Lang, Chief of the Chicago Office, Dairy Inspection, Department of Agriculture.

"What Education and Training Are Necessary for State and Municipal Health Officers." Dr. George B. Young, Commissioner of Health, Chicago.

The Campaign for Conservation of Vision, Dr. F. Park Lewis, Buffalo, N. Y.

"A Program for Local and State Organizations for the Suppression of Tuberculosis," Dr. J. W. Pettit, Superintendent Ottawa Tent Colony, Ottawa, Ill.

Discussion of Organization of a Council on Public Health.

Report of Committee on Resolutions.

Colleges Increase Entrance Requirements

The entrance requirements of Washington University Medical School for 1912-13 will be two years of collegiate work including specified work in physics, chemistry, biology, German and English. For the last two sessions one year of college work has been required.

Dr. Paul G. Woolley, dean of the Ohio-Miami Medical College of the University of Cincinnati, states that the medical faculty recently voted unanimously that after June 1, 1913, the entrance requirements of that medical school shall be two years of specified university work.

This makes thirty medical schools which require two or more years of collegiate work for admission. There are also seventeen medical schools requiring one year of collegiate work, making a total of forty-seven which have requirements beyond the standard four-year high school course.

Florida November Report

Dr. J. D. Fernandez, secretary of the Florida State Board of Medical Examiners, reports the written examination held at Jacksonville, Nov. 7, 1911. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 62, of whom 41 passed and 21 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Medical College of Alabama (1910) 75;	(1911) 83,	86
Birmingham Medical College	(1911)	93
Howard University	(1907)	81
Atlanta School of Medicine	(1911)	75
Atlanta College of Phys. and Surgs. (1910) 79, 93;	(1911) 75,	75
Rush Medical College (1884) 80;	(1906)	83
Chicago College of Med. and Surg. (1909) 80;	(1910)	75
University of Louisville (1892) 80; (1894) 79; (1909) 78;	(1911)	78.
Medical College of Indiana	(1881)	75
Tulane University of Louisiana (1897) 89;	(1911)	89
Baltimore Medical College	(1910)	98
Johns Hopkins University	(1902)	85
University of Maryland (1910) 92;	(1911)	82
College of Physicians and Surgeons, Boston	(1911)	75
Barnes Medical College	(1901)	83
St. Louis University	(1904)	81
Columbia University, College of Phys. and Surgs.	(1875)	86
University of Buffalo	(1911)	83
Syracuse University	(1896)	83
Leonard Medical School	(1910)	75
Jefferson Medical College	(1902)	77
University of Pennsylvania (1909) 88;	(1910)	88
Medico-Chirurgical College of Philadelphia	(1901)	83
Medical College of South Carolina	(1911) 80,	86
Memphis Hospital Medical College	(1903)	81
Chattanooga Medical College	(1910)	88
Vanderbilt University	(1911)	87
FAILED		
University of Alabama	(1903)	63
Atlanta School of Medicine	(1908)	52
Atlanta College of Physicians and Surgeons (1910) 62;	(1911) 61, 63,	70.
Medical College of Georgia	(1911)	54
University of Louisville	(1911)	66
Louisville National Medical College	(1910)	45
Louisville Medical College	(1891)	54
Baltimore University	(1899)	58
St. Louis College of Phys. and Surgs. (1904) 59;	(1911)	57
Medical College of South Carolina (1910) 66;	(1911) 59,	68
Meharry Medical College	(1908)	68
Chattanooga Medical College	(1896)	60
University of West Tennessee	(1911)	62
University of Tennessee	(1909)	58
Memphis Hospital Medical College	(1899)	67

THE INVESTIGATION OF MEDICAL EDUCATION IN LONDON

The following are abstracts of memoranda and other information furnished by the individuals named to the Royal Commission on University Education in London, which was created a few years ago to inquire into the facilities for advanced education existing in London for persons of either sex above secondary school age and to make recommendations for improvement. The memoranda are published in full in the Appendix to the Third Report of the Commission.

Professor von Müller on Medical Education in Germany

In his memorandum on medical education Professor Friedrich von Müller presents the German scheme for the practical education of the physician, based (1) on the idea that medical education is the function of the state in the interest of the public health and the prevention of disease, and (2) on the view that those who are to care for the health of the people should be broadly educated and should take rank among the learned men of the country. Medical education is therefore a part of university education and the conditions of pursuing medical studies are the same as those of admission to other departments of the university.

The state, therefore, selects the instructors and pays salaries sufficient for dignified self-support with an additional sum derived from the fees of students, varying with the number of students of the individual teachers. The position and the career of the teacher depend on his scientific attainments, and his promotion may come not merely from his own university but from any other university in the country.

In addition to the selection and pay of teachers, the state provides buildings and laboratory equipment at considerable expense. Thus, in Prussia, the state contributes toward the education of every student of medicine $475 per year. A considerable part of the expense for the education of the medical student goes to the support of hospitals for clinical teaching. A portion of these hospitals are municipal institutions, in which more or less difficulty is met in securing the use of the patients as material for clinical instruction. For this reason the state has been obliged also to provide university hospitals in which the material is more completely under the control of the medical faculty. The patients for this clinical teaching are not supplied entirely by charity, as in the case of the English hospitals, but to a very large extent they are the beneficiaries of the state industrial insurance law. The sum paid for insurance of the working classes amounts in Germany to nearly $90,000,000 yearly. Professor von Müller predicts that, with the establishment of the new insurance law for the working classes in England, it will be necessary to erect great new hospitals for those insured patients who cannot afford proper treatment at home, and suggests that it may be useful to bring those hospitals into connection with the university teaching of medicine.

In the education of the German medical student, such subjects as physics, chemistry, biology and other natural sciences, are begun at the age of 18 or 19 years, in the class-rooms and laboratories of the philosophic faculty. At the same time he receives instruction in anatomy from the medical faculty and in the second year and the first half of the third year he attends the lectures in normal histology and embryology. During this time he attends lectures on pharmacology and takes practical instruction in the hospital wards in the physical examination of patients, in the propedeutics of surgery and midwifery, and in clinical chemistry and microscopy. He is then prepared to enter the clinic. German clinical teaching differs from English in that the young student is not immediately brought into contact with the patient. In Germany, especially in the larger universities, the clinical teacher shows to all the students in the theater every day one or two selected cases which are especially adapted to illustrate the conception of the disease. The patient is examined before the whole class; the teacher explains the symptoms and discusses the general pathologic questions which are connected with the case. Only after acquiring some general knowledge is the student brought into closer contact with the patient under control of the assistants. Each individual patient, in Müller's estimation, shows such complicated possibilities that the beginner cannot understand the whole significance of the case until he has acquired a certain fund of knowledge. The work in the hospital is followed, not preceded as in the English system, by work in the out-patient department. The Germans believe that it is more difficult, and requires greater experience, to deal with out-patients and find out quickly the essential points, than to work under direction in the wards of a hospital where the cases are far better prepared and more horoughly examined by the assistant and the head physician. During his last year the student attends clinics in the spe-ialties and lectures and laboratory work in bacteriology and hygiene, with dissections of pathologic cases.

Admission to practice is secured by an examination conducted under the control of the empire and allowing the right o practice in all parts of the empire. As a rule, the exam-nation is conducted by university professors, but not neces-arily those under whom the pupil has studied. It is not at ll obligatory that the student should pass this examination t the university at which he has studied. The state exam-nation must be followed by a year of practical hospital work nder the control of hospital physicians before the licensee is permitted to undertake private practice.

Von Müller emphasizes the fact that the range and scope of study are far more important than examinations, and that it is not the province of the university to prepare for examination, but for the future life and vocation. Reform must egin with the instruction and not with the examination. A harp distinction must be made between the state examina-ion which gives the license to practice and the academic egree. The degree of M.D. can be conferred by the medical aculty in all German universities on nearly the same condi-ions. While the state examination is especially practical, he degree of M.D. is a scientific credential based on a piece of scientific work—some experimental investigation or some clinical observations with consideration of the pertinent literature.

The teachers of science for medical students are university professors and their selection follows the same lines as in the case of university professors in general. Only those who are actively engaged in scientific research are capable of being university teachers. Since the clinical hospitals are well-established institutions of the university, and since the clinical teachers are fully acknowledged university professors, they must be selected from among the scientists and not from among the successful practitioners. The clinical professor should have a wide scientific foundation apart from practical medicine, it may be in pathology or in physiology; the clinical teacher must be fitted to conduct not only the work in his ward but also the work in his laboratories. "But, above all, he must be a good physician because he has to instruct the young generation in practical medicine. If he should not be thoroughly acquainted with general medicine there would soon arise a discrepancy between the university teachers and medicine—such a disagreement as we find between scientific jurisprudence and the practice of law, and which we all deplore." The professor of clinical medicine has to consider his professional work as his principal duty, to which he devotes the main portion of his day in his hospital wards and laboratory. It is not a recommendation for a clinical professor that he has a large private practice, and he should not waste too much of his time in consultation. The limit of his private consulting practice must be left to his own conscientiousness. In Müller's opinion, the clinical teacher should not be altogether forbidden to engage in private practice, for he should be in constant touch, not only with the progress of science, but also with general professional life and with medical practitioners. If he should be confined entirely to his laboratory and hospital, he would be liable to make mistakes and come to wrong conclusions.

The clinical professor must have his staff of well-educated assistants, experts in various departments, especially in laboratory work, who should not be changed frequently. The future clinical directors will be selected from the number of old and thoroughly trained clinical assistants. The clinical assistant knows that his future career as a professor of medicine depends mainly on his scientific work and hence devotes himself to scientific investigation.

It is obvious that such a clinician must be in charge of his wards and laboratories throughout the year. Under this condition alone can he conduct the work of his wards and control his assistants and his nurses with a strong hand. The selection of a university professor for a vacant chair, even in a clinical branch, should not be restricted to the junior members of the same school, but should be made from the wide field of all the universities speaking the same language. Inbreeding is as bad in university management as in nature. Fresh blood and competition with the other best centers is the chief consideration for the welfare of universities and hospitals.

The aim of medical education should be to provide capable and highly educated physicians for the remotest hamlet and to build so as to care for the coming generation. A plan of reform which is intended only to meet the wants of the present day is wrong from the beginning. All plans must be broad enough to allow further expansion and accommodation to the necessities of advancement in science.

Mr. Abraham Flexner on Medical Education in Great Britain

Mr. Abraham Flexner, of the Carnegie Foundation for the Advancement of Teaching, in his paper said that during the last century there had been three distinct phases in the development of medical education. The first was medical teaching as it originated in schools of anatomy. For clinical work the students accompanied the physician in his hospital rounds. Teaching was an incident in the life of the physicians. Second, with the development of the sciences, chemistry, physics, biology, physiology, pathology, bacteriology and pharmacology, it was necessary to provide full-time teachers in these branches, but clinical teaching remained the same. Third, the last stage is marked by the differentiation of the clinical teacher. Teaching and research are his interest, business and duty. Practice is secondary. If pathology requires the full time of the teacher, surely an equal devotion is necessary on the part of the clinical teacher and investigator in dealing with the more intricate problems of medicine.

London is behind, according to Mr. Flexner, in methods of teaching. In some places, anatomy is still in the hands of a surgeon; pharmacology is taught in but one school and clinical teaching is in the hands of a busy consultant who visits his wards twice a week and has not the time to study clinical problems by the light of the latest developments of science. Although the hospitals care well for their patients, yet there is a lack of necessary laboratory equipment and the house staff is made up of recent graduates serving only for a short term. Accordingly, medical education is not an organic whole.

But London has more clinical material for teaching and research than any other city in the world and the conditions for teaching are very favorable. London needs scientific producing clinicians—so salaried that they may devote their main time and thought to teaching and investigation. The younger men must be trained to be producers.

In the University of Berlin, according to Mr. Flexner, no man holding an important position practices medicine, although the assistant professors have outside work in the afternoon. The university must pay the salaries of the professors, the surgeons and physicians, and must finance the laboratories. Mr. Flexner also emphasized the need of at least two years of college work, four years in the medical school and a year as intern, as the present requirements for a physician.

Sir William Osler on University Education in Medical Schools

Sir William Osler says that four questions must be considered: university work, a hospital unit, their connection with each other, and the interest they have for us and for the community.

The function of the university is to teach students and to advance learning; that is, to increase man's knowledge of man and Nature. No real progress was made until knowledge was pursued for its own sake.

Three of the greatest advances of modern times have come from the studies of strictly laboratory workers: Faraday in physics, the Curies in chemistry, and Pasteur in biology. During the past generation the advances in medicine have been most marked. To-day, there are specialists in charge of laboratories for anatomy, physiology and pathology with their subdivisions of histology, embryology, physiologic chemistry and pharmacology. In some places there are large separate institutes devoted to these subjects. "The urgent need to-day is to extend this type of university work into our medical schools so that all branches of the curriculum are included"—medicine, surgery, midwifery, and gynecology as well as anatomy and pathology.

The difficulty is that the practical schools which deal with these subjects are not under the control of the university or have only a feeble affiliation.

In regard to the hospital unit, the hospital stands "primarily for the cure of the sick and the relief of suffering; secondly, for the study of the problems of disease; and thirdly, for the training of men and women to serve the public as doctors and nurses." These ends are best achieved through the hospital unit; that is, each department in medicine should be fully equipped with its own clinics, lecture-rooms, laboratories, rooms for students, and the whole paraphernalia for teaching and research. As in Vienna and Berlin, there might be two or three units in medicine and surgery.

The unit consists of the director, the patients, the laboratories and the staff. The professor or director sees that the patients are well treated, investigates disease, and teaches the students and nurses. Second in the unit are the patients, then the necessary laboratories for cardiorespiratory physics and physiology; bacteriology and vaccine therapy; chemistry; microscopy; Roentgen-ray and electrical work, and a general laboratory for students. Lastly comes the staff, the senior assistants, whole-time men, holding their positions for years; the junior assistants, who are appointed annually from the senior class, the laboratory chiefs, and the out-patient staff or assistant professors, who are, as a rule, men in private practice, and are in charge of the junior teaching. The problem is, how to place a dozen or more teachers in every medical school in the same relation with the university as the professors of physiology and physics—how to give to each one of these a department organized on university lines.

The student should be made to feel that the hospital is his home, and should become enthusiastic over the practical work of the ward. Vacations should be done away with and the school year divided into quarters.

Finally comes research work; the problems in medicine are innumerable and the better students may be given work on these problems.

"We need an active invasion of the hospitals by the universities." The universities must pay their share of the expenses. "The men in charge of the units must be paid salaries sufficient to enable them to devote at least one-half of their time to hospital work—to give it the first place in their lives," but to insist that he give his whole time to this work limits the man too much and does not benefit the public or the man individually.

Some additional points, brought out in the answers to questions by the commissioners, show that Osler believes that not a single hospital physician in London has at his command a complete set of proper hospital laboratories. He stated also that laboratory workers in charge of chemistry and bacteriology had to be full-time men. In regard to the professorships, when the man who is at the head of a department is engaged in a large private practice, the clinics are very apt to suffer much on that account.

Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

DIVISION OF FEES AND SECRET COMMISSIONS

In this department of The Journal (Jan. 7, 1911, p. 59) appeared the report of the Committee of the Erie County (N. Y.) Medical Society appointed to investigate the causes and extent of this evil and to suggest remedies.

At that time, as well as on numerous other occasions, The Journal unsparingly denounced this practice and warned physicians that if this abuse was not investigated and corrected by the medical profession, it would soon be taken up and dealt with by the public. It was also pointed out that the correction of this evil was necessarily a duty of the local or county society, as neither the state nor the national organizations could deal with it properly. County societies were warned that if they did not do their duty in this particular, they could not complain if the public itself took it up. Evidently, this prediction has been realized in New York.

At a recent meeting of the Board of Regents of the University of New York (the licensing body in that state) Dr. A. S. Draper, state commissioner of education, presented a report on this subject, based on the report of the committee of the Erie County Medical Society. In his report Commissioner Draper said, in part:

> "At a meeting of the Board of Regents held April 19, 1911, a somewhat elaborate report or memorial bearing on the ethical standards of the medical profession and the educational standards of admission to the profession was received from the Erie County Medical Society. Its importance led the Board of Regents to refer this document to the State Board of Medical Examiners for report. . . .
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> "There are two sides to this subject. The first relates to the common attitude of the profession concerning the correct lines of moral conduct touching its relations to patients. About that it is not necessary to say much now, but it is vitally related to the educational requirements for admission to the profession, and to their enforcement, and it is all thrust on us by the report from the Erie County Medical Society. . . .
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> "In the report . . . representations are made that the practice of 'splitting fees' between physicians and surgeons,

or between physicians and consulting physicians, is common. It is held to be unethical. The practice referred to consists, I suppose, of the more thoroughly trained or more experienced physician or surgeon paying the less experienced or less capable one for bringing him patients, the division of fees being without the knowledge of the patient but of course paid by or for him. It is impossible to say how common this practice is. It is certainly reprehensible because it develops the motive for deception and overreaching and it changes the relations of the parties from a personal and professional into a commercial one. It is suggested that the legislature be requested to consider the advisability of amending the law so as to prohibit a consulting physician or surgeon from paying fees to another practitioner for bringing him business without making the fact of such payment known to the patient concerned or to the relative or friend acting in behalf of such patient. It might also be well for the Board of Regents to announce that it will revoke the licenses of physicians or surgeons determined to have been guilty of the practice."

Commenting on this report, the Brooklyn *Eagle* of January 28 printed a long editorial in which the need of reform was urged. Only a part of the *Eagle's* editorial can be quoted:

"The evil it arraigns is a form of trade unionism by surgeons and physicians for attendance on the injured and the ill. The prices charged and 'split' are not only oppressive but collusive. They are moderately characterized when called a conspiracy of corrupt surgeons and physicians against patients. The offense is a new one in the world of medicine, but in morals it is analogous to the wrongs the McNamaras committed against honest united labor, with results that narrowly saved them from execution after having brought death itself to scores of others.

"It is a peculiar shame that the State of New York has been made the theater of these offenses which Dr. Draper very judiciously sets forth. Erie is the county in which the offenses have been discovered. That they exist to a degree in other counties is certain. The proportion of shameless physicians, distinct, but we hope not large anywhere, cannot be assumed to be greater in Erie County than elsewhere by any consideration of distributive depravity or of human nature itself.

"The honest union of doctors and surgeons is desirable for fellowship, study and exchange of experience. The proportioning of charges to the eminence of practitioners and measurably to the resources of patients is in a sense defensible. The differentiation of charges, based on the eminence of doctors and, within reason, on the wealth or poverty of patients, is also defensible, always provided that from doctors, paid by municipal government and in hospitals bountied by public money, the poor get as good service as the well-to-do, the 'rich' commanding only the comforts and luxuries, grateful to them but not essential to their professional treatment.

"That may be all right, but that is not this case. Collusion between surgeons and physicians is shown by the 'split fee' system which makes patients the victims of practitioners and surgeons and which presents both divisions of the profession as conspirators in the overmulcting of patients who are alike deceived and robbed. That Dr. Draper makes as plain as types here make plain the assertion of it. And Dr. Draper proves what he says, as any reader of his words can see. The scandal of this is bad. The temptation of this is worse. It is collusion. It breeds robbery. It is conspiracy and when exposed it tempts to organized perjury in denial of confederated plunder. It is as against medicine a sin akin to the sin against the Holy Ghost in the realm of faith, and in any world the one sin should be eternally as unforgivable as the other.

"Honorable men of medicine should be of but one mind on this. They inwardly are, but too many of them fear to say they are. Their fear is the result of trade unionism in their profession, which they call by another name. Interest may deceive them. It does not deceive other men of equal intelligence. And 'God is not mocked' nor deceived by it. He is not more conscious of 'the blood of His innocents' than He is of the moral rights of those made in His image and likeness.

"The necessity is reform. The question is, can the societies of physicians and surgeons assure this reform. In medicine as in politics, the question is can reform from the inside be expected or must reform from the outside be invoked and secured? Partisans are not more insistent than physicians on the capability of reform from the inside. Partisans have been almost invariably wrong on that contention. It is to be seen whether physicians will be any more right than partisans on that contention. But by physicians or over or in spite of them the reform will come. That is unquestionable. That is what physicians should regard as inevitable. A race that has evolved surgeons from barbers, writers from tramp servitors and physicians from voodoo conjurers will find the means of evolving the reforms that are inevitable from the medical profession or from forces outside of it more progressive than that profession may show itself to be.

"The wrongs disclosed will be righted. The reforms required will be secured, despite the fact that among the offenders the worst are the boldest and the weakest are the most silent. Dr. Draper is in nothing wholesale and in all things just, but his soul and the souls of those of whom he is the executive and the spokesman are profoundly stirred. This free and strong state will end the wrongs he exposes and secure the rights he advocates. Inside or outside 'the profession,' by it or over it, the moral revolution required will be accomplished. And the time required will be well spent, to deserve and to win the praise of the Great Physician on Whose Name none of that sacred calling should be the parody or the reproach which a fetid few now are."

The *Eagle* sums the whole situation up in a sentence when it says that the question is whether reform of this evil can come from the inside or whether correction must come from without. Physicians themselves, through their local organizations, can correct this evil, if they will. If they do not, then they must expect the public itself to take the correction into its own hands. And if this is done, the results are likely to be exceedingly painful to some one.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

General Subject for the Month: Normal and Pathologic Pregnancy

Seventh Month—First Weekly Meeting

EMBRYOLOGY

OVA: Origin, development; primordial ova, number, distribution and growth; Graafian follicle, formation, cells, discus, fluid; rupture of follicles, ovulation. Structure of ova. Maturation, formation of female pronucleus, relation of polar bodies to embryomas. Unfecundated ova.

SPERMATOZOA: Number, nuclei, movements, male pronucleus.

FERTILIZATION: Segmentation nucleus, location.

SEGMENTATION: Morula, vesicle, germ layers, trophoblast.

MIGRATION: Sites, duration, forces.

IMPLANTATION: Time, action of trophoblast, primitive villi, maternal blood sinuses.

DECIDUA: Vera, serotina and reflexa.

CHORION: Formation, villi, syncytium. Frondosum and leve.

AMNION: Sac. Liquor amnii.

ALLANTOIS: Yolk sac. Cord. Placenta.

EMBRYO: Development to sixth week.

FETUS: Appearance and growth of organs, size, length.

MULTIPLE PREGNANCY

Origin, arrangement of membranes and placenta, diagnosis, termination.

ANTENATAL PATHOLOGY

DECIDUA: Acute infections, hyperplasia endometrii, hydrorrhea gravidarum.

CHORION: Hydatid mole,[1] changes in villi, syncytium, stroma, vessels. Symptoms and treatment. Chorioepithelioma.[2]

PLACENTA: Abnormalities in shape, size and weight. Adherent placenta. Placental infection, syphilis, infarcts.[3] Calcareous degeneration.

AMNION: Hydramnios; causes, symptoms, diagnosis, treatment. Oligohydramnios. Amniotic bands.

CORD: Velamentous insertion, stenosis, abnormal length.

EMBRYO: Malformations and monstrosities of germinal and embryonic periods. Nutritional and infectious diseases. Traumatism of embryo and fetus.

REFERENCE BOOKS FOR THE SEVENTH MONTH

Text-books of obstetrics by Williams, Edgar, Hirst, Jewett, Garrigues and the American Text-Book of Obstetrics.

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1. Findley: Am. Jour. Med. Sciences, 1903, cxxv, 486.
2. Frank: New York Medical Journal, 1906, lxxxiii, 864.
3. Williams: American Journal of Obstetrics, 1900, xli, 775.

Book Notices

Heredity in Relation to Eugenics. By Charles Benedict Davenport, Carnegie Institution of Washington, Director. Cloth. Price, $2. Pp. 298. New York: Henry Holt & Co., 1911.

In reviewing a book it is always well to know the author's aim in writing it. In the present instance the author believes that "our social problems still remain problems. For a long time yet our watchword must be investigation. The advance that has been made so far is chiefly in getting a better method of study. In this book I have sought to explain this new method." "It is the aim of this book to incite to further investigation." The author's aim, therefore, is not only to stimulate investigation but also to point out a better method of studying some of the social problems. It cannot be said that the author has presented anything particularly new in the method of study; the enthusiasm with which he presents the subject may incite to investigation. The author believes that traits are inherited; that the various traits or unit characters are all present, at least potentially, in the germ plasma and that they are transmitted to the germ plasma by what are called "determiners." It is simply the difference in the determiners present in two fertilized eggs that makes one develop into an ox and the other into a man.

Determiners are present in both the egg from the mother's side and the sperm from the father's side and it is the combination of these two groups of determiners in the offspring that shapes or determines its character or in other words its traits.

By the judicious mating of individuals possessing the proper determiners the author believes that the human race can be greatly improved in the same manner that scientific breeding of animals improves the stock. That there is much truth in this theory in the abstract no one who has given the subject any thought will deny. It will be granted, too, that much good may come from the scientific study of the subject, and the application of the facts to concrete life, but the author's enthusiasm leads him at times to disregard other very important factors in the evolution of the human race and makes him rather pessimistic as to the outcome unless certain methods of mating or breeding are followed.

For instance, "Unless people accept this simple truth and let it influence marriage selection, human progress will cease." This is of course an overdrawn statement, for the human animal made great progress long before the science of eugenics was dreamed of and would continue to make progress without it; but more rapid progress undoubtedly can be made when the truths of eugenics are discovered and properly applied.

In considering the different traits it is difficult to understand why art, painting, sculpture, etc., should be looked on as positive units of character or due to the presence of determiners, while music is looked on as a recession or as dependent on the absence of something, so that "high attainment in vocal or instrumental music is due to the same defect in the protoplasm." If musical talent is to be considered a defect in the human makeup, what a blessing it is that there are so many defectives!

Pauperism, narcotism and criminality are classed with hysteria, insanity and many other diseases of the nervous system as inherited traits. Many diseases such as progressive, pernicious anemia, nose-bleed, splenic anemia, exophthalmic goiter, pneumonia, rheumatism, many diseases of the spinal cord, prolapse of the uterus and many others are classed as inherited conditions without sufficient reason—in fact in many cases without any reason.

The author's great fault is that he undervalues the effect of the influences to which the individual is subjected after birth. The more we know of these conditions the less mystery there is in the unexplained.

The author considers that all the acts characteristic of persons classed as "feeble-minded" and all those which belong to criminals and which are now classed as crimes "are the normal acts of our remote ancestors" and "are so common with infants that we laugh when they do such things" and that all such traits "are normal for the infant and for an early stage in man's evolution." If all of these traits were normal for our ancestors and the traits of our ancestors are perpetuated by inheritance, why is it that practically all of these traits have become eliminated from the normal individual of to-day? Simply because the fundamental law of evolution is progress, and progress means the elimination of defects and not their perpetuation. This fact is not sufficiently recognized by the author. This, however, does not mean that the criminalistic, the epileptic and the insane do not tend to reproduce their kind in society and that their reproduction should not be prevented, but simply means that there is more to the problem than heredity.

The author objects to sterilization of this class of individuals on what appears to us as insufficient grounds. Until more is known of the laws of eugenics, and until the people become more impressed with the advantages which will result from the application of these principles, it is not to be expected that the author's suggestion to limit immigration by a careful study of the family traits of the immigrants so as to exclude all those with bad "blood" will soon be realized.

The work is an interesting one and should be read by laymen and particularly by legislators as well as by the professional man.

The Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume 1, Number 1. Paper. Pp. 133, with illustrations. Six numbers a year. Price per year, $8. Philadelphia: W. B. Saunders Company, 1912.

This is a new departure in medical publishing in this country. The work is neither a journal nor a text-book, but a combination of the two. It is a verbatim stenographic report of the public clinics held for physicians by Dr. Murphy at the Mercy Hospital, each bimonthly issue representing the latest views of the author on the particular subject treated. The subjects covered in the first number are: carcinoma of breast; nerve anastomosis; fracture of patella; Charcot's disease of hip-joint; pelvic tumor; duodenal ulcer; hydrothorax; and hemangioma of leg. The history of each case is given, and, of course, diagnosis is well covered, the method of arriving at diagnosis, reasons for it, and all the points involved in the living pathology of the particular type of case presented. Dr. Murphy's method of teaching is so practical that an exact record of his clinics cannot fail to be of great value. These *Clinics* are to be issued bimonthly, each number to contain about 130 pages with illustrations, etc. The bimonthly numbers are bound in paper; the idea is, we presume, that later two or more numbers will be bound together in cloth. If the numbers to follow are equal to the first one, the series will certainly be in great demand, for they are very practical—well up to date and full of valuable, useful suggestions.

Food Values. Practical Tables for Use in Private Practice and Public Institutions. By Edwin A. Locke, A.M., M.D., Instructor in Medicine, Harvard Medical School, Boston. Cloth. Price, $1.25 net. Pp. 110. New York: D. Appleton & Co., 1911.

This is not a treatise on dietetics, but in the first pages some of the principles of dietetics which guide one in computing a balanced ration are explained. The kernel of the volume is the valuable table of common American foods which gives the composition and energy value of common portions such as "usual helping," "tablespoon," "one chop." This makes it easy for physicians, laymen or superintendents of institutions to calculate the value and balance of a menu. There are also included a table of weights and measures and Atwater and Bryant's well-known table of average chemical composition of American foods.

Meine Präparationsmethode des Operationsfeldes mittels Jodtinktur. Von Dr. Antonio Grossich, Primarchirurg am Ospedale civico in Fiume. Paper. Price, 75 cents. Pp. 80. Berlin: Urban und Schwarzenberg, 1911 (New York: Rebman Co.)

Since Grossich in 1908 first called attention to the iodin method of sterilizing the skin it has found a wide application and has given very gratifying results. In this little brochure the author presents some personal observations on the use of the method with a chapter on the alleged harmful aftereffects of the iodin. Following this is a reprint of all the author's previous articles on the subject, together with extracts from practically all of the articles which he could find in literature. The method itself is undoubtedly of great value and its extreme simplicity commends it to all.

Medicolegal

Color Blindness as Sickness

(Kane vs. Chicago, Burlington & Quincy Railroad Co. (Neb.), 132 N. W. R. 920)

The Supreme Court of Nebraska holds that a railway night switchman becoming color blind during his employment is thereby disabled by sickness within the meaning of his employer's contract that it will pay him sick benefits for a limited period while he is disabled by sickness or accidental injury, provided the fact be established by proof of acute or constitutional disease. The court says that there was no direct evidence concerning the cause of this defect in the plaintiff's vision, and that the defendant's counsel argued that the court could not take judicial notice that color blindness uniformly is caused by sickness, and that, without evidence to explain the cause of the plaintiff's condition, the jury could not lawfully or logically find that cause to have been sickness. Counsel said that this defect might have resulted from the plaintiff's advancing years, and, if so, the defendant was not liable. It did appear, however, that the plaintiff became color blind while in the defendant's employ. There was little, if any, evidence to justify a finding that this color blindness was the result of acute sickness; but could not the jury lawfully have found that it was caused by constitutional disease? The by-laws of the relief department recognized constitutional, as well as acute, disease as a satisfactory cause for a disability which would entitle the employee to its sick benefits, and the court may take judicial notice of the fact that this defect in vision occurs in about 5 per cent. of all human males in civilized countries, and that it is discovered in every period of life from infancy to advanced senility. The jury knew these facts, and were justified in finding that the plaintiff's optical weakness was inbred, but for some reason did not become evident during his earlier years. Incurable blindness has been judicially determined to be sickness. The plaintiff for the purposes of his vocation was blind, and, being blind, he was sick, within the meaning of the defendant's regulations. The court concludes, therefore, that a verdict in his favor was sustained by sufficient evidence.

Contamination of City Water-Supply by Ducks

(City of New York vs. Blum (N. Y.), 131 N. Y. S. 87)

A trial term of the Supreme Court of New York, Nassau County, holds that the plaintiff city was entitled to make regulations to prevent the contamination of its water-supply by ducks raised on the defendant's premises, or to have his raising of ducks enjoined. The court says that the city had been for many years the owner of "Smith's pond," as it was known, used for supplying its inhabitants with water for drinking purposes. The defendant had for about three years owned his premises on Pine brook, which empties into Smith's pond, and was engaged in raising ducks, with ponds on his premises which were at the beginning of this action fed by an artificial channel leading from Pine brook. The water was again returned to Pine brook by another artificial channel lower down the stream. Since the commencement of the action, this last-mentioned channel had been closed; and, although there was a perceptible flow from Pine brook into the defendant's ponds, there was no perceptible flow from these ponds back into that brook. The plaintiff sought to enjoin the raising of ducks on the defendant's premises, unless he would permit on his premises certain precautions to prevent the contamination of the plaintiff's water-supply, claiming that large quantities of duck excreta were carried from his premises into its pond from which its water-supply was obtained.

While some evidence was given on the defendant's behalf, tending to show that colon bacilli were found in the waters of Pine brook or stream above, as well as below, the defendant's ponds, the court thinks that it could not be seriously disputed that the result of such duck-raising industry at this point was, and would be, to greatly increase the amount of colon bacilli in such waters. For this situation the court thinks that the closing of the outlet from the defendant's ponds could not be considered an adequate remedy. More or less of the excreta must escape into the waters of the ponds and sooner or later be conveyed by flood and high water into the plaintiff's pond. This left the sole question to be determined: Was the defendant's use of the premises reasonable? If it was, then, notwithstanding that the plaintiff's source of water-supply might be polluted to some extent, the plaintiff's only remedy was to condemn the premises on which the contaminating industry was carried on. On the other hand, if such use of the defendant's land was not reasonable, then the plaintiff was entitled to the relief sought in this action.

The habits of ducks are so well known that the court has no hesitation in finding without proof that they spend a large part of their time in or on the water; and, necessarily, nearly all of their excreta is dropped in the water, thus rendering them more harmful to the water than other farmyard fowl or any domestic animal allowed to run at large on the farm. While duck raising is a legitimate business and ordinarily cannot be considered a nuisance, still, under certain surroundings and conditions, it would be an undoubted nuisance, the same as slaughter-houses and other industries which are prohibited in some localities. In this case the court is unable to find that the raising of ducks in the manner in which the defendant carried it on was a reasonable use of the stream in question. Under the regulations proposed by the plaintiff (not set out in the opinion) such use would be reasonable. That the stream in question was polluted by others was no defense for the defendant.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Bulletin of Johns Hopkins Hospital, Baltimore

February, XXIII, No. 252, pp. 33-64

1 James Parkinson. L. G. Rowntree, Baltimore.
2 *Is Anastomosis Between Portal Vein and Vena Cava Compatible with Life? B. M. Bernheim and C. Voegtlin, Baltimore.
3 Some Suggestions Regarding Mechanism of Resorption of Thyroid Colloid. P. G. Woolley, Cincinnati.
4 *Influence of Iodids on Catalytic Activity of Rabbit's Blood. A. Strauss, Baltimore.
5 *Consanguineal Diabetes Mellitus. N. B. Foster, New York.

2. Is Anastomosis Between Portal Vein and Vena Cava Compatible With Life?—A new modification of the operation for Eck fistula is described by Bernheim and Voegtlin which is superior as far as safety is concerned to the methods already known. In order to do away with practically all danger in cutting the opening they have lately devised a pair of scissors that are mathematical in the precision with which they cut. They are bayonet shaped, so that there is no difficulty or awkwardness in approaching the vessels which naturally lie quite deeply. The handles are four inches long with a one and a half inch drop to the blades, whose actual cutting edge is 1 cm. There are two separate "stops," which allow the blades to be opened only a certain distance. When they are opened to their fullest extent, their points are exactly one-quarter of an inch apart and their outer edges are almost parallel, as nearly parallel as an instrument maker can make them and still keep the inner edge for cutting purposes. Furthermore the blades are wedge shaped, so as to prevent all bleeding while entering the vessels. Raised to them is a round guide which projects out beyond the blade points one-half inch and is turned up at its ends. It is attached to the shank of the scissors. Where formerly they used single thread (Brainerd and Armstrong, size A or B), they now use double, threaded on the usual curved No. 3 French needle. The reason for this is that the double thread almost entirely fills the needle holes and is, of course, stronger. They found that Eck fistula dogs, if kept on a proper diet, may live without being influenced by the operation for a long time. Certain hepatic functions are decreased in Eck fistula animals: tolerance for sugars, formation of bile, hemolytic function of the liver. Proof is furnished for the assumption that the application of the operation to the human being is perfectly compatible with life.

4. **Influence of Iodids on Catalytic Activity of Rabbit's Blood.**—It was found by Strauss that potassium or sodium iodid fed to rabbits in large doses may lead to an increase of the catalytic activity of the blood. This increase is not due to the presence of the iodid in the circulating blood. Withholding the food may lead to an increase in the catalytic activity of the rabbit's blood, while resumption of feeding is associated with a drop in its catalytic activity.

5. **Consanguineal Diabetes Mellitus**—Two families have come to Foster's attention in which two or more children of the same parents have developed diabetes in early youth.

Virginia Medical Semi-Monthly, Richmond

January 26, XVI, No. 20, pp. 498-520

6 *Fifty Cases of Goiter Operated On at St. Luke's Hospital. S. McGuire, Richmond.
7 Mental Defectives. W. F. Drewry, Petersburg.
8 Later Experiences with Salvarsan at U. S. Naval Hospital, Norfolk, Va. G. B. Trible, Norfolk.
9 Use of Salvarsan at Army Hospital, Fortress Monroe, Va. F. P. Reynolds, Fortress Monroe.

6. Abstracted in THE JOURNAL, Feb. 3, 1912, p. 371.

Archives of Pediatrics, New York

January, XXIX, No. 1, pp. 1-78

10 Hospitals for Care of Infants and Children and Methods of Prevention of Infection. H. Koplik, New York.
11 *Diazo Reaction in Scarlet Fever and Serum Sickness. S. S. Woody and J. A. Kolmer, Philadelphia.
12 Anesthesia in Surgery of Childhood. F. W. Pinneo, Newark, N. J.
13 *Dietetic Treatment of Infantile Tetany. C. G. Grulee, Chicago.
14 Relation of Social and Economic Conditions to Infant Morbidity and Mortality. J. Levy, Newark, N. J.
15 *Is Milk of Eclamptic Mothers Toxic? C. A. Frost, Utica, N. Y.

11. **Diazo Reaction in Scarlet Fever.**—The Diazo reaction was found positive by Woody and Kolmer in 17.3 per cent. of scarlet fever and 12.9 per cent. of diphtheria patients during the first week of these infections. It is during this week that scarlatiniform serum rashes are so apt to develop and make a differential diagnosis from scarlet fever quite difficult. The percentage of positive reactions in serum sickness was much lower. A few positive reactions were found averaging 10.8 per cent. for all kinds of rashes, but many of these positive results may have been due to diphtheria. The value of the Diazo reaction in differential diagnosis is held to be very slight by the authors, not because the reaction is occasionally present in a serum rash case, but because the percentage of reactions in scarlet fever and diphtheria is comparatively low and inconstant, so that a negative reaction in a case presenting a scarlatiniform rash is of little value in excluding scarlet fever. Since the reaction is positive in 75 per cent. of cases of measles a negative reaction in a case presenting a morbilliform rash is considered by the authors to be of value in differential diagnosis.

13. **Dietetic Treatment of Infantile Tetany.**—Without having previously read Finkelstein's statement, Grulee decided to determine what effect, if any, the removal of the salts, and especially the calcium from the food would have on the cases of infantile tetany. This suggested itself to him because of the recent tendency in literature to connect in some way this disorder with a disturbance of calcium metabolism, the exact nature of which had and still has escaped our knowledge. Though his observations fall far short of proving any relation between infantile tetany and the calcium content of the food, they tend, he thinks, to confirm the statement of Finkelstein that the whey is at fault. In looking over his four cases Grulee was struck by the fact that a food containing no whey should be so nonirritating, and that with such a striking regularity there was seen an increase in the tetanic condition on the addition of whey to the food. Therefore, he believes that he is justified in drawing the conclusion that the curds of milk from which the whey was removed were not irritating in these cases. In the four cases mentioned the food was simply a mixture of curds of skimmed or whole milk, as indicated, which had been precipitated with rennet, mixed with barley water. This arrangement proved very unsatisfactory, for the reason that curds would precipitate to the bottom of the bottle and oftentimes fall into large clumps, which it was impossible to get through the hole of an ordinary nipple unless this was enlarged. After some experimentation, especially with gelatin in various concentrations, Grulee found that a solution of arrowroot flour to the strength of two drams and a half (a level tablespoonful) to the quart, makes the best medium in which to keep the curds suspended. It is very necessary that the curding be done carefully.

The following method has been used in the Provident Hospital diet kitchen with greatest success: The milk is brought to a boil and then cooled to 107 F. Chymogen, a teaspoonful to the quart, is then added and the temperature kept at 107 F. for half an hour. The milk is then strained through a cheesecloth and allowed to drain for one hour. The curds are then put through a finely meshed sieve. It would seem that the whey was an irritating food in these cases. Summarizing, Grulee says that whatever the direct cause of tetany may be, it is intimately connected with metabolic processes, and that there is in the whey some material which acts in an irritating manner, producing an increase of the irritability of the peripheral nerves. That removal of whey from the food gives a food which is non-irritating in these cases, but which frequently must be supplemented with sedatives in order to bring about a proper reduction of the spasmophilic condition.

15. **Is Milk of Eclamptic Mothers Toxic?**—Frost feels that the milk of an eclamptic mother is toxic, even more than her blood, and that a seizure coming on, just prior to the secretion of milk, makes it doubly toxic, as nature takes this mode of elimination; therefore he forbids a nephritic or eclamptic mother to nurse her new-born infant.

Washington Medical Annals, Washington, D. C.

January, X, No. 6, pp. 309-419

16 Tendency to Exaggeration and Complexity in Modern Medicine. W. M. Barton.
17 Hypertrophied Ova of Birds. D. S. Lamb, Washington, D. C.
18 Vaccine Therapy in Diseases of Ear, Nose and Throat. V. Dabney, Washington, D. C.
19 Rational Treatment of Hysteria Without Minute Psychoanalysis. T. A. Williams, Washington, D. C.
20 Historic Synopsis of Development of Hypodermic Medication. C. A. Pfender, Washington, D. C.
21 Healing Forces of Nature in Disease. G. Werber, Washington.
22 Case of Fatal Anemia from Toxemia of Pregnancy, Treated by Direct Blood Transfusion. W. W. Wilkinson, Washington, D. C.

American Journal of Medical Sciences, Philadelphia

February, CXLIII, No. 2, pp. 157-312

23 *Movable Cecum. J. Sailer, Philadelphia.
24 Lumbar Type of Intermittent Claudication. J. R. Hunt, New York.
25 *Acute Yellow Atrophy of Liver in Children; Report of Case. J. Phillips, Cleveland.
26 *Treatment of Nocturnal Enuresis in Children. J. Ruhräh, Baltimore.
27 Some Applications of Crehore Micrograph, with Special Reference to Recording of Heart Sounds. J. H. Austin, Philadelphia.
28 Sarcoma of Tongue and Conditions Which Simulate It. E. M. Foote, New York.
29 Influence of Oral Sepsis on Digestive Disorders. G. M. Niles, Atlanta.
30 *Prognostic Value of Urochromogen and Diazo Reactions in Pulmonary Tuberculosis. R. C. Heflebower, New Mexico.
31 Agar as Vehicle in Intestinal Therapeutics. M. Einhorn, New York.
32 *Reactions Induced by Antithyroid Vaccination. H. Albert and A. M. Mendenhall, Iowa City.
33 Brain Tumor Successfully Located by Means of Roentgen Rays. J. H. Lloyd and L. J. Hammond, Philadelphia.
34 Roentgen Rays in Hypertrophied Prostate. J. W. Hunter, Norfolk, Va.
35 *Cancer of Ovary in Girl Aged 11 Years. F. H. Lahey and S. R. Haythorn, Boston.
36 *Physical Exercise and Blood-Pressure. E. O. Otis, Boston.

23. **Movable Cecum.**—Sailer says he can easily understand why the fixation of the cecum should prevent recurrent attacks of colic, if they are due to temporary constipation or restore the contractibility of an atonic colon, and, therefore, purely on theoretical grounds, it would seem desirable at the time of the operation to correct all displacements, kinks, or folds that are giving rise, or may in the future give rise to partial or complete obstruction. He is convinced that many cases of movable cecum are wrongly diagnosticated chronic appendicitis, that in these cases the removal of the appendix, even if it shows signs of inflammation, is not followed by the relief of the symptoms, and, therefore, some other etiologic factor must be active. In no less than three of the five cases reported by him had the appendix been removed, and in every instance described as the seat of a chronic inflammatory process, and yet in none of those three was there any relief

afforded, and in one, subsequent operations were equally futile. He regards it as likely that the essential lesion in these cases is the atony which results from the partial and occasional obstruction, and agrees with Fischler that the term typhlatonia is better than cecum mobile.

25. **Acute Yellow Atrophy in Children.**—Phillips' patient, a female child, aged 5 years, was admitted to the hospital, Nov. 3, 1909, suffering from intense jaundice associated with stupor. Neither the family nor the personal history threw any light on the case. One week before admission she began to lose her appetite, and vomited several times a day, the last time she vomited being two days before coming to the hospital. During this time the child became more deeply jaundiced, the stools were clay colored and the urine a deep yellow color. The parents stated that they had not noticed any blood in the vomitus or in the stools. During the last twenty-four hours she had been unconscious. Physical examination showed a well-developed and quite well-nourished child, tossing about restlessly in bed. The skin and mucous membranes were deeply jaundiced, a small ecchymotic area was noticed in the left lower quadrant of the abdomen, and another on the outer side of the right arm just above the elbow. There were numerous small petechias over the lower extremities below the knees. The child was unconscious, but seemed hypersensitive when touched. The pupils were widely dilated and reacted sluggishly to light. The ears, nose and throat were normal, but the tongue was heavily coated with a yellowish-white fur. Slight general glandular enlargement was noted. The temperature was 96.2 by rectum, the respirations were thirty to the minute, and somewhat shallow and irregular. Examination of the lungs revealed nothing abnormal. The pulse-rate was sixty-four; with the exception of some arhythmia there was nothing of importance in the examination of the heart.

The abdomen was somewhat distended, especially in the lower part, this being due to a full bladder. The spleen could be felt. The lower edge of the liver was not palpable; the upper border of hepatic dulness began at the fourth rib in the right mammary line and at the sixth rib in the axillary line. The tendon reflexes were exaggerated and there was some spasticity of the legs. The urine was dark yellow in color; specific gravity, 1.017, alkaline, contained a faint trace of albumin and bile was present in large quantity. The microscopic examination of the centrifugalized sediment showed many epithelial and hyaline casts and many leucin crystals. The leukocyte count was 22,400. The child vomited shortly after admission to the hospital, the vomitus being mixed with dark clotted blood. The stomach was then washed out and numerous blood clots came away in the washing.

The child died two hours later. Anatomic diagnosis: Acute yellow atrophy of the liver icterus, petechial hemorrhages (skin, omentum, mesentery, mediastinal tissues, epicardium, pleura, lung, Peyer's patches, mucous membrane of the stomach), cloudy swelling of heart, kidney, pancreas and adrenals, stenosis of the cystic duct, thyroid hyperplasia.

26. **Nocturnal Enuresis in Children.**—In a small series of unselected cases Rührah used dried thyroid. In a small proportion of cases in which there were more or less marked signs that might be attributed to thyroid insufficiency, the results were quite remarkable. These were all children with adenoids and enlarged tonsils, or in some cases children in whom the adenoids and tonsils had been recently removed. In this series of cases the effect was obtained promptly or not at all. In every instance in which a favorable result was obtained a marked difference was noticed after the administration of one or two doses of the drug and in all cases within a week. The undersized children gained weight rapidly, nor has it been necessary to continue the thyroid over long periods of time. In several instances in which the children had high arched palates but no subnormal temperature, the thyroids had no effect whatever.

30. **Diazo Reaction in Tuberculosis.**—In Hellebower's series of thirty-nine cases there were positive Diazo reactions in 29.1 per cent.; while 66.6 per cent. gave positive urochromogen tests. There was a positive Diazo reaction in none of the ambulant cases, in 15.7 per cent. of the semi-bed cases and 42.8 per cent. of the bed cases. The urochromogen test was positive in 45.4 per cent. of the ambulant cases, 47.3 per cent. of the semi-bed cases and 80 per cent. of the bed cases. Both reactions occur more frequently in the severe cases and with still greater frequency in the severest cases. The Diazo reactions were more intense, and the urochromogen test even more so, in the more severe cases. Not only does the urochromogen reaction occur in a greater number of cases, but it occurs far more constanly than does the Diazo reaction. Therefore Hellebower concludes that the frequency and constancy of the appearance of the Diazo and urochromogen reactions in the urines of cases of pulmonary tuberculosis is an index to the severity of the condition, a constant negative result pointing to a case that is doing well, while a constant positive result indicates a progressively downward case. The urochromogen test occurs more frequently, and is more constant than the Diazo reaction. It is, therefore, a better index to the condition of the patient than the Diazo reaction. The intensity of both the Diazo and urochromogen reactions is of great import as an index to the severity of the condition, especially as a method of determining the difference in prognosis in cases which show the reactions constantly.

32. **Antityphoid Vaccination.**—Albert and Mendenhall found that the injection of typhoid vaccines induces a local reaction in all cases and a general reaction in some cases. A previous attack of typhoid fever apparently causes the reaction to be more severe than is observed in individuals who have not had typhoid fever. Antityphoid vaccination causes a marked increase in the specific agglutinins, opsonins and bacteriolysins. The injection of typhoid vaccines causes a marked polymorphonuclear neutrophil and large mononuclear leukocytosis. The marked increase (both absolute and relative) of the large mononuclear leukocytes in the peripheral blood is the only leukocytic change which is common to both clinical typhoid fever and antityphoid vaccination. Such occurrences suggest that these leukocytes have something to do with the formation of antibodies concerned with the production of antityphoid immunity.

35. **Cancer of Ovary.**—This was a rapidly growing, malignant tumor, which produced very extensive metastases of lymphatic distribution. The structure was that of an epithelial growth of a round-or-oval-celled type, which always reproduced the same picture and never developed cylindrical cells or became scirrhus. These points, added to the fact that the growth was first seen in the ovaries, leads to the supposition that it was primary in one or both of them. Most interesting were the cells in the mesenteric veins and in the liver, which appeared to be free tumor cells. In the mesenteric veins there seemed to be little doubt that they were tumor cells, for they exactly resembled those in the lymph spaces, had nucleoli and were larger than desquamated or wandering endothelial cells. In the liver they were not so well stained, but could be differentiated from displaced liver cells, in that they had larger nuclei and were free from fat globules and pigment granules, while there was abundant pigment in the neighboring liver cells. Those found in the liver sinusoids were distinguished from wandering endothelial cells with difficulty, their greater size being the only obvious point of difference. None of these cells were found in the lung capillaries.

The customary teaching on these tumors which metastasize wholly by the lymphatics is that the cells do not gain entrance to the blood-stream; but granting that the cells observed were tumor cells, Lahey and Haythorn say that another explanation must be sought in this case. Three possibilities have suggested themselves to the authors: (1) That the blood had closely associated with it (maybe with the red cells) an immune body which brought about the destruction of the tumor cells, but did not diffuse through to the lymph. (2) That the tumor cells were carried to the liver by the portal circulation and destroyed. (3) The most likely possibility of all is that the question was a quantitative one, the lymphatics in the neighborhood of new growth being filled with great numbers of tumor cells, while some search was required to find those in the veins.

36. **Physical Exercise and Blood-Pressure.**—In 126 cases of moderate general exercise a mixture of various kinds, as in class work, ninety-seven, or 77 per cent. showed a rise of blood-pressure immediately after the exercise. In nine, or 8.1 per cent., there was no difference between the first and second measurements; and in twenty cases, or 16 per cent., there was a fall in the second measurement. With the third test, taken from three to twenty minutes after the exercise, in some cases after a simple rest and in others after the bath, out of fifty-nine men, forty-five, or 76 per cent., showed either a fall to the initial measurement (supposedly the normal), or to a subnormal pressure, generally the latter. Otis concludes that physical exercise in the majority of cases, of whatever nature it may be, excessive, severe and long continued, or more gentle and moderate, causes a rise in the systolic blood-pressure, the maximum occurring sometimes in the systolic blood-pressure during the effort. As fatigue sets in and advances, the pressure falls to normal or subnormal. If the exercise ceases at a time when the increased pressure exists, which is indicated by taking it immediately on stopping exercise, the return toward the normal takes place rapidly, generally within a comparatively few minutes, as was the case with Otis' observations. Or, if it ceases after the fall to subnormal has occurred, as in the case of more extensive fatiguing and long-continued exertion, then the return *upward* to the normal is slower. depending on the degree of fatigue and exhaustion.

Wisconsin Medical Journal, Milwaukee

January, X. No. 8. pp. 433-490

37 Rachiocentesis. W. F. Lorenz, Mendota.
38 Impaling Injuries of Pelvis. C. J. Habhegger, Watertown.

Journal of South Carolina Medical Association, Seneca

January, VIII, No. 1, pp. 1-30

39 Pneumonia. W. M. Lester, Columbia.
40 Treatment of Pneumonia. W. J. Burdell, Camden.
41 Pneumonia. W. A. Woodruff, Cateechee.
42 Bronchopneumonia. H. L. Shaw, Fountain Inn.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

January, XV, No. 1, pp. 1-64

43 *Uses and Limitations of General Anesthesia as Produced by Subcutaneous and Intravascular Injections. W. W. Babcock, Philadelphia.
44 *Parental Alcoholism as Factor in Mental Deficiency of Children. A. Gordon, Philadelphia.
45 Physiologic Treatment of Constipation and of Mucomembranous Enterocolitis. H. Nepper, Paris, France.
46 *General Paresis, Tabes and Cerebrospinal Syphilis. E. D. Fisher, New York.
47 General Practitioner or Optician. E. M. Alger, New York.

43. Abstract in The Journal, June 3, 1911. p. 1677.

44. **Parental Alcoholism in Mental Deficiency of Children.**—Gordon's study embraces 298 cases of mental deficiency observed in 117 families. Only the living members were taken into consideration; the mortality in each case of the families studied was great; death occurred at a very tender age; some children died early in life and the living presented mental and physical stigmata of degeneracy. Therefore, one must logically conclude that the effect of alcoholism on the offspring is most disastrous. Gordon is led to conclude that alcoholism is unquestionably one of the direct causes of imbecility, idiocy and feeble-mindedness in the offspring. The pictures built up from the collected facts show that alcoholized individuals procreate degenerate and mentally feeble children. These in their turn, if permitted, continue the chain of the pathologic condition and so on endlessly unless the chain is interrupted. One such family, for example, is capable of throwing into the community dozens of useless or dangerous individuals, who, if capable of multiplying, will produce their like.

The mental inferiority of such units leads the community backward and its intellectual *niveau* is thus lowered. A mentally deficient individual is unable to adapt himself to his surroundings and his efforts in that direction are futile. Moreover, he becomes dangerous to society as his conceptions of obligations and of conventional laws are primitive, undeveloped and frequently perverted. It may be of interest to mention the results of experiments conducted on animals with reference to the question of germ-plasm deterioration, which is discussed here from a psychiatric standpoint. There is no doubt in Gordon's mind that ethyl alcohol taken into the organism in any form and allowed to act for some time can produce changes in the germ cells which influence many generations of descendants. These changes are multiple, ranging from an ordinary nervous disturbance to an anomaly and deformity and to the production of fetuses which die *in utero*.

Heredity, he says, consists of the transmisison of physical and mental characteristics of parents to the offspring by means of the energy of the nuclear plasm of the germ cells. After sexual union has taken place, a combination of the hereditary characteristics of both cells follows. Should any change occur in the qualities of the plasm of the germ cells, a lasting alteration will develop in the hereditary energies of these cells. Alcohol is one of the agents capable of producing the blastophthoria of Forel or germ deterioration, which, in its turn, causes many anomalies and defects involving the embryonal development of various organs. Blastophthoria or germ deterioration can be perpetuated for many successive generations through habitual hereditary transmission.

46. **General Paresis, Tabes and Cerebrospinal Syphilis.**—In Fisher's opinion salvarsan is probably as ineffective in the parasyphilitic affections as mercury and iodid of potassium.

Journal of Oklahoma State Medical Association, Muskogee

February, IV, No. 9, pp. 355-396

48 Ankylostomiasis. A. C. Hirshfield, Norman.
49 Plea for Radical Herniotomy with Local Anesthesia. L. F. Watson, Oklahoma City.
50 Cure of Opium and Morphin Habitués. W. E. Rammel, Bartelsville.
51 Various Aspects or Forms of Icterus. H. M. Williams, Wellston.
52 Rabies; Report of Case. G. A. Morrison, Poteau.
53 Iritis. W. A. Cook, Tulsa.
54 Obstetric Record of Forty Years. W. Nairn, Alluwee.
55 Early Diagnosis and Treatment of Meningitis. C. J. Fishman, Oklahoma City.

Boston Medical and Surgical Journal

February 8, CLXVI, No. 6, pp. 195-234

56 *Responsibility of Medical Profession for Early Diagnosis and Treatment of Pulmonary Tuberculosis. J. B. Hawes, Boston.
57 *Influence of Race in Prevalence of Tuberculosis. F. P. McCarthy, Boston.
58 Fly Problem at Worcester State Hospital, Massachusetts, 1911. S. T. Orton, Boston.
59 Inefficiency of Ordinary Bed Rest; Its Correction with Thigh Support. L. T. Brown, Boston.

56. **Pulmonary Tuberculosis.**—At the Massachusetts General Hospital and at the Boston Consumptives' Hospital, where there is a thorough routine physical examination of every patient and the sputum, Hawes says, consumption is diagnosed promptly, as shown by the fact that 279 out of 300, or 90 per cent. of patients, were diagnosed at once, or within one week.

At the same institutions, though less so at the latter, there is little evidence of much in the way of "early" diagnosis. Out of 200 patients diagnosed as having pulmonary tuberculosis, fifty-seven were found to be incipient, but of those only thirty-four were so called without a positive sputum examination, while during the same period at the Massachusetts General Hospital, at least, the number of cases of "debility," "anemia," "Ph?" and other somewhat vague diagnoses was very large. Out of 500 patients now at the various sanatoria in Massachusetts, over 75 per cent. of whom are in the advanced or moderately advanced stages of the disease, 285 were told by the first physician whom they consulted that they did not have consumption.

Of these 500 patients, 331 stated that they went to a physician as soon as they suspected that they had any lung trouble. This might have been late or early in the disease, according to the intelligence of the patient. Only fifty-four waited over a month before consulting a doctor. Out of eighty-one patients who consulted a doctor because of a hemorrhage, thirty-nine were told that it was not due to consumption. Of the 285 patients told that they did not have consumption, seventy-three were told by their doctors that they had bronchial trouble, bronchitis, cold or grippe; fifty-eight that they were run down and needed rest; and forty-eight that they had a "spot on the lungs," weak lungs, lung trouble, or that "their lungs were affected." These 500 patients visited 1,128 doctors in order to get a diagnosis. Of these 500 patients, 207 were told at once that they had consumption, seventy-six within a month, 148 waited over a month, and forty-six were *never told*. One hundred and seventeen patients applied for admission to a sanatorium at once, eighty-eight in one month or less, while 145 patients waited six months or more before applying.

57. **Influence of Race in Prevalence of Tuberculosis.**—As a result of clinical and pathologic observations of tuberculosis in different races, McCarthy draws the following conclusions:

> 1. That a definite resistance has been acquired by certain races as a result of contact with tuberculosis over a long period of time, brought about by urbanization. 2. That the Indian and negro races have acquired as yet very slight resistance against the disease, and preventive measures are practically the only means of stemming the mortality. 3. That the present high mortality rate among the Irish can be brought to a considerably lower level by the educational and preventive measures now in vogue. 4. That in the fight against the disease we have on our side the knowledge that it is possible we may raise the resisting power of a race against tuberculosis as shown by the relative low mortality in the Jewish people against the high rate among the aboriginal races.

Iowa Medical Journal, Des Moines

January, XVIII, No. 7, pp. 307-356

60 Pathology of Carcinoma of Uterus. D. J. Glomset, Des Moines.
61 Prophylaxis and Cure of Carcinoma of Uterus. H. A. Minassian, Des Moines.
62 Care of Expectant Mother. M. Taylor, Ottumwa.
63 Labor in Deformed Pelvis and Its Treatment. H. M. Stowe, Chicago.
64 Cystoscopy as Aid to Diagnosis. R. A. Weston, Des Moines.
65 Who Is to Blame? J. H. Goad, Ellston.
66 Division of Responsibility in Referred Cases. J. W. Kime, Fort Dodge.

Medical Record, New York

February 10, LXXXI, No. 6, pp. 251-300

67 Practical Utility of Distinguished Consultant. C. K. Austin, Paris, France.
68 Suggestion for Improved Method of Using Radium. R. Abbe, New York.
69 Tuberculous Peritonitis; Sarcoma of Kidney. H. B. Sheffield, New York.
70 Diagnosis and Treatment of Intranasal Suppuration. J. D Donelan, London.
71 Tricuspid Regurgitation and Stern's Posture as Aid in Its Diagnosis. L. B. Sachs, New York.
72 *Treatment of Arthritis Deformans in Montefiore Home. S. W. Boorstein, New York.
73 Significance of Splashing Sound in Gastro-Intestinal Canal. M. I. Knapp, New York.

72. **Treatment of Arthritis Deformans.**—The treatment as outlined by Goorstein is divided into (1) that of the general condition and (2) that of the joints. General treatment: Since infection plays an important part in bringing on the disease and aggravating the condition, they look first for the source of the infection and examine the mouth for carious teeth, pyorrhea alveolaris, and diseased tonsils and remove the source of infection when found. The digestive tract is very carefully attended to, since gastrointestinal disturbances aggravate the symptoms, and whenever patients are constipated they complain of marked pain and discomfort in the joints. The urine is examined two or three times a week and when indican is found in large quantities a high enema is given. As a routine measure each patient receives two or three enemata a week, as a result of which the pain in the joints is greatly relieved.

Each patient as soon as he enters the orthopedic department has his casts, *x*-ray, and photograph taken and a careful description is made of the joints on the question blank so that a good record of the changes can be kept. Then the patients are given the following treatment: Baking followed by massage three times a week; "steam boxes" on the intervening days; light baths twice a week; Bier's hyperemia every day for six or twelve hours; enemata twice a week; exercises daily, and static electricity three times a week. Casts are taken every three to four months. For carrying out this treatment they have given nurses special training and have elicited their personal interest in this special kind of work.

St. Paul Medical Journal, Minn.

February, XIV, No. 2, pp. 73-128

74 Diagnosis and Treatment of Diseases of Biliary Tract. M. H. Richardson, Boston.
75 Mediastinal Tumors; Report of Two Cases. L. D. Bristol, St. Paul.

Journal of Experimental Medicine, New York

February, XV, No. 2, pp. 107-204

76 *Behavior of Chicken Sarcoma Implanted in Developing Embryo. J. B. Murphy and P. Rous, New York.
77 *Experimental Pneumonia by Intrabronchial Insufflation. R. V. Lamar and S. J. Meltzer, New York.
78 *Production of Passive Hypersensitiveness to Tuberculin. C. R. Austrian, Baltimore.
79 *Studies on Immunity in Cancers of White Rat. I. Levin, New York.
80 Pressor Influence of Augmented Breathing. C. J. Wiggers, K. C. Eberly and H. L. Wenner, Ann Arbor, Mich.
81 Morphologic and Pathogenic Variations in Treponema Pallidum. H. Noguchi, New York.
82 *Chemical Studies on Intestinal Infantilism. I. Endogenous Metabolism: Kreatinin, Kreatin, Uric Acid. F. H. McCrudden, New York.
83 *Idem. II. Relation of Endogenous to Exogenous Metabolism, Nitrogen and Sulphur Distribution and Calorimeter Experiments. F. H. McCrudden and H. L. Fales, New York.

76. **Behavior of Chicken Sarcoma.**—The direct inoculation of a sarcoma of the fowl into the developing chick embryo or its membranes has yielded growths in many cases. The neoplasms developing are spindle-celled sarcomata, remarkably uniform in structure and similar to those in the adult fowl, except that in the embryo the neoplastic cells are often extremely long and slender and the structure of the growth is very loose. The membranes adapt themselves in a remarkable way to the support of the tumors. In them, the growth is seldom invasive; and while regional metastases are occasionally seen, none occur by the blood-stream, despite the predilection of the growth for this path of distribution in adult hosts. In the more resistant structures of the embryo itself, an invasive extension of the sarcoma occurs. Growths originally in the yolk-sac outside the chick may be carried into the latter during the course of development. Secondary growths in the viscera may cause the death of the host some weeks after hatching.

In order to produce tumors in the embryo, the sarcoma cells or the agent engendering the growth must be brought into a direct association with the mesodermal tissues. This necessity is responsible for interesting differences in the location of the growths in the various membranes. The sarcoma will grow in the membranes of pigeon or duck embryos, whereas in adults of these species it will not do so; and in chicken embryos of different varieties, it grows uniformly well, a finding not obtained in adults. In embryo hosts of all the sorts mentioned, there is a total absence of the cellular reaction which in adults indicates resistance to the tumor's development. Relatively speaking, the embryo seems much more favorable than the adult as a host for the sarcoma.

77. **Experimental Pneumonia by Intrabronchial Insufflation.**—By intrabronchial insufflation of pure cultures of pneumococcus in dogs, the authors produced experimental pneumonia successively in forty-two cases, with a mortality of at least 16 per cent. The fatal cases resembled closely lobar pneumonia in man. In the non-fatal cases the pathologic and bacteriologic findings were again in accord with the findings in man. Clinically, however, the cases of non-fatal experimental pneumonia run a milder and shorter course than in man. In a few instances, lobar pneumonia has been produced experimentally also with the *Pneumococcus mucosus* and with Friedlander's pneumobacillus. The anatomic findings in these experiments have shown some characteristics agreeing with the findings in the pneumonias of man produced by these organisms. The quantity of the injected culture seemed to have a definite influence on the outcome of the disease; in the fatal cases larger quantities of the culture had been injected. The animals were neither selected nor prepared in any manner. The experimental success did not, therefore, appear to depend on the degree of resistance of the individual hosts. It is suggested that the uniformly successful results of the experiments were due to the obliteration of a large number of bronchi by the injected culture, through which mechanical effect a favorable opportunity was provided the pneumococci to develop and display their pathogenic activities, consisting in the calling forth of a characteristic local, more or less effective, wide-spread, inflammatory reaction of the lung tissue.

78. **Production of Passive Hypersensitiveness to Tuberculin.**—Definite proof was obtained by Austrian as the result of experiments, that tuberculin hypersensitiveness in man is a condition of true anaphylaxis and that in cases of tuberculin "idiosyncrasy," at least, "sensibilisin" may be present in the circulating blood.

79. **Immunity in Cancers of White Rat.**—Growth of cancer, according to Levin, presents a loss of equilibrium between the inhibitory power of the parenchymatous cells and the proliferating power of the cancer cells. The value of his investigation consists in the fact that it presents the first experimental proof of the existence of a local "precancerous stage." It also shows that there are still many points in the etiology of cancer which it will be impossible to elucidate through animal experimentation.

82. **Chemical Studies on Intestinal Infantilism.**—In three cases of intestinal infantilism studied by McCrudden the creatinin excretion was more irregular than normally, and the creatinin coefficient was low. Creatin was found in the urine on a creatin-free diet. The sum of creatinin and creatin was also irregular. The endogenous uric acid was irregular from day to day. The creatin excretion was apparently lower on a high fat diet than on a high carbohydrate diet.

83. **Idem.**—The relation of endogenous to exogenous metabolism and nitrogen and sulphur distribution was studied by the authors on the same three patients as those described in a previous paper, and on a normal boy for comparison. The presence of creatin, and at one time, of acetone, in the urine of the abnormal cases, and of acetone in the breath of one patient and the very large amounts of various elements lost through the feces of these patients, made it seem possible that the lack of absorption was leading to some condition of starvation that was responsible for the arrest of development. Calorimeter experiments proved: (1) That the metabolism, as a whole, is on a low plane, as was indicated by the fact that the nitrogen excretion per square meter of body surface was at about the starvation value; (2) that the endogenous metabolism was low, as was shown by a low creatinin coefficient; (3) that the distribution of nitrogen and sulphur among the different compounds in the urine was in the ratio found in normal persons only when the metabolism was on a high plane.

From the data obtained, the authors feel justified in suggesting that possibly some fundamental defect exists that prevents the body from engaging in a more active metabolism. Or there may be a long continued state of undernutrition due to poor absorption, which, at first, leads only to a low exogenous metabolism, but in time is followed by a readjustment whereby the endogenous metabolism gradually falls to a lower plane, and finally exogenous and endogenous metabolism come to the normal balance in such a way that nitrogen and sulphur distribution again become normal. Only one instance of previous study of the nitrogen and sulphur distribution after a very long period of low nitrogen diet has come to their attention. That the endogenous metabolism may show a gradual decrease in starvation is indicated by the gradual lowering of the creatinin excretion. A final possibility is that one or more of the amino-acid complexes of the food protein are so changed by bacterial action in the intestines that they cannot be utilized by the body. In three cases of intestinal infantilism, the excretion of nitrogen in the urine per square meter of body surface was low. The heat radiation was normal. In spite of the fact that the absolute quantity of nitrogen was low, the distribution of nitrogen and sulphur among the various nitrogen and sulphur constituents of the urine was in the normal ratio. The ammonia excretion was normal. The ethereal sulphates were slightly increased. The respiratory coefficient showed that the supply of glycogen had not been used up after eighteen hours' starvation.

Kentucky Medical Journal, Bowling Green

February 1, X, No. 3, pp. 93-148

84 *Physician's Duty as Educator in Preventive Medicine. J. W. Ellis, Masonville.
85 Treatment Following Prostatectomy. L. W. Bremerman, Chicago.
86 Newer Methods of Treatment of Diseases by Hypodermic Medication. C. Pope, Louisville.
87 Deep Injections of Alcohol for Persistent Neuralgia. E. A. Stevens, Mayfield.
88 Prognosis and Treatment of Typhoid. C. R. Garr, Flemingsburg.
89 Serum and Bacterin Therapy. W. M. Floyd, Henderson.
90 *Importance of Early Diagnosis in Malignant Disease. W. H. Wathen, Louisville.
91 Importance of Early Diagnosis in Malignancy. A. L. Thompson, Madisonville.
92 *Importance of Early Diagnosis of Intestinal Obstruction. P. C. Layne, Ashland.
93 *Early Diagnosis of Ano-Rectal Disease. J. G. Carpenter, Stanford.
94 Importance of Early Diagnosis of Ectopic Pregnancy. H. E. Prather, Hickman.
95 *Diagnosis of Head Injuries. A. D. Willmoth, Louisville.
96 Importance of Early Diagnosis of Placenta Prævia. J. T. Reddick, Paducah.

84, 92 and 93. Abstracted in The Journal, Nov. 18, 1911, pp. 1719 and 1720.

90 and 95. Abstracted in The Journal, Nov. 11, 1911, p. 1635.

New York Medical Journal

February 3, XCV, No. 5, pp. 209-260

97 Relief of Prostatic Obstruction. J. B. Squier, New York.
98 Complete Amputation of Penis by Jealous Wife. G. F. Lydston and H. F. Steere, Chicago.
99 Treatment of Diseases of Posterior Urethra. J. A. Hawkins, Pittsburgh.
100 Case of Keratitis Rosacea. B. Chance, Philadelphia.
101 New Ideas Concerning Phymatiasis (Tuberculosis). A. Rose, New York.
102 Alcohol and the Individual. H. Brooks, New York.
103 Alcohol in Its Relation to Stomach and Liver. M. M. York, Flushing, N. Y.
104 Serum Treatment of Hemorrhage and Blood Dyscrasias. A. W. Lescohier, Detroit.
105 Responsibility of Medical Profession for Early Diagnosis and Prompt Treatment of Pulmonary Tuberculosis. E. O. Otis, Boston.
106 *Explanation of Positive Wassermann Test Following Some Cases of Anesthesia. S. L. Cherry, Philadelphia.

February 10, XCV, No. 6, pp. 261-312

107 Alcohol a Menace to Soldier; Privileges of Post Exchange. L. L. Seaman, New York.
108 Cancer of Rectum and Lower Sigmoid; Report of Unique Case. M. F. Porter, Fort Wayne, Ind.
109 Atypical Case of Hyperthyroidism. J. S. Horsley and B. M. Rosebro, Richmond.
110 Case of Puerpura Hemorrhagica. J. M. Wallfield, New York.
111 Salvation of Tuberculous. C. P. Wertenbaker, Norfolk, Va.
112 Vaccine Therapy in Diseases of Ear, Nose and Throat. V. Dabney, Washington, D. C.
113 Perforation of Gravid Uterus; Its Prevention by Proper Technic. S. Wiener, New York.
114 Two Hundred Cases of Pyosalpinx. H. A. Duncan, Philadelphia.
115 Tumor of Brain. H. Climenko, New York.
116 Insanity in Children. C. Holmes, New York.

106. **Positive Wassermann Test Following Anesthesia.**—Cherry maintains that anticomplementary bodies are formed in the blood of dogs during chloroform anesthesia, and these cannot be removed entirely from the serum by heating it to 55 C. for thirty minutes. It is evident that when antigen, possessing anticomplementary properties in undue amount, is combined with a serum possessing anticomplementary properties, the total of the two may be sufficient to cause more or less fixation of complement in the Wassermann test. The purer the antigen is, therefore, the more strongly a positive Wassermann test points to syphilis. No antigen, however made, is permanent, and the main thing is to use an antigen as strongly antigenic and as weakly anticomplementary as possible.

Annals of Ophthalmology, St. Louis

January, XXI, No. 1, pp. 1-207

117 Oxycephaly and Optic Atrophy. A. Brav, Philadelphia.
118 Orbital Diseases Secondary to Sinusitis. W. Reber, Philadelphia.
119 Case of Sympathetic Ophthalmia. N. M. Black, Milwaukee.
120 Fatal Case of Streptococcic Bacteriemia with Panophthalmitis. H. F. Hansell, Philadelphia.
121 Optic Neuritis Following Measles. J. M. Griscom, Philadelphia.
122 Case of Double Perforation of Globe by Iron Sliver. B. Chance, Philadelphia.
123 Case of Bitemporal Hemianopsia with Acromegaly and Other Symptoms Apparently Due to Disease in Pituitary Region. S. D. Risley, Philadelphia.
124 Transitory Decrease in Static Refraction of Eye in Diabetes. W. Zentmayer, Philadelphia.

Laryngoscope, St. Louis

January, XXII, No. 1, pp. 1-80

125 Otosclerosis and Allied Conditions. A. A. Gray, Glasgow.
126 Applied Anatomy of Eustachian Tube. J. A. Bacher, San Jose, Cal.
127 Polyp of Pharyngeal Mouth of Eustachian Tube. C. M. Brown, Buffalo.
128 Transillumination of Mastoid. H. P. Mosher, Boston.
129 Treatment of Cicatricial Stenosis of Larynx. E. Mayer, New York.
130 Treatment of Foreign Bodies in Esophagus. E. F. Ingals, Chicago.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

January 27, I, No. 2665, pp. 169-224

1 *Resistance of Human Body to Disease. A. R. F. Exham.
2 Diagnosis of Spinal Cord Affections. D. Forsyth.
3 *Removal of Extramedullary Tumor of Spinal Cord; Recovery. J. M. Clarke.
4 *Regeneration of Nerves, with Regard to Surgical Treatment of Certain Paralyses. B. Kilvington.
5 Pneumococcal Meningitis. H. Drummond.
6 Transient Hemiplegia Following Parturition. H. Gillies.
7 Two Cases of Tetanus Treated Successfully by Subdural Injections of Magnesium Sulphate. O. Smithson.
8 Supposed Case of Heat-Stroke; Remarkable Recovery. A. S. St. John.
9 Acute Anterior Polioencephalomyelitis in South Staffordshire. L. S. Tomkys.
10 Case of Poisoning by Oil of Mirbane (Nitro-Benzol). C. W. Hogarth.
11 *Vaccine Treatment of Hydrocele. S. Mallannah.

1. **Resistance of Human Body to Disease.**—The tenor of Exham's remarks is well summarized in the following paragraph: I think we must all realize that medicine is still far from being an exact science and that our ignorance is greater than our knowledge. But, if we also realized that the body is endowed with large powers of resistance to disease and that the problem of treatment is how to evoke those powers and help their utilization to the best advantage, and if we realized that resistance varies in the individual, then we would recognize that there is a certain unity in medicine, that it is the treatment of disease and not of diseases; we would recognize that we are not the masters but the servants of Nature, and we would sit humbly at her feet patiently investigating the secrets of that most marvelous collection of forces, the living human body, trying to help her, not endeavoring to take the case out of her hands. And a recognition of the unity of medicine would promote a spirit of unity among ourselves; we should hear less of systems of treatment; we should be spared those unedifying controversies in regard to special methods, of which we have had several instances lately, and which I confess are to me painful, for we would recognize that the goal we are all seeking to attain can be reached by several routes, and that no one of us has a monopoly of wisdom.

3. **Removal of Extramedullary Tumor of Spinal Cord.**—In the case cited by Clarke there was a lesion at the level of the lower part of the cervical region of the cord with affection of the pyramidal tracts below this level. The first clue to the extramedullary seat of the lesion was the discovery of the partial loss of sensation on the post-axial side of the left upper extremity, showing that the left eighth cervical and first dorsal posterior roots were definitely involved. This was supported by the distribution of muscles affected with wasting and altered electrical reactions, which coincided with the motor supply of the corresponding anterior roots. The pain was more widely diffused, but in its chief intensity corresponded fairly to the same roots. Further confirmation of an extramedullary lesion at this level was afforded by the order of onset of the cord symptoms; that is, (1) pain, (2) paresthesiæ, (3) paralysis, (4) wasting of muscles, first at the level of the lesion, and then, as pressure began to be exerted on the cord itself, the appearance of spasm, increased reflexes, and paralysis in the legs, with finally, much later in the case, some sensory loss over the trunk and legs, and affection of sphincters, as the cord gradually became more severely compressed. The case further illustrates the fact that if it is not destroyed, or there is no pressure-myelitis, the cord is capable of recovering from an enormous amount of pressure when this is removed. The order of return of reflexes is of interest. Two weeks after operation, sensory disturbance of legs and abdomen disappeared. Four weeks after operation, right abdominal reflexes returned; ankle clonus disappeared; left plantar reflex became "mixed" in character. Six weeks after operation, power over bladder recovered; knee-jerks still exaggerated. Eleven weeks after operation, double flexor plantar reflex; abdominal reflexes returned on both sides.

4. **Regeneration of Nerves.**—From the point of view of regeneration, Kilvington says an unremedied nerve division produces more serious changes in the central end (with the nerve cell) than in the distal end (with the muscle fiber and motor end organ). The appearance in the nerve trunk is the reverse of this. Beyond the bulb at the divided face of the nerve there is little visible change in the central stump. The distal divided trunk is always thinner than normal, more or less adherent to tissues, flabby to the touch, and reddish in color. The microscope shows marked alterations (Wallerian degeneration) in the distal nerve and none in the central. From these facts it is legitimate to conclude that the motor nerve cell is more damaged by ununited division of the nerve trunk than the isolated neuromuscular apparatus. In other words, when secondary suture is delayed too long and regeneration is not effected, it is not due to degeneration of the muscle or to loss of chemotactic attraction in the peripheral stump for the sprouting nerve fibers from the central nerve. The condition found after the nonunion of a cut nerve trunk is very variable. These varying conditions render any definite statement as to time limit to secondary suture difficult, if not impossible. Kilvington has had successful cases of secondary nerve suture in the human subject after many (six) years of nonunion. When all factors have been taken into consideration and it is concluded that restoration of function after secondary nerve suture is unlikely, there is still another surgical procedure open. This is the suture of recently divided central nerve fibers to the distal trunk of the degenerated nerve; that is, by nerve anastomosis to an adjacent healthy nerve.

11. **Vaccine Treatment of Hydrocele.**—When investigating the contents of 40 hydroceles for the presence of germs, Mallannah found the contents sterile, as a rule, but on one occasion met with an organism which on cultivation proved to be the *Bacillus pyocyaneus*. A vaccine (sterile) containing 25 million of *B. pyocyaneus* was then prepared and injected into the tunica vaginalis (after this had been tapped and evacuated) of the patient in whom the organism in question had been isolated. The injection produced a severe inflammation which lasted seven days and during this time the scrotum refilled, and its circumference became 2 inches larger than before tapping, while the patient's temperature varied between 101 and 103 F. On cessation of the inflammation the circumference of the scrotum returned to 20 inches. Matters remained in this condition for nearly a month, and for this period it appeared as if the severe inflammation had produced no beneficial effects whatever. Then, however, the swelling gradually decreased, and in two months' time the circumference of the scrotum was reduced to 5 inches and the hydrocele completely cured. This was a year ago, and the man still remains free from his former complaint, although it had previously existed for ten years, and his hydrocele had been tapped more than a dozen times. Encouraged by the success of this experiment, Mallannah then introduced vaccine containing 5 to 10 million of *B. pyogenes aureus* into a dozen cases; in some cases the vaccine was introduced after tapping, and in others without tapping. Generally the results obtained were usually identical with those recorded in connection with the case described.

Journal of Tropical Medicine and Hygiene, London

January 15, XV, No. 2, pp. 17-32

12 Weights of Organs. R. H. Castor.
13 Amebic Dysentery. A. Duncan.

Journal of Obstetrics and Gynecology of British Empire, London

December, XX, No. 6, pp. 269-324

14 *Primary Carcinoma of Female Urethra. B. Whitehouse.
15 *Clinical Aspects of Extrauterine Pregnancy. S. M. Mackenzie.
16 Life-History of Ovary. J. S. Young.
17 Case of Gangrene of Vagina. M. Lindsey.
18 Ovarian Pregnancy, Probably Bilateral. E. Holland.
19 Chorion-Epithelioma of Fallopian Tube. M. H. Phillips.
20 Primary Carcinoma of Female Urethra. J. S. Fairbairn.
21 Anglo-Chorioma of Placenta. R. D. Maxwell.

14. **Primary Carcinoma of Female Urethra.**—Forty-three cases of this kind are now on record including the one reported by Whitehouse.

15. **Extrauterine Pregnancy.**—One hundred and fifty-five cases were analyzed by Mackenzie. In 123 the diagnosis was confirmed by operation or in post-mortem examination. The remaining thirty-two presented the following symptoms:

There was a history of amenorrhea followed by a discharge of blood from the vagina, accompanied by pain in the lower part of the abdomen. A lump could be felt in juxtaposition to the uterus and this lump diminished and got harder with rest. Of these cases twenty-four were cases of hematocele, thirty-seven were tubal mole, eight were tubal abortion, forty-eight were ruptured ectopic gestation, two were unruptured tubal gestation, one was abdominal pregnancy, one was lithopedion and one was interstitial pregnancy. The total number of hematoceles is therefore fifty-six. Of the cases which were found to be ruptured, forty ruptured in the peritoneal cavity and eight in the broad ligament. The cases were spread out over almost all the child-bearing period, the youngest being nineteen and the oldest forty-four. It is found that a woman of twenty-eight is specially liable to this condition, nearly 16 per cent. of the cases occurring in patients of that age. The greatest liability attached to one pregnancy, and extrauterine gestation is more likely to occur in a mother of a small family, since in 80 per cent. there was a history of three or less previous pregnancies. Forty-two per cent. occurred within two years of a previous pregnancy. Only 16 per cent. had had any previous pelvic trouble.

Australasian Medical Gazette, Sydney

December 20, XXX, No. 12, pp. 711-774

22 Wassermann Reaction Results in Victorian Eye and Ear Hospital for a Year. J. W. Barrett.
23 Unilateral Twin Tubal Pregnancy. H. C. T. Young.
24 Contribution to History of Disease in Australia. J. B Cleland.
25 Management and Treatment of Early Insanity. M. H. Downey.
26 Technic of Tuberculin Administration at Kalyra Sanatorium. C. Reissman.
27 Meckel's Diverticulum as Cause of Acute Intra-Abdominal Conditions. C. E. Todd.

January 6, XXXI, No. 1, pp. 1-24

28 Diseases of Children. A. J. Wood.
29 Different Standards of Health Maintained by Sexes in Queensland. E. S. Jackson.
30 Symptoms and Diagnosis of Ectopic Pregnancy. J. A. G. Hamilton.
31 Influenza and Cerebrospinal Meningitis. J. H. L. Cumpston.

Annals of Tropical Medicine and Parasitology, Liverpool

December 30, V, No. 3, pp. 347-500

32 Table of Statistical Error. Sir R. Ross and W. Stott.
33 Some Blood Parasites in Reptiles. H. Seidelin.
34 Experiments on Larvicides. Sir R. Ross and E. S. Edie.
35 *Effects Produced on Excretion of Urinary Pigments by Salts of Quinin. W. M. Graham.
36 *Passage of Hemoglobin Through Kidneys. W. Yorke.
37 *Pseudo-Relapses in Cases of Malarial Fever During Continuous Quinin Treatment. Sir R. Ross and D. Thomson.
38 Trypanosomes Found in Two Horses Naturally Infected in Gambia. W. Yorke and B. Blacklock.
39 Examination of City of Georgetown, British Guinea, for Breeding Places of Mosquitos. K. S. Wise.
40 Case of Human Trypanosomiasis in Nyasaland with Note on Pathogenic Agent. H. S. Stannus and W. Yorke.
41 *Second Series of Experiments Dealing with Transmission of Goiter from Man to Animals. R. McCarrison.
42 New Blood-Counting Pipette for Estimating Numbers of Leukocytes and Blood Parasites Per Cubic Millimeter. D. Thomson.
43 Some Researches on Life-Cycle of Spirochetes. H. B. Fantham.
44 Desmogonius Desmogonius: New Species and Genus of Monostome Flukes. J. W. W. Stephens.

35. **Effects of Salts of Quinin on Excretion of Urinary Pigments.**—Graham found that a dose of 15 grains of quinin hydrochlorid causes an early increase in the amount of water excreted in the urine. This increase is followed within twenty-four hours by a marked decrease, which is accompanied by an increase in the excreted pigments. These pigments consist largely of urobilin (chemical and spectroscopic proofs). There is an approximate return to the normal elimination of water and pigment, the phase being almost completed in one week.

36. **Passage of Hemoglobin Through Kidneys.**—It is difficult to determine the exact portion of the renal tubule which is responsible for the excretion of hemoglobin. Yorke believes that it is the epithelium of the convoluted tubules and possibly also that of the tubes of Henle, as in sections of kidneys removed within a few hours of the intravenous injection of hemoglobin the casts are found to be limited to the cortex and are not seen in the large collecting tubes of Bellini. Later, however, the plugs are found in the large collecting tubules, but in these cases they have probably simply descended from higher portions of the tubules. His observations are more in harmony with the view that hemoglobin is secreted by the renal epithelium than that it is filtered through the glomeruli, and that the amount of hemoglobin eliminated into the urine is dependent on the activity of the epithelium lining the renal tubules.

37. **Pseudo-Relapses in Malaria During Continuous Quinin Treatment.**—During the past two years the authors have been studying the effects of quinin on malaria, employing enumerative methods by which they constantly knew the number of parasites present in the blood per c.mm. Seventy-five cases studied in this way all showed the remarkable destructive power of quinin toward the asexual malarial parasites. In all cases in which quinin was given in doses of 10 grains, thrice daily, it was almost impossible to find asexual parasites in the blood after three days of the treatment, no matter how numerous the parasites were before the treatment was commenced. In no case did they ever discover a reappearance of these parasites while this dosage was continued. It would appear to them that, so far, no drug has been found with so great a curative power in any disease, as that of quinin in malaria. They call attention, however, to apparent relapses occurring during quinin treatment. In five, or 6.7 per cent., of their cases, a sudden isolated rise of temperature occurred during the quinin treatment, accompanied sometimes with a feeling of cold and slight shivering. No asexual parasites could be detected on prolonged search by thick film during these attacks of fever. On one occasion the blood was examined by fourteen persons for over half an hour, yet no parasites either sexual or asexual could be found. All these apparent relapses were, therefore, non-parasitic relapses.

They investigated the hospital records of one hundred cases of various diseases, not malarial, and found that similar more or less inexplicable isolated rises of temperature occurred in 17 per cent. of them. The diseases in which these isolated temperature rises occurred most frequently were cases of latent phthisis, cases of valvular heart disease, Bright's disease, chorea, rheumatism and bronchitis, and to a less frequent extent in various other conditions, and in one case of spastic paraplegia. These isolated and more or less inexplicable rises of temperature, therefore, occur in other diseases during treatment as well as in malaria, and it seems possible that they may have no real connection with the original disease. In some cases the temperature could be explained by a sudden and transitory inflammation of the tonsils. One patient had a slight tonsillitis during his pseudo-relapse. Again these rises of temperature in two of the cases did not occur on the proper day, so that they would appear not to be malarial.

41. **Transmission of Goiter from Man to Animals.**—A spore-bearing bacillus was isolated by McCarrison in pure cultures from the feces of a goitrous horse and was constantly present in the cultures from the feces of goitrous individuals. It is a rod-shaped bacillus, varying from 2 to 4 microns in size, which does not retain the stain by Gram's method, but stains well with carbol-fuchsin, Leishman's and other stains. The bacilli vary in size and thickness and some of them contain a lighter unstained area, situated usually at the center, but sometimes towards the periphery of the organism. The growth on Musgrave's agar shows, in addition to the bacilli, numerous round unstained bodies, which are seen to be spores when special staining methods are employed. In some of the bacilli spore-formation is also seen. The organism is very actively motile in young cultures. Plate cultures on agar and Musgrave's medium appear as small, round and opaque white colonies. The deeper colonies are irregular, with crenated margins and are bluish-white in color. The growth is more profuse on alkaline agar than on Musgrave's medium. On agar slopes a profuse opaque growth, white lead in color when viewed from the surface and faintly brown in color with transmitted light, is seen after twenty-four hours. The organism ferments glucose, levulose, mannose and galactose, but not dextrose, mannite, lactose or maltose. It produces no curdling or acid in litmus milk and grows profusely in broth, forming a white scum on the surface. It does not liquefy gelatin in stab cultures; in this medium it forms a button-like growth into the medium, with both superficial and deep gas production. On potato there is a profuse brownish growth.

The organism is not killed by 0.5 per cent. phenol for twenty-four hours in an incubator, nor by 60 C. for half an hour. It is not destroyed by boiling at 94 C. for five minutes. Half to 1 c.c. of a living culture injected into guinea-pigs produced no immediate ill effects. Larger quantities of the living culture injected into dogs, kids and goats gave a similar result. A young dog was given nine Musgrave's agar tubes of a forty-eight-hour culture of this organism. The animal died on the ninth day. The thyroid lobes were removed, with two enlarged lymph-nodes in their vicinity. Two agar tubes were inoculated with the blood-stained fluid which escaped from the cut surface of the lymph-nodes. After twenty-four hours' incubation several colonies of the spore-bearing organism above described were present in one of the tubes. The other tube remained sterile.

Annales de Médecine et Chirurgie Infantiles, Paris

January, XVI, No. 1, pp. 1-32

45 *Aphthæ in Children. (Les aphtes chez l'enfant.) E. Gaujoux.
46 Acute Rheumatism Affecting the Brain. (Rheumatisme cérébral à forme de confusion mentale aigue chez un enfant de 7 ans.) Nobécourt and H. Darré.
47 Examination for Tubercle Bacilli in Tuberculosis in Children. (Diagnostic de la tuberculose chez l'enfant par la recherche du bacille de Koch.) P. Nobécourt. Concluded.
48 *Bilateral Spastic Paralysis in Children. (La maladie de Little. Etiologie, pathogénie et anatomie pathologique.) V. Hutinel and L. Babonneix.
49 Ultimate Outcome of Congenital Dislocation of the Hip-Joint Given Bloodless Treatment. (Du pronostic éloigné des luxations congénitales de la hanche opérées par la méthode non sanglante.) P. Redard.

January 15, No. 2, pp. 33-64

50 *Protracted Cerebrospinal Meningitis and Recovery After Decompressive Trephining. (Méningite cérébro-spinale prolongée à forme cachectisante.) R. Debré.

45. **Aphthæ in Children.**—Gaujoux refers to the article by Lévy, mentioned in The Journal, Dec. 2, 1911, p. 1873. He then goes on to show the difference betwen aphthous stomatitis, which occurs in young children, is usually due to some error in diet and is readily cured by using some mild antiseptic mouth wash, and the true aphthous fever which is contracted from foot- and mouth-disease in cattle. He then refers to Ruault's report of several cases of aphthous fever occuring in one house, and which ceased as soon as there was a change in the milk-supply. Gaujoux records also, from his own practice, three cases of aphthous fever which occurred in one household, which could be directly traced to milk. The children in the family who had a different diet were not affected. In the treatment of aphthous fever three things are necessary: (1) to boil the milk; the virus is easily destroyed; (2) to give sodium salicylate, and (3) diphtheria antitoxin, as some have recommended.

48. **Bilateral Spastic Paralysis.**—Hutinel and Babonneix sum up their studies of Little's disease as follows: In regard to its etiology, it may be due to some obstetrical traumatism during premature or difficult labor or to some toxic infection, as syphilis. Both elements may be present. The direct cause is probably cerebromeningeal hemorrhage, the results of asphyxiation, trauma or toxic infection. These lesions are always cerebral and do not differ from those found in other varieties of cerebral diplegia; they are found more often in the upper part of the two regions of Rolando; those of double hemiplegia are found in the central portion, and the lesion in pseudobulbar paralysis in the inferior portion of this same area. As a result of the cerebral lesions, there is sclerosis of the pyramidal tracts (a secondary degeneration) or agenesia, that is, defective development or absence of parts. The mechanism of the contractures is still obscure. The mental defects are due to lesions in the frontal lobes or diffuse cerebral lesions, the convulsions to this latter cause, the athetotic movements to irritation of the pyramidal bundle.

50. **Decompressive Trephining in Protracted Cerebrospinal Meningitis.**—Debré's patient was a boy of 8 who developed acute cerebrospinal meningitis and it passed into a practically chronic phase, notwithstanding serotherapy according to approved methods. This protracted form is distinguished by dulness, sphincter disturbances, diffuse amyotrophy, paresis with rigidity and cachexia, but normal temperature. In his case acute, intensely severe paroxysms developed at variable intervals, the child's attitude and opisthotonus resembling severe tetanus, and the headache being severe, accompanied by uncontrollable vomiting; during the intervals the symptoms were comparatively slight. After six months the eyesight began to fail and decompressive trephining was intended but postponed for several weeks. When the operation was finally done, the child, who had seemed almost moribund, began to recover, the symptoms subsided and a complete cure followed about eleven months after the first symptoms of meningitis. The trephining had come too late to save the eyesight; the atrophy of the optic nerve was already irremediable. The case teaches the importance of watching for signs of intracranial pressure, especially for edema of the papilla, and trephining at once as soon as the diagnosis is certain. In most cases of blindness from meningitis, the optic neuritis is consecutive to optic meningitis, the edematous condition of the papilla and inflammation coming on early in the acute phase. In the present case there were no symptoms on the part of the eye until the disease had lasted for six months.

Archives des Maladies de l'App. Digestif, Paris

December, V, No. 12, pp. 649-712

51 *Diagnostic Importance of Reduced Excretion of Creatinin in the Urine. (La valeur séméiologique de la créatinine et sa diminution dans les urines de certains malades asthéniques.) J. C. Roux and Taillander.
52 Fatal Primary Arteriomesenteric Occlusion of the Duodenum in Young Man. (Cas d'occlusion aigue gastro-duodénale primitive par compression artério-mésenterique.) Leriche and B.-Perducet.
53 *Diabetes Developing Suddenly During Septicemia. (Diabète suraigu au cours d'une septicémie; coma acétonurique; mort.) Courtellemont.
54 *Influence of Sodium Salts on Bladder and Stomach Secretion. (Influence de l'ingestion du bicarbonate et du citrate de soude sur l'elimination du chlorure de sodium par l'urine et sur la sécrétion chlorhydrique au cours des gastropathies.) A. Mathieu. Commenced in No. 2.

51. **Diagnostic Importance of Creatinin in Urine.**—Roux and Taillander summarize a dozen cases from their experience in which digestive disturbances and diarrhea or constipation were accompanied by symptoms of neurasthenia and considerable muscular weakness, and the proportion of creatinin in the urine was much below the normal percentage. Ingestion of meat invariably aggravated the disturbances and brought on headache and malaise. The patients were all women. A similar reduction in the output of creatinin was also noted in other patients with inanition, in melancholia with prostration, in paralysis and in a number of elderly persons examined. Some experiments on rabbits are also reported which seem to show that it is possible to modify by thyroid extract, epinephrin, etc., the nutritional processes in such a way as to exert a decided influence on the elimination of creatinin.

53. **Diabetes in Course of Septicemia.**—A robust man of 41, healthy except for a history of mild syphilis in youth, developed acute indigestion after eating heartily of game, followed by a stage of nephritis with anuria and uremia and this by a stage of subacute diabetes with polyuria and polydipsia as well as glycosuria, terminating in fatal coma the fifteenth day after the first symptoms of indigestion. Courtellemont explains the case as a septicemia from alimentary intoxication inducing meningo-encephalitis localized in the regions which regulate the output of sugar in the urine.

54. See abstract 41 in The Journal, Jan. 13, 1912, p. 149.

Journal de Médecine de Bordeaux

January 7, XLII, No. 1, pp. 1-16

55 *Preservation of Cadavers. (Conservation des cadavres à l'Institut anatomique.) Aubaret.

January 14, No. 2, pp. 17-32

56 *The Binet Tests for Mental Retardation. (Les tests de Binet dans le tout jeune âge.) R. Cruchet.

55. **Preservation of Cadavers.**—Aubaret says that the technic described prevents discoloration of the tissues and renders them much less fragile, in comparison with the effects of the usual technic. To the usual solution of formaldehyd in wood alcohol and water he adds 40 or 50 gm. of saltpeter to the liter, with 10 or 20 gm. of sea salt. Cadavers injected with this fluid and kept in vats for over a year still retain their natural coloring and suppleness to a remarkable extent. The vats are kept filled with water containing the formaldehyd and alcohol solution to a specific gravity of 1.004 or 1.006, no

more. The vats in use can hold up to eighteen cadavers; the glass cover fits airtight when water is poured into the groove around the edge.

56. **The Binet Tests for Mental Retardation.**—This system of tests was discussed editorially in The Journal, Dec. 16, 1911, p. 2001. Cruchet has been studying the findings as the tests were applied to a large number of children under six years old. He comments on the difference between the sexes in the replies to the test questions and adds that children at this age ask questions incessantly but do not like to answer them, and their replies are no index of their intelligence. The true test is to listen to them and watch their actions without appearing to do so. The spirit of the tests, rather than the letter, should be followed, and allowance should be made also for the difference between city and country children. Cruchet thinks that a larger number of questions should be used than Binet suggests, to give more play to the child's mentality. He mentions parenthetically that the stock question, "How old are you?" may prove misleading, as one mother said she was careful not to let her child know his age as it might prove embarrassing when she was traveling with him as "under 6."

Lyon Médical, Lyons

January 7, CXVIII, No. 1, pp. 1-48

57 *Experimental Research on Involution of the Thymus Under Exposure to the Roentgen Rays. (Sur l'involution du thymus produite par les rayons X.) C. Regaud and R. Cremieu.

January 14, No. 2, pp. 49-116

58 *Benign Extrasystolic Arrhythmia. (Orage extra-systolique d'origine émotive; rythme couplé transitoire bénin régressif.) L. Gallavardin.

57. **Involution of the Thymus Under Roentgen Rays.**—Regaud and Cremieu experimented on forty young cats and found that the thymus definitely disappeared after exposure to a strong dose of the Roentgen rays, at the expense of a mild transient dermatitis. This probably might have been avoided by fractioning the dose or using a thicker aluminum filter.

58. **Benign Arhythmia.**—In the first of the two cases reported in detail the patient was a man of 27 and the extra-systolic arhythmia commotion developed after sudden, intense emotional stress; the irregularity persisted for over a year, growing gradually less. He had a history of mild scarlet fever and measles in childhood and acute transient nephritis at 16. Otherwise his health has been at all times good to date. The second patient applied for relief from "palpitation of the heart." The extra-systolic arhythmia developed in three phases: six months of attacks of continuous couple rhythm for a few minutes, recurring from fifteen to twenty times a day; then three months of the intermittent rhythm, and finally a phase of isolated extra-systoles, the intervals between the attacks growing constantly longer during the eighteen months to date. The young man was and is apparently healthy except for slight dyspeptic disturbances. Gallavardin reviews some similar cases of benign arhythmia on record; there is generally a history of anemia, nervousness or dyspepsia. The overexcitability of the myocardium inducing this transient couple rhythm generally subsides and conditions right themselves; he proposes the term "regressive" for this special form of arhythmia. It is generally arrested temporarily by an injection of atropin.

Presse Médicale, Paris

January 13, XX, No. 4, pp. 33-48

59 *Diabetes from Atrophy and Sclerosis of the Pancreas. (Diabète maigre par sclérose atrophique du pancréas.) G. Ballet and M. L.-Lavastine.

60 Deformity of the Appendix. (L'appendice iléo-cæcal ectopique.) G. Lerda.

61 Symptomatology of Disease of the Gasserian Ganglion. (Le syndrome gassérien.) F. Lévy.

January 17, No. 5, pp. 49-56

62 Stability of Disease Types Through the Ages. (Stabilité et conditions de variation des espèces morbides.) Chauffard.

59. **Diabetes with Sclerosis of the Pancreas.**—The pancreas was found almost totally destroyed after the patient, a woman of 58, had succumbed to the rapid progress of pulmonary phthisis, accompanied by much emaciation, with 186 gm. of glucose in the twenty-four hour urine and other signs of typical diabetes. The sclerous atrophy of the pancreas involved all but 3 or 4 gm. of the gland, which weighed in all 19 gm., while the thyroid, hypophysis and adrenals showed signs of hyperfunctioning.

Semaine Médicale, Paris

January 17. XXXII, No. 3, pp. 25-36

63 Drainage After Laparotomies. (La valeur pratique du drainage abdominal.) F. Lejars.

Archiv für Kinderheilkunde, Stuttgart

LVII, Nos. 1-3, pp. 1-240. Last indexed Nov. 25, 1911, p. 1803

64 *Thymic Death and Thymic Asthma in Children. (Mors thymica et Asthma thymicum bei Kindern.) D. Ssokolow.

65 Two Recurrences of Measles. (Ein doppeltes Masernrecidiv.) Feibelmann.

66 *Bedbugs as Carriers of Disease. (Zur Rolle der Insekten als Krankheitsüberträger.) E. Sergeois.

67 Results of Measures for Infant Welfare. (Statistik der Erfolge von Fürsorgemassnahmen.) G. Tugendreich.

68 *Prevention of Flat-Foot in Children. (Verhütung des Plattfusses im kindlichen Alter.) G. Muskat.

69 Infantilism. (Zur Begriffsbestimmung des Infantilismus.) B. Wolff.

70 *Diphtheria Bacilli Carriers and Persistence of the Bacilli. (Zur Epidemiologie der Diphtherie.) P. Sommerfeld.

71 Raspberry Tongue in Children. (Ueber die Himbeerzunge der Kinder.) G. E. Wladimiroff.

64. **Thymic Death and Thymic Asthma in Children.**—After analyzing 101 cases of deaths from an enlarged thymus, recorded in the literature, Ssokolow warns against attributing to the thymus those cases of sudden death in which some other cause of death is present. Experiments have shown that it takes a much greater weight than that of an enlarged thymus to compress the larynx so that breathing is stopped. Then too, particularly in children, the elasticity of the chest walls and of the surrounding structures helps to prevent compression from an enlarged thymus. Just as in cases of enlarged lymph-nodes, spleen or thyroid, so is it with the enlarged thymus, there is an internal secretion which slowly increases, thus flooding the organism, or some other injurious product is found in the gland, which gives rise to an auto-intoxication. Accordingly the sudden deaths when there is an enlarged thymus are due, not to the pressure of the gland, but to a paralysis of the heart or affection of the respiratory center due to the excess of this internal secretion. Then follows an analysis of three tables of cases of thymic asthma (respectively forty-eight, thirty-nine and twenty-three cases in which operative treatment was attempted, tracheotomy or intubation); here again it is necessary to distinguish between dyspnea and asthma, and to eliminate any other cause for the obstruction. Radiographs and dulness on percussion cannot be depended on for diagnosis as enlarged mediastinal or bronchial lymph-nodes will give the same findings, especially if tuberculous, and it is often difficult to differentiate thymic asthma from capillary bronchitis. It should be noted that in König's case, following an operation on the thymus, rachitis developed; this has also been observed in experiments on animals, after the removal of the thymus. In Rehn's case, atrophy dependent on an enteritis followed. Although often difficult to differentiate, cases of pure thymic asthma do occur; it is characterized chiefly by dyspnea during expiration. Ssokolow has done much experimental work on the thymus, which he reviews—his impression being that the thymus is of essential importance for the growing child, its internal secretion being necessary for normal growth, but that its functions can be partly assumed by other organs at need.

66. **Rôle of Insects as Carriers of Disease.**—This is a study of the bedbug as a carrier of disease. Sergeois gives the anatomy and life history of the bedbug, and discusses the experimental work which has been done, especially in regard to relapsing fever, and the possibility of its being carried by this insect. In conclusion he states that it is possible for the bedbug to be an intermediary for disease germs. Ordinarily it plays the part merely of a carrier; seldom is it the host. In no disease is it of specific epidemologic importance, yet undoubtedly through bedbugs such diseases as relapsing fever and kala-azar remain endemic in certain places. It is known that infectious organisms may remain alive a long time in the bodies of bedbugs. In order for the infection to be transmitted, the microorganism must escape from the crushed bedbug and come in contact with some abrasion in

he skin, into which it must be impelled with some force; hese conditions are liable to occur in scratching a bedbug ite. Consequently the bedbug is a dangerous insect, and its xtermination is a hygienic necessity.

68. **Prevention of Flat-Foot in Children.**—According to the rmy statistics in Germany, twenty-five per thousand of the oung men at the age for compulsory military service have o be rejected on account of flat-foot, a total of 10,000 concripts a year. Flat-foot is congenital in 4.3 per cent. and cquired in 95.7 per cent. In previous works on prophylaxis f flat-foot, Muskat emphasized the need of caring for the eet, and exercising the toes and ankles, the influence of walkng and standing properly, placing the feet parallel, not turnng the toes out or in; proper shoes and stockings, not too arrow and pointed. The shoe and stocking should be made o fit each foot separately to conform to the natural shape f the foot. A physician should be consulted at once when ny trouble begins in the foot. Acquired flat-foot is of raumatic origin in about 4.9 per cent.; of paralytic in 3.1 er cent.; of rachitic in 3.1 per cent.; and due to improper se of the foot, a static disturbance, in 88.9 per cent. In he traumatic, paralytic and rachitic cases, proper measures hould be applied, such as bandaging, to prevent the developnent of flat-foot. Prophylaxis of flat-foot should not be by vearing insoles but by teaching children to use their feet roperly in walking, in standing and in sports and exercising.

70. **Diphtheria Bacilli Carriers and the Persistence of the Bacilli.**—The diphtheria bacillus is frequently found in the hroats of healthy persons, but they have always been in conact with diphtheria patients. Sommerfeld gives a table of ineteen cases in which the child was well, the throat findings egative, but cultures taken from the mother's throat the day he child left the hospital were positive. The bacilli from the hroats of the diphtheria carriers are as virulent as those in he throats of the sick. Diphtheria bacilli may linger in he throat for months after the patient is well. These bacilli arriers and convalescents are particularly dangerous for preading the bacilli. Patients should remain in the hospital ntil their throats are free from diphtheria bacilli, but they nay, on returning home, become infected again from bacilli arriers in the family. The isolation of diphtheria bacilli cariers is of great importance in eradicating the bacilli. Somnerfeld suggests isolating the carriers in convalescent homes; e deplores the lack to date of any effectual means for lestroying the bacilli in the mucosa. He examined 368 chillren in a general hospital and found diphtheria bacilli in the hroat or nose in 8; that is, in 2.1 per cent. One of the chillren had had diphtheria four years before, another six years efore, and the sister of a third had had diphtheria eighteen nonths before. No cases of diphtheria had resulted from the resence of these carriers in the wards.

Archiv für klinische Chirurgie, Berlin

XCVI, No. 4, pp. 825-1089. Last indexed February 3, p. 379

72 *Biologic Sugar Solution Treatment of Peritonitis. (Die Zuckerbehandlung der Bauchfellentzündung.) F. Kuhn. Commenced in No. 3.
73 Importance of Blood-Count Before Operations. (Wert der Blutuntersuchungen vor Operationen.) G. Lerda and G. G. Rossi.
74 General Anesthesia from Intravascular Injection of Local Anesthetics. (Totalanästhesie druch Injection von Localanaestheticis ins Blut.) C. Ritter.
75 Peritonitis. (Zur Behandlung der acuten, freien Peritonitis, mit bes. berücksichtigung auf die Frage der primären Naht.) F. Bauer.
76 Tumors of the Spinal Cord. (Operative Entfernung intramedullärer Rückenmarkstumoren.) W. Röpke.
77 Primary Tumors of the Greater Omentum. (Zur Casuistik der primären Geschwülste des grossen Netzes.) F. Heinsius.
78 Small Intestine for Plastic Operations on Urinary Passages. (Anwendung von Dünndarmteilen bei gewissen Operationen der Harnwege.) J. Berg.
79 Intraparietal Inguinal Hernia. (Einige Fälle von interparietalen Leistenbrüchen.) F. Ehler.
80 Hemangiomas of the Parotid Gland. T. Usui.
81 Peritheiloma of the Brain. (Fall von Perithelioma des Gehirns.) T. Coste and F. H. Levy.
82 Mobilization of Rigid Upper Aperture of the Thorax by Paravertebral Resection of the First Rib to Relieve Pressure on Apex of Lung. (Die hintere, paravertebrale Decompressivresection der ersten Rippe zur Behandlung "Freund'scher Spitzentuberculosen".) C. Henschen.
83 Bone Plastic Operation on Lower Lip for Congenital Defect in Two Brothers. (Freie Knochenplastik in die Unterlippe bei congenitalem Faciallsdefect.) A. Läwen.

72. **Sugar Solution in Biologic Treatment of Peritonitis.**—The Journal mentioned recently, page 379, Kuhn's arguments in favor of a concentrated solution of sugar as the best solution for washing out the peritoneal cavity in peritonitis and to leave in the peritoneal cavity. It is not irritating but has a complete biologic and physiologic action here. It helps drainage, prevents abscess formation, hinders the formation of alkaline, hemolytic and toxic products, and helps to preserve the endothelium and thus protects the entire organism. It is best to use a concentrated solution of grape sugar in physiologic solution, and to introduce the fluid into the peritoneal cavity through a tube speculum. The sugar solution is indicated in early cases of peritonitis, but it is of special value in the late cases, even after abscess formation. Sugar checks putrefaction of albumin, the hemolytic action of bacteria and production of bacterial toxins, while injected into the peritoneum it starts an outward flow of fluid, automatically flushing and draining the cavity. This auto-rinsing is the chief feature of the biologic effect, and it is effectually supplemented by the checking of coagulation from fibrin production. He rinses first with a 4 per cent. solution and then introduces and leaves a more concentrated solution, 10 or 20 per cent.

Beiträge zur klinischen Chirurgie, Tübingen

December, LXXVI, No. 3, pp. 545-891

84 Stab Wounds of the Thorax. (Behandlung der Stichverletzungen des Thorax. Auf Grund eines Materials von 257 Fällen, 1905-1909.) W. Lawrow.
85 *Traumatic Tetanus. (Vorbeugung und Behandlung des Wundstarrkrampfes.) M. Magula.
86 Frequency of Acute Appendicitis. (Zur Frage der Häufigkeit der akuten Appendicitis.) G. Petren.
87 Proliferation of Epithelium in Enlarged Prostate. (Ueber atypische Epithelwucherungen in der hypertrophischen Prostata.) A. Tietze.
88 *Acute Yellow Atrophy of the Liver, etc., and Anuria. (Ueber Icterus gravis und Anurie.) Steinthal.
89 *Operative Treatment of Non-Malignant Disease of the Stomach. (Die chirurgische Behandlung gutartiger Magenerkrankungen und ihre Folgezustände.) W. Burk.
90 Trichosoma as Cause of Tumor Growth in Rat Bladder and Kidney. (Trichodes crassicauda specifica, eine Causa directa in der Aetiologie der Tumoren.) S. Löwenstein.
91 Cystic Degeneration of Gall-Bladder and Primary Cancer of Cystic Duct. (Cystische Entartung der Gallenblase und primäres Adenocarcinom des Ductus cysticus. Zur Frage der Epithelveränderung.) C. Licini.
92 *Fatality During Nitrous Oxid and Oxygen General Anesthesia. (Ein Todesfall während der Lachgas-Sauerstoffnarkose.) J. Olow.

85. **Traumatic Tetanus.**—Magula reports the results of the use of antitetanus serum at the Obuchow hospital in St. Petersburg. In ten years, in the 20,913 patients under treatment, there have been thirty-three cases of tetanus; that is, 0.16 per cent. The mortality of the serum-treated patients was 71.4 per cent. Nineteen patients did not receive the serum, and of these fourteen died, a mortality of 73.7 per cent. Magula thinks that the positive results of antitetanus serum when used either prophylactically or therapeutically, are small. In the severe, acute cases, the serum has proved powerless. In the light cases, or the chronic cases with a long latent period, recovery takes place without the use of the serum. He found that the longer the latent period, the milder the case and the better the prognosis. All the patients who recovered had an incubation period of ten days or more. The wound was usually in the foot and hand. The majority of the patients were between 14 and 30 years old.

88. **Icterus Gravis and Anuria.**—Steinthal refers to the normal physiologic process by which the bilirubin passes with the bile into the intestine, is there broken up into urobilin and urobilinogen, and then the greater part of the urobilin goes back to the liver. When through some obstruction the bile is prevented from reaching the intestine, urobilin is found in the urine. Accordingly urobilinuria is an indication of relative insufficiency of the liver cells. There are cases of gall-stones with obstruction of the common bile duct and icterus gravis in which, following the operation, there is oliguria and a lethal anuria. He cites a case of his own, in which at necropsy there was found an acute nephritis with degeneration of the epithelium. He also refers to a case of Beck's in which there was acute parenchymatous nephritis, and a case of Simon's in which the necropsy showed a hemorrhagic nephritis with hemorrhagic glomerulitis.

89. **Operative Treatment of Non-Malignant Disease of the Stomach.**—Burk says that the complications of gastric ulcer, such as hemorrhage, perforation, pyloric stenosis, a hardening of the ulcer, deformity of the stomach or cachexia, indicate operative measures, but for simple ulcer they are not required. At the operation the neighboring organs, pancreas, duodenum, liver, gall-bladder and appendix, should all be examined. With an active gastric ulcer the lymph-nodes should be examined for carcinoma. Ulcer of the pylorus, not penetrating or callous, indicates post retrocolic gastro-enterostomy with a short loop, particularly if there is stenosis of the pylorus, or the ulcer may be excised and a gastroduodenostomy done. With this operation there is less danger of secondary stenosis from the scar. In pyloric ulcer with much perigastritis, a simple gastro-enterostomy is best; here, too, resection of the pylorus may be necessary. Hemorrhage from the stomach suggests danger of perforation or carcinoma, accordingly a radical operation is called for—excision of the ulcer with or without operation of the pylorus. With a hard gastric ulcer there is danger of carcinomatous degeneration, perforation into the abdominal cavity, hemorrhage, involvement of neighboring organs and deformity of the stomach. A hard ulcer of the body of the stomach requires a partial resection of the stomach. A hard ulcer of the pylorus demands a pyloric resection. When there is a hard ulcer of the body of the stomach, excision should be used only when the size and position of the ulcer are such that there will not be any serious resulting deformity of the stomach. This operation should be combined with a gastro-enterostomy from behind; 25 per cent. of the hard ulcers have shown beginning cancer. With ulcer of the duodenum, the shutting off of the pylorus is the best procedure. Gastro-enterostomy is indicated with pyloric stenosis, together with exclusion of the pylorus, if there is adjoining inflammation or a small pyloric ulcer. Hour-glass stomach requires gastroplasty; it may be combined with gastro-enterostomy, but, if there is stenosis and an active ulcer, resection is advisable. The radical operations and the shutting off of the pylorus give the best permanent results. With gastro-enterostomy, the ulcer returns in 20 per cent. of the cases. The mortality after operations for ulcer of the stomach and duodenum, in the ninety cases on which Burk's article is based, was with gastro-enterostomy, 3.3 per cent.; with the radical operation, 12.5 per cent.

92. **Death During Nitrous Oxid and Oxygen Anesthesia.**—Olow reports a case of death on the table under laughing gas and oxygen anesthesia. The cause of death is hard to explain. The operation was for a loose body in the knee joint. The patient was a man of 53, very stout, with emphysema and sclerosis of the coronaries, but otherwise apparently in good health. Three minutes after the beginning of the anesthesia, although not deeply under, the patient suddenly became cyanosed and stopped breathing. Artificial respiration was used and ether injected subcutaneously, but in half a minute the heart stopped beating. Necropsy showed syphilitic changes in the aorta, secondary hypertrophy of the heart, sclerosis of the coronary arteries and degeneration of the muscles. See The Journal, Feb. 10, page 395, for article on this method of anesthesia; it has been applied by Olow in fourteen cases during the past year, including the above fatality.

Berliner klinische Wochenschrift

January 15, XLIX, No. 3, pp. 97-144

93 The Phthisical Chest and the Predisposition to Tuberculosis. (Der Thorax phthisicus und die tuberkulöse Disposition.) B. Stiller.
94 Percussion and Auscultation. (Ueber Perkutieren und Auskultieren.) E. Aufrecht.
95 *Syphilitic Polyneuritis. (Polyneuritis luetica.) A. Plehn.
96 Salvarsan Administered by the Rectum. (Rectalmethode in der Salvarsantherapie.) S. L. Bagrow.
97 Radium Emanations in Therapeutics. (Ueber Heilerfolge mit Radiumemanationskuren.) J. v. Banczur. (Versuche über die Wirkung der Radiumemanation auf das Blutgefässsystem.) A. Loewy.
98 Resection of Ribs. (Zur Technik der Rippenresektion.) C. Ritter.
99 Agar as a Vehicle for Drugs to Act on Intestines. (Ueber Agar als ein Vehikel in der Darmtherapeutik.) M. Einhorn (New York).
100 Comparative Tests for Albuminuria. (Ueber die Esbach'sche und Aufrecht'sche quantitative Eiweissbestimmungsmethode im Urine.) E. Pfeiffer.

95. **Syphilitic Polyneuritis.**—Plehn remarks that he knows of only six certain cases of syphilitic polyneuritis on record, and one of them was in his own practice six years ago. Since then he has encountered two other cases which he here reports in detail. The flaccid paralysis, paresthesias, loss of the tendon reflexes, atrophy and reduced galvanic excitability at least in the face, excluded poliomyelitis and the prompt improvement under specific treatment confirmed the diagnosis of a syphilitic affection. Facial paralysis developed on resumption of the specific treatment later, with lagophthalmos, but he regarded these as the equivalent of the Herxheimer reaction in the skin and continued the treatment under which the symptoms subsided completely. No specific treatment but mercury and potassium iodid was given in this case at any time. The patient was a woman of 36 with a history of two abortions, otherwise apparently healthy, although the Wassermann reaction was faintly positive; both husband and wife denied syphilis. The polyneuritis developed suddenly, the legs becoming too weak to sustain her and the arms weak likewise, with numbness and pricking in the limbs but no actual pain except in the region of the coccyx. The second patient was a robust man of 39, with no history of syphilis, who developed pains in the limbs and paralysis of the legs and fingers; the knee-jerk was hard to elicit, the other reflexes normal. As no improvement was observed in two weeks, potassium iodid was given and motor recovery followed, aided by an injection of salvarsan, although the patient is still rather weak and has some tremor. The pains in both cases were too mild to conform to the clinical picture of subacute poliomyelitis, which otherwise the affection might have suggested. Plehn's three cases belong to the pure motor type of polyneuritis which seems to be especially rare.

Deutsches Archiv für klinische Medizin, Leipsic

CV, Nos. 1-2, pp. 1-177. Last indexed February 10, p. 447

101 Innervation of the Intestine. (Darminnervation.) L. R. Müller.
102 Fever from Hemolytic Processes and Transfusion of Blood. (Studien über das Fieber durch Blutzerfall und Bluttransfusion.) H. Freund.
103 *Improved Method for Titration Determination of Small Amounts of Sugar. (Neues titrimetrisches Verfahren zur Bestimmung besonders von kleinen Zuckermengen.) Flatow.
104 *Hemolytic Processes from Soaps in the Blood. (Ueber Seifenhämolyse inerhalb der Blutbahn und ihre Verhütung im Organismus.) W. Meyerstein.
105 *Hematoporphyria. (Die Hämatoporphyrie.) H. Günther.
106 *Dependence of Albuminuria on Acidity of Urine. (Ueber die Abhängigkeit der Albuminurie vom Säuregrad des Urins und über den Einfluss der Alkalizufuhr auf Aciditat, Albuminurie, Diurese und Chloridausscheidung, sowie auf das Harnammoniak.) R. v. Hösslin.

103. **Titration Method for the Estimation of Small Amounts of Sugar.**—Flatow describes the method used by Moritz for twenty years in determining the sugar content of the blood. The advantages of this method are said to be in the small amount of blood necessary, 15 or 20 c.c. being sufficient for three or four tests, and that the end reaction is obtained quickly and remains. The apparatus necessary for this method is somewhat complicated. The principle of the method is decoloration with hydroxylamin after the fluid to be examined has been added to a boiling ammoniacal copper solution.

104. **Destruction of Red Corpuscles by Soaps in the Blood and Means to Prevent It.**—Meyerstein found through experimentation that sodium oleate, stearate and palmate, in certain concentrations, would dissolve the red corpuscles, both in the test tube and in the blood-stream, even in the presence of blood-serum. Consequently by intravenous injection of these substances it is possible to induce hemoglobinuria. The hemolytic action of soap and the production of hemoglobinuria after an intravenous injection, is arrested by the incorporation of cholesterin at the same time. Other lipoids, such as cephalin and the lipoids of the erythrocytes themselves, also give good protection. The neutral fats also act antagonistically to the soaps, so the relation of fats to soaps is of decided importance. The soaps can produce anemia if their quantity in the blood exceeds a certain amount.

105. **Hematoporphyria.**—This term has been coined to express a condition in which there is enormous production and elimination of hematoporphyrin in the urine and sensitive-

ess of the skin to light. Günther summarizes the fourteen cute cases that have been reported to date. The syndrome s further characterized by intestinal disturbances, vomiting, onstipation and abdominal pain. Five of the patients died, our of whom had paralysis of the Landry type; the others ecovered. Acute toxic hematoporphyrinuria is found in hronic intoxications with sulphonal, trional and veronal, but s not present in the acute cases of poisoning with these drugs. Compare with Abstract 83 in THE JOURNAL, Jan. 20, 1912, p. 34.) There are nine cases of chronic hematoporphyrinuria on ecord; these were characterized by sensitiveness of the skin o light, inducing hydroa estivale and in one case there was lso scleroderma. This chronic form is the congenital hema- oporphyria. The hematoporphyrinuria and hydroa estivale egan in early childhood; later (18 to 45 years) mutilations levelop, especially on the nose, ears, cheeks, backs of the hands nd fingers. The urine looks like port or burgundy wine.

106. **Albuminuria and Its Dependence on Acidity of the rine.**—Hösslin draws the conclusion from his experiments hat there is some relation between the acidity of the urine nd albuminuria, for in cases of albuminuria and nephritis the ddition of an alkali lessens the albumin or causes it to dis- ppear entirely, but it will return if the urine becomes acid gain. The same is true in regard to casts in the urine. Uric cid plays an important part; there seems to be no fixed rela- ion between the uric acid and albumin. He considers this of mportance in the treatment of albuminuria. In all cases of lbuminuria the acidity should be estimated and an attempt nade to lessen this through the use of alkalies. The best lkali for this purpose seems to be sodium bicarbonate, which, e says, should be given in doses of from 2 to 8 gm.

Deutsche medizinische Wochenschrift, Berlin

January 18, XXXVIII, No. 3, pp. 97-144

07 General Principles for Technic and Indications for Carbonated and Oxygenated Baths. (Technik und Indikationen der kohlensäure- und sauerstoffhaltigen Bäder.) F. Frankenhäuser.
08 *Technic for Making Plaster Casts. (Praktische Winke zur Gipsverbandtechnik.) F. Pels-Leusden.
09 *Strip of Fascia to Shut Off the Pylorus. (Umschnürung und Verschluss des Pylorus durch Faszienstreifen.) M. Wilms.
10 Immunization Against Experimental Trypanosomiasis. (Ueber Trypanosomen-Immunisierung.) H. Braun and E. Teichmann.
11 *The Poisonings at the Berlin Municipal Shelter. (Ueber die im Städtischen Asyl zu Berlin beobachteten Vergiftungen.) F. Strassmann.
12 Habitual Constipation. (Die habituelle Obstipation.) E. Fuld.
13 Salvarsan. (Salvarsan. Während eines Jahres gesammelte Erfahrungen.) M. Möller. (Salvarsan und Auge.) E. Reissert.
14 Negative Wassermann Reaction in Lead Poisoning. (Wa. R. und Bleiintoxikation.) R. Hilgermann.
15 *Serodiagnosis and Treatment of Cancer. (Weitere Erfahrungen über serologische Diagnostik, Verlauf und Behandlung des Karzinoms.) A. Pinkuss. Commenced in No. 2.
16 The Question of Primary Suture After Mastoid Operation. (Ueber primären Schluss der Wunde nach Eröffnung des Warzenfortsatzes.) A. Blumenthal.
17 Connection Between Race and Crime. (Die Frage des Zusammenhangs zwischen Rasse und Verbrechen.) E. H. Rosenfeld.

108. **Plaster-of-Paris Dressings.**—Pels Leusden gives minute irections how to make plaster splints and casts, saying that hey are generally made too thick and too wide. Six layers are enerally enough and the bandage need not be narrower than ve inches and should not be over four yards long. The cast ontains nearly half its weight in water and it should be left xposed during the first twenty-four hours to let it dry out. e lays great stress on careful molding of the bandage to the art as it is being applied, keeping this up continually until he plaster sets. He advocates applying the bandage without gard to the natural openings, cutting them out after the laster has set.

109. **Exclusion of Pylorus with Strip of Fascia.**—Wilms eparates a strip of fascia from the anterior aspect of the ectus and uses the strip to throw around the pylorus, tying or suturing it so as to exclude the pylorus completely. This, e says, is by far the simplest and safest means for the pur- ose, while it materially shortens operations on the stomach, equiring exclusion of the pylorus. It avoids further the reflex isturbances and resulting atony of the stomach when the ylorus is severed; he has had a case of extreme atony from his cause during the last year. It is possible, he adds, that a strip of fascia might be used in this way to exclude or fasten a segment of intestine, in entero-anastomosis, etc.

111. See Berlin Letter in THE JOURNAL February 3, p. 358.

115. **Diagnosis and Treatment of Cancer.**—Pinkuss reports extensive experimental and clinical research on various methods for serodiagnosis of cancer and on various methods of treatment. Among the points he has thus learned are that a negative antitrypsin reaction can be depended on to exclude cancer; positive findings are not so reliable as he occasionally obtained a positive reaction in other affections accompanied by much destruction of leukocytes, thus releasing the tryptic ferment. In malignant disease the reaction is the work of a proteolytic ferment generated by the cancer. The reaction becomes negative after removal of the cancer, and the persistence of the negative reactions excludes recurrence and metastasis. In seventeen operative cases he has since kept systematic supervision over the patients with this test. In five of the cases there has been suspicion of recurrence, but constantly negative findings with the test were confirmed by the course of the cases. In ten cases the persistence of a positive reaction showed the failure of the apparently radical operation to eradicate the malignant disease, and the patients have since died of metastasis. He advocates systematic application of the test at regular intervals after operations for cancer to detect recurrence in its incipient stage. (The technic was described in THE JOURNAL, July 4, 1908. It is based on the discovery that normal blood-serum contains sufficient antibodies to arrest the digesting action of a 1 per cent. solution of trypsin on the Loeffler plate in the proportion of 1 to 3.) Pinkuss reiterates his warning that a positive reaction should be estimated only in connection with the clinical picture as a whole. In a recent case a well nourished woman of 50 developed pain in the left sciatic nerve and the antitrypsin test gave strong positive findings. A tumor was discovered compressing the sciatic nerve, and microscopic examination disclosed it to be a metastatic osteoblastic carcinoma; the primary tumor is still undetected. Pinkuss comments on the peculiarly unfavorable influence of a pregnancy on malignant disease of the genital organs, and states that the methods of active immunization against cancer, which have proved effectual in animals, have given constantly negative results in the clinic, as also the attempts to apply pyocyanase, epinephrin, thymus extract, etc., all of which have some successes to their credit in cancer on animals. He thinks that it is still an open question whether cancer on animals can be compared with human cancer. (A previous article by Pinkuss on cancer was summarized in these columns Feb. 11, 1911, p. 463.)

Medizinische Klinik, Berlin

January 21, VIII, No. 3, pp. 91-132

118 *Danger from Methyl and Other Alcohols. (Verwendungsgefahren des Methylalkohols und anderer Alkohole.) L. Lewin.
119 Rectoscopy and Treatment Under Direct Inspection. (Technik und Indikationen der Recto-Romanoskopie und der endoskopischen Behandlung.) L. v. Aldor.
120 Electric Cataphoresis for the Eye. (Zur Technik der Jontophorese des Auges.) R. Wirtz.
121 Segment of Saphenous Vein Utilized to Close Gap After Removal of Aneurysm in Popliteal Artery. Goecke.
122 The Intracardiac Motor Centers of the Heart. (Zur Anatomie und Physiologie der intrakardialen motorischen Centren des Herzens.) W. Koch.
123 Is Methyl Alcohol a Poison? E. Rost.

118. **Toxicology of Methyl Alcohol.**—Lewin reviews his own research and the literature on this subject; among the data cited are experiments on laboratory animals by prolonged administration of small amounts of methyl alcohol, the temperature of the body declining and the animals dying in a comatose state. Sixty-three eggs into which alcohol was injected developed afterward normally in nearly 54 per cent. when ethyl alcohol had been used and in only 23.08 per cent. with methyl alcohol. His research on the effect on the eyes when methyl alcohol was incorporated or the fumes inhaled or the alcohol penetrated through the skin, confirmed the peculiar and powerful action of the alcohol in this respect, more certain, he declares, than with any other substance. The toxic action may be enhanced by admixture of other injurious substances when methyl alcohol is used in liquor, and he insists

on the necessity for legislative regulation of the production of liquor. In England there have long been laws penalizing the use of methyl alcohol for internal use in any way. Lewin adds that nearly all brandy and liqueurs from a scientific standpoint are denatured. Persons addicted to such drinks long for variety and this wish is catered to, so that it is impossible to say what synthetic and natural alcohols and flavoring substances may be added to produce the mixed drinks. There are certain other alcohols which are more toxic for man even than methyl alcohol, such as amyl alcohol. A recent analysis of a certain "superfine essential oil" revealed that 11.84 per cent. of the fluid was fusel oil. The number of ethereal oils used in the manufacture of brandies and liqueurs is considerable, and some of them—in combination with the other ingredients of the brandies, etc.—are undoubtedly injurious to health, as also certain other added substances, such as quillaja, Spanish soaproot, and certain coloring matters. He emphasizes the necessity for further research in this field.

Münchener medizinische Wochenschrift

January 16, LIX, No. 3, pp. 121-176

124 *The Wassermann Reaction in the Cerebrospinal Fluid. (Ueber die Auswertungsmethode des Liquor cerebrospinalis vermittels der Wassermannschen Reaktion.) H. Neue.
125 Influence of Microbes on Action of Salvarsan. (Der Einfluss der Mikroben auf die Wirkung von Salvarsan.) W. L. and N. K. Yakimoff.
126 *Care of the Bladder After Suprapubic Incision. (Versorgung der Blase nach Sectio alta.) P. Janssen.
127 Operative Treatment of Prolapse of Rectum. (Ueber den Ersatz des Thierschschen Drahtringes bei der Operation des Mastdarmvorfalls durch geflochtene Seidenriemen, frei überpflanzte Gefass-, Sehnen-, Periost- oder Faszienstücke.) C. Henschen.
128 *Section of Posterior Spinal Nerve-Roots for Relief of Spastic Conditions and Sensory Crises. (Zur Försterschen Operation: Spastische Zustände und sensible Krisen (Tabes) durch Resektion der hinteren Stränge des Rückenmarks zu bessern.) B. Heile.
129 *Be Cautious with Scopolamin! (Vorsicht mit dem Skopolamin!) F. Brunner.
130 Improved Technic for Roentgen-Ray Work. (Ueber rationellen Röhrenbetrieb in der Röntgentherapie.) H. Ritter. (Technik und Entwicklung des Einzelschlagverfahrens in der Röntgenaufnahme.) F. Dessauer.
131 Epidemic Occurrence of Disease of the Hair. (Trichorrhexis nodosa.) H. Hüber and E. Walter.
132 *Epidemic Occurrence of Acute Heart Disease in Children. (Ueber gehäuftes Auftreten von akut entzündlichen Herzerkrankungen im Kindesalter.) A. Forell.
133 Stretching the Prostate in Treatment of Hypertrophy. (Behandlung der Prostatahypertrophie durch Prostatadehnung.) F. Kraemer.
134 Circular Severing of the Lymphatics in Treatment of Phlegmons of the Arm. (Phlegmonenbehandlung der oberen Extremitäten mittels Zirkumzision.) K. Knoke.
135 Simultaneous Pregnancy in Both Fallopian Tubes. (Gleichzeitige Schwangerschaft in beiden Eileitern.) G. Davidsohn.

124. **Wassermann Reaction in Cerebrospinal Fluid.**—Neue took twice as much of the fluid for examination as Wassermann directs for the test, and found that when the reaction was negative with the smaller amount, it was sometimes possible to obtain a positive response with the larger quantity. Nonne thus obtained a positive response in forty-two of forty-four patients who gave a negative reaction with the original technic, and Neue reviews similar experiences with fourteen patients.

126. **Care of the Bladder after Suprapubic Incision.**—Janssen expatiates on the necessity for ample and thorough evacuation of the bladder before the incision; he pierces the wall with a trocar over which is slipped a rubber tube, connecting with a vessel below. By this means it is possible to evacuate the bladder completely, even when the pelvis is raised, before commencing the incision which can then be made vertically in the median line. He sutures the bladder completely and leaves a ball drain next to it, but not in contact, bringing the stem of the drain out through a buttonhole on one side below, supplementing this drain with two other long glass drains brought out through other buttonholes, to ensure against subcutaneous accumulations of blood. He leaves the retention catheter in place for twelve or fourteen days, and does not disturb the drainage of the prevesical space until convinced that the suture of the bladder is definitely consolidated. His results with this method have been invariably good.

128. **Section of Posterior Nerve Roots for Spastic Paralysis.**—Heile reports a case of Little's disease in a boy of 4 in which he practically cured the little patient by section of the second, third and fifth posterior lumbar roots and the second sacral on both sides, resecting 2 cm. of each. The improvement is the more remarkable as no operation was done on any muscles or tendons; the case is peculiarly instructive as an older brother had the same disease and was treated by the ordinary measures; his condition is by no means so good as that of the child whose nerve roots were resected. Heile also reports a case of tabetic gastric crises in which he performed the Foerster operation, resecting the seventh, eighth and ninth dorsal roots, but flaccid paralysis followed, the symptoms suggesting a transverse lesion of the spinal cord at the level of the operation. The patient succumbed four months later, and necropsy revealed softening of the spinal cord and that the posterior tracts were entirely destroyed at the site of the operation. Syphilitic changes in the vessels were undoubtedly responsible for the softening of the cord after the operation, as it could not have been directly injured. In future such mixed cases should be excluded from the Foerster operation. It is probable that the three cases reported by Henle, de Haan and Nonne belong in this category, as transient or permanent paralysis followed the section of the nerve roots. The spinal cord in Heile's case was incapable of functioning below the sixth dorsal segment, but yet the patient suffered from severe abdominal crises accompanying the gastric. The pains must therefore be referred to roots above this—which could not have been the case in this instance for reasons which he enumerates—or the vagus nerve must have been responsible for them and not the sympathetic, notwithstanding the fact that the patient presented the symptoms (hyperesthesia in the corresponding dorsal segment and exaggeration of the epigaster reflex) assumed to be characteristic of involvement of the sympathetic. The case teaches the wisdom of testing before operating to learn which of the great nerve systems is involved. Injection of epinephrin or atropin will determine whether the vagus or the sympathetic system is responsible for the trouble, or injection of a local anesthetic into the vertebral foramen will block the posterior roots involved. If it proves possible to arrest transiently the pain in a gastric crisis by such an epidural injection in the vertebral foramen, this will prove that the rami communicantes actually do transmit the pain. If on the other hand, the injection does not arrest the pain, we can assume that the vagus is the pain transmitter, and Exner's method of severing the vagus nerve above the cardia may be indicated instead of the Foerster technic. The epidural injection into the vertebral foramens may possibly prove an effectual therapeutic measure.

129. **"Be Cautious with Scopolamin."**—Brunner has had two cases of serious collapse under the scopolamin-pantopon-ether technic for anesthesia. One patient, a woman of 74, recovered, but the other, a corpulent man of 39, with sound heart and lungs, died from the effects of the anesthesia; the operation had been an inguinal herniotomy. Brunner gave strychnin as an antidote and noticed slight benefit under it, but says that he does not wish to stand sponsor to such an accumulation of heroic drugs as this makes. In future he intends to content himself with the older, tried technics, and warns the physician who uses the scopolamin technic that he must constantly bear in mind that he is working with a drug which is not harmless, and that he should beware especially of too large doses of morphin or pantopon with this technic.

132. **Epidemic Acute Heart Disease.**—Forell states that last June seven children, between 5 and 10, were brought to the policlinic in his charge, all with acute myocarditis or endocarditis, and all living near together; five of the children exhibited the first symptoms all within two days. Only in one case was there a pronounced sore throat at the onset, but two others complained that their throats hurt them, although free from objective findings. The affection began with an acute severe onset and ran a comparatively mild course, although there has been a relapse in two cases. None of the children complained of any joint pain or trouble except one who said that the back of her neck was sore and the left Achilles tendon. One of the children presented transient choreiform movements. In several cases the liver became enlarged and epistaxis was a frequent symptom. Diphtheria bacilli were excluded, but no positive bacteriologic findings are reported.

Wiener klinische Wochenschrift, Vienna

January 11, XXV, No. 2, pp. 67-106

136 *Roentgenoscopic Differentiation of Gastric Ulcer and Cancer. (Die unterscheidenden Merkmale zwischen Magengeschwür und Magenkrebs im Röntgenbilde.) M. Haudek.
137 Sensitization by Incorporation of Fluorescent Substances. (Ueber die antagonistische Wirkung photodynamischer Sensibilisatoren auf ultraviolettes Licht.) A. Perutz.
138 *Gastric Mucosa Findings with Ulcer and Cancer. (Magenschleimhautbefunde bei Ulcus ventriculi und Karzinom.) H. Heyrovsky.
139 Drinking-Water in Causation of Goiter. (Ueber Ursache und Wesen des Kropfes.) B. Breitner.
140 Severe Cicatricial Changes in Treatment of Trachoma with Carbon-Dioxid Snow. (Zur Behandlung des Trachoms mit Kohlensäureschnee.) F. Rössler.
141 *Treatment of Tetanus. (Ueber ein neues Tetanusheilverfahren.) Kras.
142 Decadence of Family of Julius Cesar. (Zur Pathographie der Julischen Dynastie.) F. Kanngiesser.

January 18, No. 3, pp. 107-146

143 Monkeys Surviving After Removal of the Brain. (Affen ohne Grosshirn.) J. P. Karplus and A. Kreidl.
144 Diagnosis and Treatment of Tuberculosis. (Bestimmung und Behandlung der tuberkulösen Infektion mittels antitoxischer Mittel.) E. Wein.
145 Radium in Therapeutics. (Ueber St. Joachimstaler Radiumträger und einige ihrer Strahlenwirkungen.) F. Dautwitz.
146 *Technic for Tonsillectomy. (Eine neue Methode der Radikaloperation der Tonsille.) S. Tenzer.

136. **Roentgenoscopy of Gastric Cancer and Ulcer.**—Haudek's work issues from the Roentgen laboratory in charge of Holzknecht at the Vienna general hospital, and discusses, with illustrations, the points which differentiate ulcer from cancer. He says that great reliance can be placed on the findings in regard to motor functioning. An ulcer anywhere in the stomach tends to induce spastic contraction of the pylorus, and thus retards the emptying of the stomach. With cancer, on the other hand, the pylorus is constantly gaping, so that the ingesta pass smoothly along into the duodenum. With an ulcer the outline of the shadow cast by the stomach contents is smooth, while with cancer of the pyloric region the outline is ragged on the right side. With an ulcer in the lesser curvature the shadow lies to the left of the umbilicus, the right edge perpendicular or sloping upwards slightly toward the left. He investigates the motor functioning first, giving the patient a test meal of 40 gm. bismuth carbonate in 300 gm. porridge. The shadows cast, when examined six hours later, are characteristic, especially with stenosis of the pylorus, the broad, shallow half circle extending each side of the umbilicus.

138. **Stomach Mucosa Findings with Cancer and Ulcer.**—Heyrovsky reports the histologic findings in 120 cases of gastric ulcer and in twenty-eight of gastric cancer, and states that he was able to ascertain the present health of forty-three patients given operative treatment for gastric ulcer. Among those whose mucosa had been found healthy at the time of the operation, 64.6 per cent. were free from disturbances, while only 46.2 per cent. were thus free among the patients whose stomach showed signs of gastritis at the time of the operation.

141. **Treatment of Tetanus.**—Kras was unable to obtain antitetanus serum in the extremely serious case reported, and he treated the patient, a mulatto of 25, by cauterizing the wound, withdrawing 500 c.c of blood and infusing a similar amount of saline solution, and then allowing all the cerebrospinal fluid that dripped slowly from a lumbar puncture to escape. He then washed out the cerebrospinal canal with physiologic salt solution containing 0.3 per cent. sugar, and left two syringefuls in the canal. These procedures were repeated the next day, giving an hour each time to them, washing out the canal with a liter of the saline, a drop at a time. The reaction, severe the first day, was much milder the second, and the patient afterward dropped to sleep and began to mend, and the procedures were repeated during the first five days, using smaller amounts, and the man left the hospital cured, the twelfth day. Kras states that the prognosis in this case had been unequivocally grave, and his success encourages him to try this method at need for patients who have developed hydrophobia.

146. **Tonsillectomy.**—Tenzer describes Sluder's method (illustrated in THE JOURNAL March 25, 1911, page 867) with appreciative comment remarking that the world has the Americans to thank for the best method of removing the tonsils in adults, and now Sluder has made it possible to remove the tonsils of children with a relatively simple technic. He adds that it is for pediatrists now to determine whether enucleation, according to Sluder, is to become the standard procedure instead of tonsillotomy.

Zentralblatt für Chirurgie, Leipsic

January 20, XXXIX, No. 3, pp. 73-104

147 Intratracheal Insufflation and Peroral Intubation. (Meltzer's Verfahren und die perorale Intubation.) F. Kuhn.

Zentralblatt für Gynäkologie, Leipsic

January 20, XXXVI, No. 3, pp. 65-96

148 Salvarsan in the Treatment of the Newly Born; Seven Cases. (Zur Technik und Dosierung der Salvarsaninjektionen bei der Behandlung von Neugeborenen.) F. Engelmann.
149 *Vaginal Amputation and Resection of the Body of the Uterus. (Vaginale Korpusamputation und Korpusresektion.) A. Rieck.

149. **Vaginal Oblique Resection of Body of Uterus.**—Rieck gives an illustrated description of his technic for resection of the uterus instead of amputation. It avoids the wedge excision and suturing of raw surfaces, and the abdominal cavity is walled off beforehand, the resection being entirely extraperitoneal, the ovaries and part of the tubes being shut off above. The oblique resection leaves the remaining portion in better shape to conform to the vagina and bladder. He draws out the body of the uterus with forceps, seizing it at each upper corner, and tilts it first to one side and then to the other to permit suturing the peritoneum together behind and over it to wall off the abdominal cavity water-tight. The operation is indicated for excessive uterine hemorrhage from any cause, myoma, metritis, arteriosclerosis, nervous or ovarian disturbances, and especially for excessive menstruation in young women without any local pathologic findings, rendering the women intensely anemic, weak and nervous from the constant losses of blood which nothing seems able to arrest except removal of part of the uterus. This, by the technic described, permits continuance of menstruation. One of Rieck's patients, a woman of 32, had become extremely debilitated by excessive menstrual hemorrhages for three years, rebellious to curetting and the ordinary measures, but she has had apparently normal menstruation during the twenty-one months since the operation and is strong and well. The same success is recorded in the case of a woman of 40 with excessive menstrual hemorrhages lasting for eight or ten days each time. At the regular period after the operation, menstruation occurred with slight hemorrhage and has recurred in this form during the four months to date. He regards vaginal resection of the body of the uterus as thus a certain, almost harmless and rapid means of reducing excessive menstruation to normal proportions.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 16, XXXIII, No. 7, pp. 65-72

150 Concrements in the Lungs. (Caso di calcolosi polmonare.) U. Morandi.

Revista de Medicina y Cirugia, Havana

January 25, XVI, No. 2, pp. 35-62

151 *Fatal Eclampsia Following Eating of Oranges; Two Cases. (El zumo de la naranja respecto a la eclampsia en la gestacion y el puerperio.) N. Lugo-Viña.

151. **Oranges and Eclampsia.**—In the two cases described the women had had some albuminuria, but no actual symptoms of eclampsia until after taking the juice of several oranges on an empty stomach or eating freely of an orange preserve. The first woman was in the eighth month of pregnancy; the other had been delivered at term a week before. In both the convulsions came on in the night and the women died within twenty-four hours. Lugo-Viña suggests that the orange juice may have had a special toxic action on the albuminuric women, similar to the toxicity of the *tanghin*, a Madagascar plant, for persons with a tendency to albuminuria. The oranges in the first case were of the kind known locally as *chinas*.

Hospitalstidende, Copenhagen

December 13, LIV, No. 50, pp. 1441-1472

152 Bismuth Salts Not Capable of Neutralizing Gastric Acidity. (Nogle Bemærkninger om Subnitras bismuth. og Carb. bismuth. som syremættende Midler.) C. Lundsgaard.

December 20, No. 51, pp. 1474-1520

153 *Atony of the Stomach. (Atonia ventriculi.) K. Faber. Commenced in No. 50.

153. **Atony of Stomach.**—Faber reviews the literature and the various theories in regard to motor insufficiency and dilatation of the stomach resulting from atony, and analyzes his own experience with 259 patients with chronic dyspepsia, twenty-nine with gastric cancer, eighty-eight with ulcer in the stomach or duodenum, and ninety-four with gastritis. He investigated the motor functioning of the stomach in 560 patients, including seventy with evidences of gastroptosis. This material shows that chronic atonic insufficiency and chronic atonic dilatation may occur together, but are not necessarily associated. The insufficiency is due to defective functioning of the lesser curvature which does most of the active mechanical work of the stomach. The greater curvature is more passive, and when the musculature is undernourished it weakens and stretches. He protests against the term gastroptosis as the whole stomach does not sag; the greater curvature merely stretches lengthwise and sags low, but the cardia and pylorus remain at the normal levels. The whole trouble in atony of the stomach is, he insists, the result of weakness of the nerves with or in consequence of lack of sufficient nourishment. He rejects Stiller's assumption of a congenital asthenia of the stomach, as, under appropriate tonic, physical and dietetic measures, extra nourishing food, out-door life and measures to cure insomnia, the digestion and assimilation are restored to normal and all the signs of gastroptosis gradually disappear. Dyspeptics grow nervous, and this may lead to loss of appetite or vomiting or both. Undernourishment and comparative emaciation may entail atonic motor insufficiency or dilatation or both. He says of atony with acute dilatation that it probably occurs with unsuspected frequency after errors in diet, but usually rights itself spontaneously. He does not agree with Tissier in regard to the swallowing of air as such an important factor in acute postoperative dilatation, ascribing the latter more to a paralyzing action from the anesthetic.

Hygiea, Stockholm

December, LXXIII, No. 12, pp. 1313-1440

154 Analysis of the Records for a Hundred Years of Stockholm Maternity. (Om den obstetriska verksamheten vid barnbördshuset Pro Patria under 100-årsperioden 1780-1880.) O. H. Forssell.

155 Egypt as a Health Resort. (Egypten och särskildt Assuan såsom klimatisk kurort.) E. Schacht.

156 Epidemic of Typhoid at Göteborg; 176 Cases. (Några meddelanden från en nervfeberepidemi.) H. Wennerberg.

157 Medical Impressions of America. (Reseintryck och kirurgiska erfarenheter från en studieresa i Nordamerika.) J. Borelius.

Nordiskt Medicinskt Arkiv, Stockholm

XLIV, No. 2. Last indexed Nov. 25, 1911, p. 1810

158 *Albuminuria After Severe Physical Exercise. (Die Anstrengungsalbuminurie.) I. Jundell and K. A. E. Fries. To be continued.

159 *Acute Nephritis in Children. (Akute Nephritis in den Kinder- und Jugendjahren mit besonderer Berücksichtigung der Prognose.) H. Ernberg.

157. **Athletics and Transient Albuminuria.**—The transient nature of the kidney findings in athletes after severe physical exercise, as determined by Jundell and Fries, was emphasized in the first part of their article summarized in The Journal, Nov. 25, 1911, page 1810.

158. **Acute Nephritis in Children in Respect to Prognosis in Later Life.**—Ernberg recently reviewed the records and systematically reexamined all he could relocate of 106 persons who had had acute nephritis before the age of 15, and 50, whose acute nephritis occurred between the age of 15 and 30. The intervals since the nephritis ranged from sixteen to twenty-three years. The nephritis occurred in connection with some acute infectious disease in all but twenty-seven in the first group, but in none of the forty individuals he was able to reexamine were there any signs or symptoms suggesting that the kidneys were below par. The same negative findings were observed in most of the sixteen relocated and reexamined in the group of fifty older patients. Two whose nephritis had been of a subacute type, had albuminuria when reexamined, and he thinks that their subacute nephritis was probably the beginning of chronic disease of the kidney. In two other cases evidences of nephritis were discovered, but various circumstances indicated that the nephritis had developed quite recently from other causes and not in connection with the nephritis so many years before. His experience shows further that even when albuminuria persists for a time after acute nephritis, if there are no other signs of nephritis, the prognosis is good and the albuminuria gradually subsides. Orthostatic albuminuria was not encountered in any of the patients reexamined, showing that acute nephritis does not afford a predisposition for this later. All the patients reexamined were tested several times and always in the morning.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

The Accessory Sinuses of the Nose in Children. By Prof. Dr. A. Ónodi, Director of the University Clinic for Diseases of the Nose and Throat in Budapest. With a Preface by Prof. Dr. W. Waldeyer, Director of the Anatomical Institute of the University of Berlin. Translated by Carl Prauanitz, M.D., M.R.C.S., L.R.C.P., Head of the Hydrophobia Department of the Hygienic Institute University of Breslau. Cloth. Price, $7. One Hundred and Two Plates. New York: William Wood & Co., 1911.

Dental Anesthetics. A Text-Book for Students and Practitioners. By Wilfred E. Alderson, M.D., M.S., B.Hy., D.P.H., Honorary Physician, Newcastle-on-Tyne Dispensary. With a Contribution on Analgesia by John Bolam, L.D.S., Honorary Assistant Dental Surgeon, Newcastle-on-Tyne Dental Hospital. Cloth. Price, $1,25. Pp. 100. New York: William Wood & Co., 1911.

Handbook of Mental Examination Methods. By Shepherd Ivory Franz, Ph.D., Scientific Director and Psychologist, Government Hospital for the Insane. Nervous and Mental Disease Monograph Series No. 10. Paper. Pp. 165, with illustrations. New York: Journal of Nervous and Mental Disease Publishing Company, 1912.

A Pocket Atlas and Text-Book of the Fundus Oculi. With Note and Drawing Book. Text by G. Lindsay Johnson, M.A., M.D., F.R.C.S. With 99 Drawings from Life by Arthur W. Head, F.Z.S. Cloth. Price, $2.50. Pp. 205. Chicago: F. A, Hardy & Co., 10 S. Wabash Avenue.

A Compend of Genito-Urinary Diseases and Syphilis. Including Their Surgery and Treatment. By Charles S. Hirsch, M.D. Second Edition. Blakiston's Quiz Compends. Cloth. Price, $1.25. Pp. 359, with 74 illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

Roentgen-Diagnostik der Erkrankungen des Kopfes. Von Privatdozent Dr. Artur Schüller, Vorstand der Nervenabteilung am Kaiser Franz Josef-Ambulatorium in Wien. Paper. Price, 7.80 marks. Pp. 219, with illustrations. Vienna: Alfred Hölder, 1912.

Studies in Psychiatry. By Members of the New York Psychiatrical Society. Volume 1. Nervous and Mental Disease Monograph Series No. 9. Paper. Pp. 222. New York: Journal of Nervous and Mental Disease Publishing Company, 1912.

Praktische Anleitung zur Syphilisdiagnose auf Biologischen Wege (Spirochæten-Nachweis, Wassermann'sche Reaktion). Von Dr. P. Mulzer. Second Edition. Cloth. Price, 4.80 marks. Pp. 129, with 20 illustrations. Berlin: Julius Springer, 1912.

Pleurisy, Including Empyema and Bronchiectatic Conditions. By Alex. James, M.D., F.R.C.P.E., Consulting Physician to the Edinburgh Royal Infirmary. Cloth. Price, $2.25. Pp. 243, with illustrations. New York: William Wood & Co., 1911.

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Fortschritte der naturwissenschaftlichen Forschung. Herausgegeben von Prof. Dr. Emil Abderhalden, Halle a. S. Volume 4. Paper. Price, 15 marks. Pp. 299, with 110 illustrations. Berlin: Urban & Schwarzenberg, 1912.

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THE COLON BACILLUS, A REGULATOR OF POPULATION *

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When certain species of animals, like rabbits and lemmings, increase beyond the limit desired by Nature in any locality, epidemic diseases suddenly appear and stop this disturbance of natural balance.

In the earlier days of history the human species was subjected to similar epidemics. It seems to have been Nature's plan to allow the medical profession to take charge of this subject up to a certain point, but there are limitations which we may not be allowed to pass, because there appears to be a plan to destroy by poison various species of plants and animals which have arrived at stages of increase or of development beyond Nature's liking.

Concerning the stage of development which is to be allowed for man, we can no more anticipate the limit than we can state the reason for the presence of so many thousands of suns in space. We may simply observe the fact that an oak tree is not allowed to grow beyond a certain height, and a rose is not allowed to progress beyond limited stages of development, after which its stamens are transformed into beautiful petals, and the rose then loses its power of reproduction and falls a ready prey to enemies.

Man and domesticated animals carried to the higher stages of development begin shortly to show stigmata of decadence indicating that Nature has been setting her limit.

At the present time there are few individuals among us who do not show some of the stigmata of decadence, even though no more marked than in irregular development of teeth, or abnormal shape of toes. Still more striking stigmata are familiar to all of us, as seen in every day practice in a fair proportion of all of the individuals in a community.

We may assume that glandular structures of the body, engaged in manufacturing protective elements against bacteria, present decadent features, quite as well marked, though not as observable, as external anatomic defects. Such decadence of manufacturing organs would mean derangement in function with a lessening of their protective efficiency. The higher our development, the sooner decadence begins in any one family or group of individuals. Vulnerability to bacteria of various kinds increases. In other words, a poisoning process takes place in plants and in animals when decadence begins. The toxins of bacteria are employed by Nature for killing off plants and animals when limitations of development, quite as well as when limitations of increase, have been reached.

Bacteria which formerly caused disastrous epidemics, attacking practically all types of individuals, are under excellent control at the present time, through the resources of preventive medicine. Endemics, like tuberculosis, are controlled to the point where only those individuals who have passed the higher stages of development remain very vulnerable.

There are many bacteria, insidious in their methods of attack, still conducting Nature's plan of poisoning off excess of population, and attacking most freely individuals who carry heels of Achilles after passing the higher stages of development in the family.

It is becoming apparent that the colon bacillus group of bacteria stands among the most active malefactors (malefactors from our egoistic point of view, benefactors from Nature's standpoint), and this group will perhaps be found to stand next to the tubercle bacillus group in the proportion of deaths which it causes in a community. It has even been found to extend beyond animal prey in causing destruction of terminal buds of cocoanut palms.

The reason that the activities of this group of bacteria have not been more quickly recognized is in general the reason that the flying-machine was not invented earlier; and in special, the reason is that methods of search for the colon bacillus are of recent development, and not yet extended to cover most of the field. This is in part due to the method of work which Nature allows us up to the present time. Nature has not even allowed the laboratory clinician to make routine search for the colon bacillus in urine as yet.

At the university we are trained in science to make use of all available data before arriving at a conclusion. Later in life we develop the art of the practice of medicine, and Nature sets us at grouping data about theories in a harmonious way to fit our art. This natural antagonism between science and art explains the regulation of progress, which must not be too rapid, according to Nature's plan.

In abdominal surgery we all recognize the destructive activity of the colon bacillus when it leads to gangrene of the appendix, but how often do we follow the bacillus from an actively proliferating colony at the appendix, and note distant effects of toxins or of separate colonies which occur synchronously with the development of the colony which is most in evidence?

How often do we recognize the relation of colon bacilli, for instance, to infections in the vicinity of the pylorus and duodenum?

At post-mortem examinations we find adhesions extremely abundant in the vicinity of the pylorus and duodenum in cases in which the patients have complained during life of nothing more perhaps than dyspepsia. This dyspepsia in itself has not been fatal to the individual, but has been a factor in lessening the resistance of the individual to other infections. The colon bacillus, however, was the original malefactor, from my present point of view. Such adhesions are mostly overlooked by the medical profession as yet. In dyspepsia the *x*-ray is just rising over the horizon, but we are already making gastric diagnoses with the *x*-ray which takes a picture of the stomach filled with bismuth solution, showing interference with motility of the stomach, abnormal peristalsis, or hepatofixation of the stomach, due to adhesions which have apparently resulted from insidious colon bacillus action. To-day we depend as much on the *x*-ray for dyspepsia diagnosis as we do for broken bone diagnosis.

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* Read at the Twenty-Fourth Annual Session of the Southern Surgical and Gynecological Association, Washington, D. C., Dec. 12, 1911.

Examination of adhesion tissue from the attic of the abdomen by Dr. B. B. Stroud, who is making observations for me, shows the presence of the colon bacillus in such tissue, just as others found it encapsuled in gallstones.

It is only recently, however, that we have learned of the activities of the colon bacillus in the gall-bladder.

It seems to me a tenable hypothesis that the colon bacillus is responsible for a large proportion of our cases of ulcer of the stomach and duodenum, such ulcers to my mind simply representing symptoms, like acne of the face. In 1895, I described proliferating endarteritis in the blood-vessels of the appendix. If the colon bacillus causes similar endarteritis of the terminal vessels of the stomach, it would explain why anemic distribution areas of these plugged vessels are exposed to bacterial and digestive destructive attack, resulting in symptoms which become graphic as ulcer.

We have recently noted the fact that the colon bacillus is an agent in the production of pancreatitis, but only the acute forms of pancreatitis producing death quickly have as yet attracted our attention acutely. How about the very large group of cases of interstitial pancreatitis not yet noted by the clinician, but which may often result in diabetes mellitus from squeezing out of the islands of Langerhans by hyperplastic connective tissue? Diabetes mellitus, then, like ulcer of the stomach, would belong in classification among the symptoms of poisoning by the colon bacillus, until we had disproved the point in any given case.

If the colon bacillus is known to cause interstitial panceatitis, may it not be a salient factor in the development of those cases of hepatic cirrhosis which are known to be of toxic origin, from the influence of intestinal bacteria?

If we already know about pancreatic cirrhosis from the influence of the colon bacillus, and assume that hepatic sclerosis represents a similar infection, should we not think next in order of arteriosclerosis, which causes much shortening of life, as belonging in the colon bacillus class of cases? In arteriosclerosis we have alteration of blood-vessels, including increase of connective tissue, and believed by some to be a result, secondarily at least, of toxic hypertension. A very small proportion of the cases of arteriosclerosis are caused by alcohol and syphilis, the great majority being perhaps secondary to saprophytic hypertension. We know that intestinal putrefaction is a forerunner in many cases of arteriosclerosis.

When the blood-circulatory system is being injured by colon bacillus toxins, we may also have neurasthenia, for these poisons attack the nerves as well as other structures, and neurasthenia is found chiefly in individuals of families who have passed the higher stages of development, and who are prone to intestinal putrefaction.

Indican in the urine is said to be the index of various toxins of intestinal origin, and we know that the colon bacillus is one of the most abundant bacteria which develop out of normal proportion in the bowel of patients who have lost part of their resistance, and whose urine contains indican.

A vicious circle is established when defective protective organs allow the colon bacillus to increase to a point where its toxins produce tissue-changes, these tissue-changes in themselves giving rise to still further disturbance of function of glands engaged in protection, nutrition and excretion.

If we are free to assume that the colon bacillus is a malefactor in arteriosclerosis, we may easily place this bacterium as ranking with the tubercle bacillus in limiting over-population by increasing the death-rate. The colon bacillus sometimes develops insidiously at various points, when any actively proliferating colony is at work at some one focus and making distant colonies. Thus we may have subphrenic colonies when the primary nest of active bacteria is as far away as in a diverticulum of the sigmoid flexure of the colon. These flagellated bacilli frequently spread over the peritoneum, causing acute peritonitis, when they escape from some focus of destructive activity.

Dr Charlton, of McGill University, has suggested that pernicious anemia may at times result from colon bacillus infection, but at the present time it seems to me perhaps better to recognize a colon bacillus anemia simulating pernicious anemia.

Malarial infection is simulated by the toxic impression that goes with some forms of intestinal putrefaction, and as the colon bacillus is the commoner saprophyte, it seems fair to assume that the sapremia is to be charged against a bacterium that is dominant at the time. In any event, it is evident where the burden of proof lies ready for the clinician.

Dr. H. G. Harris has found the colon bacillus abundant in the urine of a patient with infantile paralysis. We know that experimental injection of the colon bacillus into the circulation has resulted in special impression on the spinal cord, and that at least makes us pause for a moment to consider what sort of relation may exist between the colon bacillus and infantile paralysis. Perhaps the colon bacillus prepares the way for the special infection of infantile paralysis; perhaps the special infection of infantile paralysis prepares the way for terminal infection by the colon bacillus.

One of the largest groups of cases in which the influence of the colon bacillus is daily overlooked by clinicians of the world is in its relation to infections of the kidneys, and this is particularly regrettable because in no other field, perhaps, have we such good control of the movements of the colon bacillus.

Dr. William H. Thomson has shown that hexamethylenamin (urotropin) combined with benzoate of soda, in the course of excretion from the kidneys, is directly destructive to the colon bacillus throughout the urinary tract. Some patients do not split up hexamethylenamin into the requisite by-products readily, but the addition of benzoate of soda seems to facilitate the process.

In many cases of infectious and contagious diseases, like scarlatina, measles, typhoid and diphtheria, the organism found in the urine is the colon bacillus. In several forms of acute gastro-intestinal disturbance, like cholera morbus, particularly in elderly people, the kidneys may be so filled with colon bacilli that a fatal result is due to this complication, which could have been averted by recognition of the colon bacillus in the urine and application of the Thomson treatment. Persistent bacilluria may require in addition colonic flushing to reduce the primary toxic source.

We have less cause to fear the dangerous nephritis of scarlatina when we find the colon bacillus abundant in the urine, and recognize it as an agent hastening the patient toward death.

Sometimes in consultation physicians have advised against operation in cases of appendicitis because of the presence of albuminuria, but when they were shown the presence of the colon bacillus in the kidneys, they were not surprised at the rapidity with which albuminuria ceased after operation on the primary focus of infection.

Infection of the urinary tract occurs in several ways. We have ascending infection through the open portal of the urethra, descending infection through the mazes of the blood-stream, infection by contiguity when the bacilli make their way through tissue from a neighboring focus.

Concerning ascending infection through the open portal of the urethra, we shall often find the colon bacillus as the chief malefactor in many cases of chronic cystitis if we simply look for it, and I have found it in cases in which the clinical diagnosis was tuberculosis of the bladder, and a hopeless prognosis had been given. Yet the cystitis disappeared under the influence of hexamethylenamin before I had taken up the improved treatment of Thomson, with the addition of benzoate of soda.

Infection of ureters and the pelvis of the kidney is often due to the colon bacillus, and we may obtain this bacterium from any part of the urinary tract. Some obscure cases in which we suspect the presence of stone in the kidney, but cannot prove it by text-book resources, are really cases in which we will find the colon bacillus at work, if we look for it. This is true also of some kidney abscesses.

The colon bacillus ascends the open portal of the vagina, and is responsible for some of the leukorrheas of intractable character. I have found it chiefly in the ones in which the leukorrhea was secretory in character rather than purulent and particularly in neurasthenic young women.

This bacterium is sometimes the cause of oviduct infection, when resistance is suddenly lessened in a woman exposed to cold during the time of menstruation.

In other cases the colon bacillus insidiously escapes nto the peritoneal cavity beyond the oviducts, without making particular demonstration en route, but attacks an ovary at a point of injury, like that caused by recent escape of an ovum, and gives rise to ovarian abscess. I suspect it to be the cause for some of the ovarian and ubal adhesions in cases giving no clear history of acute attack.

Incontinence of urine in children is sometimes due to he presence in the bladder of the colon bacillus, which has entered through the urethra, or has descended from he kidney. Highly acid urine caused by the colon bacillus accounts for the irritability of the bladder and he incontinence in this group of cases.

The same bacterium is undoubtedly a factor in limiting population when it goes into the vagina and causes such highly acid secretion that spermatozoa perish, unless we correct the hyperacidity with milk of magnesia or other resources.

The colon bacillus penetrating the diaphragm sometimes causes local pulmonary consolidation, and it has been found by Kemp as an abundant bacterium in double pneumonia and purulent bronchitis, and obtained in pure culture from the urine at the same time.

The effects of the colon bacillus are sometimes so remote that the influence of this bacterium is not suspected at all. In one case of chorioiditis in which the patient had become nearly blind, Dr. Kirkendall, of Ithaca, N. Y., recognizing the toxic character of the chorioiditis, sent the patient to Dr. Stockton, of Buffalo, for consultation. Dr. Stockton believed that the toxin in the case might be from the colon bacillus, due to bowel disturbance caused by chronic inflammation of the appendix, and the patient was sent to me for operation. Removal of the appendix cured the patient of his chorioiditis.

Clinicians must form a habit of looking for the colon bacillus as systematically as they now make differential blood-count.

My view that the colon bacillus ranks along with the tubercle bacillus as an agent for preventing overpopulation and regulating the character of population, by means of poison, might have been given special attention by Darwin or Malthus, had they been in possession of our present data which open such an interesting new vista.

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THE PRESENT STATUS OF SALVARSAN THERAPY IN SYPHILIS [*]

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Since the introduction of salvarsan to the profession, in the early part of 1910, the use of this powerful specific in the treatment of syphilis has passed through several stages and its final position is not yet entirely fixed on account of the chronic nature of the disease. The purely experimental period, however, is practically over. Certain definite statements can now be made, and the lines for future development are fairly well laid down. The present status of the whole subject can best be appreciated by a brief review of its history, which is illustrated by personal experiences.

As a preliminary to the discussion of the treatment of syphilis, it is very desirable to decide, if possible, on some criterion of cure. Before the day of the Wassermann reaction the question of cure in a given case was somewhat problematical, as a number of cases which have received "classical" treatment still give positive reactions. But now that we have in the Wassermann reaction an index of the infection, and in salvarsan a remedy which helps cut short the length of treatment, I believe that it is feasible to adopt a criterion of cure which will hold good and within a reasonable period of time. Accordingly the following criterion has been tentatively adopted: one year without treatment, without symptoms and with several negative serum reactions. This standard depends largely on the observed fact that after the discontinuance of treatment, the great majority of relapses, clinically or serologically, occur within six months, and it is believed that but few untreated persons can harbor living spirochetes for a year without giving some evidence of their presence, either in the way of symptoms or as a result of repeated examinations of the blood-serum. The "luetin" test, recently introduced by Noguchi,[1] may also prove of value, especially in tertiary cases, as an indication of cure.

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[*] From the Bacteriologic Laboratory of the Army Medical School, Washington, D. C. Published with the permission of the Surgeon-General, U. S. Army.

These two conditions of cure—observation for one year and an abundance of reliable Wassermann reactions—are, of course, somewhat difficult to secure for various series of cases treated in different ways. Most syphilitics in hospitals belong to a floating class and have a way of failing to turn up when most needed. and private patients do not always serve for scientific purposes. In this respect the military service offers distinct advantages; some cases may be lost by transfer, discharge or desertion, but many can be closely followed for a long time and under definite conditions. In regard to serum reactions, which are so essential for conclusive results, I am greatly indebted to Captain Charles F. Craig, of the Army Medical Corps, for unlimited assistance. My clinical experience with salvarsan dates from May, 1910, when Dr. John A. Fordyce and I, under direction of Dr. Flexner of the Rockefeller Institute, began the treatment of the first series of cases in this country. Since that time I have used the drug as follows: Eighty-eight intramuscular injections in eighty-five cases; eleven subcutaneous injections in eleven cases; eighty-two intravenous injections in forty-seven cases; a total of 181 injections in 143 cases, and each case has been followed clinically and serologically as closely as possible.

Keeping in mind the criterion mentioned above, it can readily be seen that only within recent months can positive statements be made of the cure of syphilis with salvarsan. The whole history of the practical use of salvarsan covers less than two years, and the first doses were admittedly small. The intravenous method in general use is only about one year old, and various combination methods are less than that.

THE HISTORY OF SALVARSAN

As is well known, after the experimental foundation for the use of salvarsan had been thoroughly established in animals,[2] and preliminary applications had been made to man, Ehrlich issued the drug to a number of physicians in different parts of the world for trial in human syphilis. Thus was inaugurated the third practical advance in the modern campaign against syphilis as an infectious disease, and this advance had as its starting point the previous discoveries in regard to etiology and serum reactions. From the first, Ehrlich assumed every responsibility and no better evidence of his genius is afforded than the way in which he planned and guided his attack on the immense problem involved in the treatment of syphilis. In his first circular of instructions Ehrlich advised the intramuscular injection of the alkaline solution in a dose of about 0.3 gm. in a series of cases. The program then called for a gradual rise in the dose in other series until a sterilizing dose was reached. Each case was to be treated but once—partly as a result of experiments on animals and partly as it was feared that "arsenic-fast" organisms might be developed by repeated small doses. The immediate results of this program were brilliant. Almost every observer, including Dr. Fordyce and myself,[3] reported remarkable clinical and serologic results. The only big question which remained was in regard to the permanency of the results. Such relapses as occurred were attributed to too small doses, and other series were started with larger doses, 0.5 to 0.8 gm. There was an admitted drawback, however, in the painfulness of the injection, which persisted in spite of local anesthetics and modifications in alkalinity and in the site of the injection.

About this time, July, 1910, Wechselmann brought out his method — the subcutaneous injection of the neutral suspension as a painless substitute for the alkaline method. I happened to be in the Frankfort laboratory when Wechselmann's letter describing his method arrived, and I well remember the pleased expressions of *kein Schmerz* which followed the first use of his method. It was thought that the drawback involved in the alkaline method was removed, and the original program of increasing the dose to the sterilizing point was taken up with renewed vigor by every one supplied with the drug. But Wechselmann's method was doomed to almost complete failure; the injection was relatively painless, but in the majority of cases the injected mass failed to be completely absorbed, and resulted in lasting encystments and necrosis of the tissues, and of course the clinical action of the preparation was considerably diminished. Unfortunately, the instructions issued with the first lot of salvarsan put on the market recommended Wechselmann's method, and naturally the results were disappointing; but the method was soon entirely given up, and the only net result was the use of partial emulsions in the muscle.

As far as the original plan was concerned, the Wechselmann episode was a fiasco, and there was a general return to the intramuscular method with a feeling that the results justified the discomfort. Then, as relapses began to occur even with fairly large doses, the intramuscular injection was preceded by an intravenous injection. Meanwhile, one other modification was being tried — the intramuscular injection of the original powder rubbed up in oil. This method is less painful than the alkaline method, but the substance is also in an undissolved form, and while it has been extensively used by a few workers, it did not materially alter the program.

About this time, at the end of 1910, Ehrlich made a complete change of base and this was due to several causes. In the first place, aside from the painfulness of the alkaline method, there were some cases of extensive necrosis and encystment, and there was some danger of an explosive effect of the large amount of arsenic if the compound should be decomposed in the tissues. In the second place, in spite of fairly large doses, relapses began to be reported. In the third place, it was found in Ehrlich's laboratory that the spirochetes, unlike the trypanosomes, do not become resistant to repeated doses of arsenic preparations. I was able to confirm this finding.[4] Finally, the intravenous method, which had been used from the first by Iversen in relapsing fever, seemed to meet all the conditions best, and Ehrlich accordingly advised that this method be used, in repeated small doses, and in combination, if necessary, with mercury.

To any one who had followed the development of the subject this change of base was a logical move, and one which showed that the object of the attack was to destroy the spirochetes in the surest way, rather than to exploit any one line of treatment. But a good deal of confusion arose among those who were not familiar with the development of the subject. On the one hand, single intravenous injections were given with the hope of cure—a procedure which Ehrlich never sanctioned for a moment. It is not easy to give the exact clinical equivalent of one good-sized intramuscular injection in terms of intravenous injections, but it is certainly not less than two, with a short interval. On the other hand, the old-line syphilographers took the combination treatment as an admission of failure of Ehrlich's propaganda, an assumption which will be referred to later and which, in my opinion, is emphatically a mistaken one. The only real confusion resulted from the attempt to follow different series of cases for a sufficient time and to correlate the results of different series of cases treated with different doses intramuscularly, subcutaneously, intravenously or in combination with mercury; and this difficulty is inherent in the chronic nature of the disease. Fortunately, at least for the clarity of the subject, it has become evident that much of the original program was inadequate for permanent cure; but it is also true that certain kinds of cases do yield to the treatment as originally laid down, and that in the great majority of cases the combination method offers the best prospect.

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[1] Noguchi: Jour. Exper. Med., 1911, xiv, 557.

[2] Ehrlich and Hata: Die experimentelle Chemotherapie der Spirillosen, 1910.

[3] Nichols and Fordyce: The Journal A. M. A., Oct. 1, 1910, p. 1171.

[4] Nichols: Jour. Exper. Med., 1911, xiv, 201.

THERAPIA STERILISANS MAGNA

The idea of curing syphilis by a single treatment instead of with treatments running over two or three years was a daring conception, but one which was theoretically sound when dealing with a powerful spirillocide like salvarsan. There is no room for any doubt that salvarsan is a specific for the spirochetes of syphilis. Whether or not it is a specific for the disease depends, to my mind, simply on the question whether or not the spirochetes are accessible to the drug. If they are accessible, they will be killed and a cure will result; if some few are buried in the tissues away from the direct influence of the circulation, they will survive and reproduce and the patient will relapse. Some workers, of course, believe in a resistant stage of the spirochetes, such as Balfour's spore granules,[5] but no actual proof of the spore-like nature of these bodies has been given and it seems to me that everything points in the opposite direction. Spirochetes, as such, have been found in practically every lesion of syphilis and the study of ultures does not suggest any cycle of development other than simple division. The best evidence in favor of his view, however, is found in the experimental treatment of rabbits; if a very small dose is used, it has no ffect except to immobilize certain of the spirochetes; f a larger dose is used the spirochetes can be killed to uch an extent that the lesion disappears but reappears n a few weeks; if a still larger dose is used all the pirochetes are killed and the lesion does not reappear.

The correctness of this line of reasoning is also shown, believe, by the reports of radical cure following a ingle treatment. The cases concerned have been early ases in which the spirochetes have not thoroughly established themselves in the tissues, or later cases in which ither by treatment with mercury or by the natural urative processes of the body the spirochetes have been eft more exposed or segregated in certain limited areas. n my own experience *therapia sterilisans magna* has een realized only in such cases as shown in Table 1.

In the first case, which was one of three chancres of he lip and a beginning eruption, the patient was cured y a single intramuscular injection of 0.3 gm. This result must be considered as exceptional in view of further experience, but it shows the possibilities of the drug when the conditions are favorable. The second case is of interest as a case of reinfection with a typical chancre in a new location after a year of negative reactions. There is no better proof that the patient was entirely cured than the very fact of reinfection, as we now know that there is no permanent immunity in syphilis. Some 119 cases of this kind have been collected by John.[6] The third, fourth and fifth cases are a good deal alike in that the patients had had treatment with mercury, but still showed a positive reaction and symptoms, and were permanently cured by single injections. The amount of mercury in any given case was not enough to produce a cure, but may have aided somewhat in the final outcome, as will be mentioned later. The last case is the most remarkable of the six. This was a woman who had been infected by her husband and had a syphilitic child three years before treatment. In August, 1910, she had a gumma of the lip which yielded to inunctions of mercury; but the cachexia, which had reduced her weight to 78 pounds, and terrific headache and backache, together with a double plus reaction, remained in spite of inunctions and injections. In October, 1910, during the Wechselmann era, she was given 0.4 gm. salvarsan subcutaneously. For forty-eight hours her pains increased, but then ceased and never returned. The injected mass became encysted and finally ulcerated, but the patient improved steadily and her condition after a year, with clear red color, a gain of 20 pounds, and perfect health, in spite of an incomplete absorption of the drug, can be ascribed only to what Ehrlich calls the preeminent qualities of the preparation.

It is only fair to say that these cases are but a small proportion of the total number, and that in fully 85 per cent. of miscellaneous cases a relapse occurred when the patients were treated with a single average-sized dose, as is illustrated in Table 2. But the point at issue is the possibility of cure with a single dose, and this has certainly been realized according to the original program in certain cases. If the dose is raised to 1 gm. the percentage of cures can also be raised, but the percentage of relapses is still very high, and, in addition, the painfulness and possible danger of the method are strong arguments against it. As practically all observers agree in these results, we may conclude that *therapia sterilisans magna* can be realized, with the intramuscular method, in the primary stage; that in the secondary and tertiary stages it is possible but not probable; and that the principle remains as an ideal toward which to work.

REPEATED INJECTIONS

As soon as it was settled that only a small percentage of patients could be permanently cured by a single intramuscular injection a great variety of repeated doses were started and a good deal of confusion resulted until fresh series of cases could be treated according to some definite plan. Repeated intramuscular injections were given and a certain number of cures can be cited for this method, but a number of patients, including some of my own, objected strenuously to a second or third intramuscular injection. Then, as is noted above, an intravenous injection was followed by an intramuscular; I have one case of this kind which has been negative for eleven months, but I have several other patients who relapsed under the same treatment.

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[5] O'Farrell and Balfour: Jour. Roy. Army Med. Corps, 1911, vii, 225.

[6] Klausner: München. med. Wchnschr., 1911, lviii, 2335.

In February, 1911, following Ehrlich's recommendation, I adopted the intravenous injection as a routine measure. The intramuscular method was hard on the patient; it was insufficient for permanent cure in the majority of cases; it could not readily be repeated; and it had a possible danger, although I had no personal experience with any bad effects. The question then arose, How many intravenous injections of a given dose are necessary for a given case? As our first experience of the clinical effect of salvarsan was with the intramuscular injection, the question can be restated, How many intravenous injections equal one intramuscular in a given stage of the disease? My own experience, as stated above, is that at least two intravenous injections, with a week's interval, are necessary to equal the effect of one intramuscular injection in an average case in the secondary period. Of course, cases of syphilis vary—in the extent of infection—from almost nothing to infinity and the treatment must correspond. For example, I have under observation a patient who, August 20, noticed a small sore; August 23 spirochetes were found, and August 25, 0.6 gm. salvarsan was given intravenously. The reactions were August 23 —, September 14 + —, October 13 + —, November 29 —; no secondaries. It is too early to say positively that this patient is cured, but in all probability he is. On the other hand, in a case of secondary syphilis with a mucous patch on the uvula and a positive reaction, I have seen the reaction disappear and the lesion heal after one intravenous injection only to reappear in three weeks. This relapse would undoubtedly have been longer delayed under an intramuscular injection. Everything goes to show that the intramuscular injection, as Cabot[7] says, has the most profound effect on the disease, but the intravenous method on general grounds has come to be the method of choice and practice must conform to it. Realizing that, if one intramuscular injection equals two intravenous injections, it would be necessary to give more than two intravenous injections in most cases, I started a series of six untreated patients in the secondary stage with two intravenous injections a week apart, with a repetition of the treatment after a month. The immediate effects were, of course, excellent. In regard to permanent effects, two cases have remained negative for eight months, two patients have relapsed and two have been lost track of.

This form of experimenting on different series of cases with different doses and methods of administration, was, of course, necessary for knowledge, and under ordinary circumstances would have been continued until we could say, approximately, just how many injections of a given dose were necessary to cure a given case. Of course, some writers, chiefly those who have had little experience with the drug, claim that salvarsan cannot really cure syphilis and that the game of "hide and seek" with the spirochetes would go on indefinitely. After what has been said it is not necessary to discuss such a statement except to repeat that the condition of cure is simply contact of salvarsan with the invading organism, and that this contact can be secured by using enough of the disinfectant. What, then, interfered with carrying out further experiments along this line? Chiefly, the unexpected development of neuro-recidives, or relapses affecting the nervous system. Of course the expense involved and a natural hesitation about giving an unlimited number of intravenous injections had some weight, but the really deciding factor was the peculiarity of some of the relapses. Ordinarily, little harm is done by giving a certain treatment and withholding anything further. In many cases the serum reaction returns as an indication for further treatment before symptoms appear, and when symptoms do appear they are not usually of a serious character. In some early cases, however, the relapses after salvarsan treatment have unexpectedly been explosive in character, especially those affecting the nervous system.

What is the meaning of these symptoms? Assuming that they are not toxic in origin, as I believe we are justified in doing,[8] they are very important as giving an insight into what I believe is a radical difference between the action of salvarsan and of mercury. When a patient is treated with mercury the spirochetes are not killed *en masse*: some are killed, but a great number are simply repressed and the natural defenses of the body are gradually brought to bear on the infection, and as a result the patient goes more or less definitely through the various stages of the disease much in the way an untreated patient does. Even if the patient relapses under mercury he is somewhat advanced in the disease and the mercury which he has had is an asset which can be added to by further treatment. With salvarsan I believe the case is entirely different. The great bulk of spirochetes are killed at one blow and if any remain they are too few to stimulate the resistance of the body. They begin to multiply, however, after a time, and suddenly flood the tissues again, and, if the brunt of the attack falls on the nervous system, serious consequences may ensue, such as convulsions, deafness, blindness, and so forth. The patient is at least no better off than he was at the start, and the treatment must begin at the beginning, because the body reactions have not progressed as usual. In other words, salvarsan has entirely upset the ordinary course of syphilis and has introduced entirely new factors in the matter of serious relapses.[9]

If salvarsan were the only remedy for syphilis, certain of these cases would be inevitable, but, as we have in mercury a drug which years have shown to be effective against syphilis in time, Ehrlich advised that mercury be used as an adjunct to salvarsan in order to reduce to a minimum the relapses, especially those affecting the nervous system. There has been an attempt in some quarters to make a partisan matter of the use of salvarsan versus mercury or vice versa, but no such attitude can long be maintained. The interests of science and of the patient are identical in the long run and both demand that the best means of combating the infection be used irrespective of personal prejudice. As I have tried to show, I believe that salvarsan can cure syphilis without other medication, if given according to the indications. If the specific nature of a sore can be determined within a few days of its appearance, and before the serum reaction appears, one intravenous administration may stop the infection. A week or two later two may be sufficient. Still later, when the serum reaction is present and when the secondaries are full-blown, three or four injections will cure some cases and so on through the disease, but at each step relapses may occur and may damage the patient. Hence it is in the interest of the patient to be overtreated in many instances by the use of the combination method rather than to run the risk of a serious relapse under salvarsan

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[7] Cabot: Boston Med. and Surg. Jour., 1911, clxv, 505.

[8] Bernario: Ueber Neurorezidive, 1911.

[9] Desneux and Dujardin: München. med. Wchnschr., 1911, lviii, 2111.

TABLE 1.—SIX CASES OF SYPHILIS IN WHICH THERAPIA STERILISANS MAGNA WAS REALIZED AFTER THE ADMINISTRATION OF SALVARSAN*

Case	Clinical Condition	Duration of Infection	Previous Treatment	Serum	Salvarsan		Month †												Remarks
					Date	Quantity (gm.)	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	
1	Chancres; eruption.	2 mos.	None	++	6 / 2 /10	0.3	6/30 +	..	..	..	—	..	..	..	—	..	..	—	No symptoms.
2	Chancre; bubo.....	1 mo.	None	+	11/ 3 /10	0.5	11/16 —	—	..	—	—	—	..	—	..	..	—	+	Reinfection.
3	Mucous patches....	5 mos.	Inunction of Hg two mos.	++	11/ 8 /10	0.5	11/15 —	..	..	—	..	..	—	..	..	—	—	—	Gain of 50 pounds; no symptoms.
4	Mucous patches ...	5 mos.	Hg by mouth two months.	++	11/ 8 /10	0.5	11/15 —	..	..	—	..	..	—	..	..	—	—	—	No symptoms.
5	Mucous patches; papular eruption.	5 mos.	Ten injections $HgCl_2$.....	+	11/28/10	0.5	12/5 +—	—	—	..	..	..	..	—	..	..	..	—	Gain of 10 pounds; no symptoms.
6	Cephalalgia.......	4 yrs.	Inunctions and injections. Hg and KI, two months.	++	10/22/10	0.4	11/5 —	..	—	—	..	—	..	..	—	..	..	—	Gain of 15 pounds; no symptoms.

* The intramuscular method of injection was used in all cases except Case 6, in which the subcutaneous was employed.

† In this and the following table, in these columns, the plus and minus signs signify results of the Wassermann test. The preceding figures refer to dates on which reaction first became negative.

TABLE 2.—SIX CASES OF SYPHILIS IN WHICH SINGLE AVERAGE-SIZED DOSES OF SALVARSAN WERE ADMINISTERED INTRAMUSCULARLY WITH RELAPSE IN EACH CASE

Case	Clinical Condition	Duration of Infection	Previous Treatment	Serum	Salvarsan		Month												Remarks
					Date	Quantity (gm.)	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	
1	Mucous patches....	5 mos.	18 Injections biniodid....	++	1 /14/11	0.6	..	2/4 —	..	—	..	..	..	+	..	..	..	..	Symptoms; relapse within seven months.
2	Mucous patches....	1 yr.	Hg by mouth six months.	+—	2 /14/11	0.6	2/21 —	—	—	+	..	..	..	..	..	..	..	..	Relapse within three months; no symptoms.
3	Mucous patches....	5 mos.	Hg by mouth one month.	++	11/ 8 /10	0.5	..	12/8 —	..	—	..	+	..	..	..	..	..	..	Relapse within six months; symptoms.
4	Mucous patches....	5 mos.	Hg by mouth and sodium cacodylate.	+	11/16/10	0.5	..	12/19 —	—	—	+	..	..	..	..	..	..	..	Relapse within four months; symptoms.
5	Incipient tabes ...	7 yrs.	Hg by mouth three years.	++	12/ 5 /10	0.5	12/19 —	—	—	..	—	..	..	..	..	+	..	..	Relapse within nine months; no symptoms.
6	Latent stage	1 yr.	Hg by mouth one year...	++	1 /19/11	0.6	..	2/4 —	—	..	+	..	..	..	..	..	..	..	Relapse within four months; no symptoms.

alone. To be sure, serious relapses occur only in the early secondary stage and hence this argument against the use of salvarsan alone does not apply in the primary, and tertiary stages and, in my opinion, further work with salvarsan alone should be done in these stages. But when the combination method is once established, there is a general tendency to use it all along the line.

THE COMBINATION METHOD

It is rather strange, at first thought, that the curative action of mercury on syphilis cannot be shown in animals more clearly than is possible. As is well known, the action of salvarsan can be clearly shown in the rabbit, and a single curative dose is at least ten times smaller than the fatal dose. As I have shown, however, the margin between a single curative dose of mercury and the fatal dose is very slight, and the question of "kill" or "cure" is largely a matter of chance.[4] This finding, however, can be readily correlated with clinical experience, because the best results with the use of mercury come from the intensive treatment, to the point of salivation, for example, and desultory treatment has only a slight repressive effect on the infection. Although mercury is much inferior to salvarsan in its killing power, I believe it has one great advantage, namely, its penetrative power. Mercury circulates as an albuminate; in other words, as an integral part of the body fluids, and in this way I believe it penetrates more deeply into the tissues than salvarsan, which is practically a foreign body.

What bearing, now, have these considerations on the problem at hand? Just this — the immediate effects of salvarsan treatment are all that can be desired in almost every case of syphilis. Anyone who is competent to give the drug can feel confident, by judicious treatment, of removing all symptoms, including the serum reaction, in most cases; but, except in early cases, no one can be sure that, in a given case, the treatment which has produced these excellent immediate effects is sufficient for a permanent cure. If, however, we can use at the same time a drug which is able to kill the relatively few remaining spirochetes by its superior penetrative power, we have a powerful combination against relapse. The adjuvant action of mercury has been clearly shown by Captain Craig, in an analysis of the effect of salvarsan on the serum reaction.[10] A considerably higher percentage of cases which had had previous mercurial treatment became negative and fewer relapsed than was the case when salvarsan alone was used. If the reasoning given above as to the cause of relapses and the action of salvarsan and mercury are correct, we may certainly expect to make great advances along these lines and reports which are beginning to be issued and my own experience seem to bear out the correctness of these views. The best form of combination method is not yet entirely fixed, but the principles are definite: Use salvarsan to kill the bulk of the spirochetes and thus to control the symptoms, and mercury to eradicate the last few organisms and to forestall relapses.

The Primary Stage.—With our present knowledge I believe that the best way to treat a patient in the primary stage is as follows: Diagnose the lesion as soon as possible by use of the dark-field microscope or of Giemsa's stain; excise it, if the location permits; give an intravenous injection of salvarsan of from 0.4 to 0.6 gm. and follow this by one month's treatment with mercury by inunction or injection. Complete the treatment by a second intravenous injection of salvarsan. If the serum reaction is present at the start, a second month's treatment with mercury should follow the second injection. Hecht[11] has recently reported twenty-three cases of patients treated in this way with and without excision and with but three serologic relapses in periods of from four months to one year. He gave the mercury in the form of calomel injections or inunctions. In regard to excision, one has only to study a section of a chancre stained by the Levaditi method to realize that the initial lesion is very densely packed with the invading organisms, and to see the advantage of removing this possible source of relapse.

The Secondary and Tertiary Stages.—One or more intravenous injections, with a week's interval, should be given until the symptoms are under control. At the same time an intensive treatment of mercury should be given for one month to six weeks; then the entire procedure should be repeated, the amount of salvarsan to be given being based on the state of the serum reaction. In cases which are known to be especially resistant, such as cases of bone- and joint-syphilis, a third "cure" should be added. Reports are already appearing which indicate permanent results along these lines and show that the radical cure of syphilis can be made a question of months rather than of years.[12] As was stated above, the exact form of the best combination method has not been determined. Some workers are giving small doses of from 0.1 to 0.2 gm. every three or four days for four to six weeks,[13] while others are giving larger doses at longer intervals. In any case it appears that with the combination treatment we are on the right track to a permanent result in a much shorter time than has been possible heretofore.

In regard to the dangers of the use of salvarsan, I have had no bad effects which could reasonably be attributed to the proper use of the preparation, and in suitable cases and with proper precautions one can feel as little hesitation about using salvarsan as one would in using thymol or any other powerful remedy. I have had two cases of relapses affecting the nervous system and both cases improved under further treatment with salvarsan and mercury.

CONCLUSION

As has been said before, the use of the combination of mercury and salvarsan has been taken by some old-line syphilographers as an admission of the failure of the drug, and various disparaging remarks have been made about the inexperience and rashness of various workers who "rushed" into the field of syphilis with salvarsan.[14] It is perfectly true that the spirochetes are more difficult to eradicate than many of the younger workers imagined; but, for all that, salvarsan has come to be an integral part of the modern conception of the treatment of syphilis, and we can never go back to the old ways of handling the disease. No one properly equipped to treat syphilis, and in his right senses, would think, in these days, of waiting for secondaries before beginning treatment. In the same way, no one who is properly equipped will fail to use salvarsan when it is indicated. The old-line method of handling syphilis had reached its high-water mark about 1900. Up to this time syphilis was monopolized by syphilographers who had carried the empirical method of treatment to a high pitch, and by dermatologists who were expert at differentiating a papulosquamous from a tuberculosquamous lesion and so on; but as Neisser says, the whole subject had come to a standstill as regards modern scientific advances.[15] In 1903, however, Metchnikoff transmitted the disease to apes and thus started a movement which eventually robbed the disease of its mystery and gave it its place among the infectious diseases and threw it open to work along modern lines. In rapid succession came the discovery of the cause in 1905, a means of serum diagnosis in 1906, and a method of specific treatment in 1910. All these contributions came from the laboratory and not from syphilographers, and they form interdependent parts in the modern conception of the disease, which is radically different from many of the older conceptions. There is no occasion for quarrel with the older methods unless the issue is forced, and while salvarsan has not fulfilled all expectations, the day of modern achievements is young and the future of syphilis belongs to those who follow the disease along the lines laid down by Metchnikoff, Schaudinn, Wassermann, Noguchi and Ehrlich.

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[10] Craig: Arch. Int. Med., 1911, viii, 395.

[11] Hecht: Deutsch. med. Wchnschr., 1911, xxxvii, 2039.

[12] Klingmüller: München. med. Wchnschr., 1911, lviii, 2145.

[13] Kromayer: Deutsch. med. Wchnschr., 1911, xxxvii, 1547.

[14] Gottheil: Prog. Med., 1911, iii, 130.

SUBCUTANEOUS INJECTIONS OF SALVARSAN IN GENERAL PARESIS

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In selecting the following cases of general paresis for treatment with salvarsan, those patients were taken who, by physical and mental examination, showed as near as possible the earliest symptoms of mental and physical deterioration. As is the rule in state hospitals, the patients are those who in normal life have become, through the ravages of this much-dreaded and incurable disease, incapacitated and unable to keep the home together or provide for their own necessities.

Case 1.—*Patient.*—F. W., a man aged 31, married, a billposter, was admitted to hospital, Aug. 9, 1911. Family history was negative. Previous health good up to about one year previously when he became nervous and slightly irrational at times. Patient gave a specific history of about six years' duration.

Physical Examination.—No physical defects; well-nourished. Alimentary and respiratory systems normal. Urinalysis negative. Heart normal; arteries slightly hardened. Pulse-rate 102, regular but weak. Eyes and ears normal. No Argyll-Robertson pupil; no aphasia or incoherence. Patellar reflex decreased; plantar normal. No ankle-clonus; gait steady and ataxia absent. Mental condition normal except for enfeebled memory; handwriting distinct and letters well formed.

Treatment and Results.—Aug. 16, 1911, the Wassermann reaction was made and found to be positive. August 19, 0.6 gm. salvarsan was given subcutaneously. Patient was confined to bed for two days following injection. September 6, tremor of the hands developed and he became irritable. October 4, the Wassermann reaction was made again and was positive. The patient had somewhat improved up to this time but began to fail again, tremor reappearing and paretic speech developing with appearance of slight aphasia. Salvarsan, 0.6 gm., was again given subcutaneously October 20 and the patient was confined to bed for two days following. From this time on he steadily failed mentally and physically, convulsions appearing on November 27. The Wassermann reaction was made on December 6 and found to be still positive. The patient failed steadily and died during convulsion, Dec. 10, 1911.

Case 2.—*Patient.*—S. E. W., a man aged 40, married, painter, was admitted to hospital April 11, 1911. The family history was negative. Previous health had been good up to about one year previously when he had financial losses and became greatly worried. March 25, 1911, he became suddenly violent for a few days. On admission to hospital he acknowledged syphilis of about eight years' duration.

Physical Examination.—No physical defects; patient well nourished. Alimentary, respiratory and circulatory systems were normal; urinalysis negative. Eyes and ears normal; no Argyll-Robertson pupil. No aphasia, but slight incoherence. Patellar reflex absent; plantar reflex and ankle-clonus absent; pupillary reflex reduced. Gait steady; no ataxia. Memory and logical powers somewhat enfeebled; handwriting distinct and letters well formed.

Treatment and Results.—May 12, 1911, the Wassermann reaction was positive. May 23, 1911, 0.6 gm. salvarsan was injected subcutaneously. The patient was slightly ill for two days. From this time on he began to decline mentally and physically. June 13, 1911, he lost control of the sphincter muscles. June 19 he had several convulsions. Failed steadily mentally and physically till September, when improvement set in physically. December 20, the Wassermann reaction was found to be positive, after which time he was confined to his bed, having numerous convulsions and failing rapidly mentally and physically, dying Feb. 2, 1912.

Case 3.—*Patient.*—E. L., a man aged 38, single, laborer, was admitted to hospital Jan. 3, 1911. Family history was negative. Previous health had been fair up to ten days before admission when he became suddenly unbalanced mentally. Supposed cause of attack was given as alcohol and cigarettes.

Physical Examination.—No physical defects; patient in fair state of general health. Alimentary and respiratory systems normal; heart defective and arteries hardened. Urinalysis negative; eyes and ears normal. No Argyll-Robertson pupil; voice paretic. Slight incoherence; no aphasia. Patellar reflex exaggerated; plantar and pupillary reflexes normal; no ankle-clonus. Gait steady but slight ataxia present. Poor memory and logical powers; handwriting characteristic paretic type.

Treatment and Results.—Jan. 4, 1911, Wassermann reaction was positive. Feb. 3, 1911, salvarsan 0.6 gm. was injected subcutaneously. The patient improved slightly mentally following this. Wassermann reaction, repeated March 7, 1911, was positive. He was reinjected with salvarsan April 12, 1911, and improved physically after this second injection. June 3, Wassermann reaction was still positive. From this time on to the present (Dec. 28, 1911), his mental condition has remained unchanged and his health is good. He is in the second stage of paresis.

Case 4.—*Patient.*—C. M. L., a man aged 42, single, clerk, was admitted to hospital Nov. 15, 1910. He has one brother in hospital under treatment. The patient's previous health had been good until March, 1910, when he became deranged mentally. Supposed cause of attack was given as alcohol.

Physical Examination.—No physical defects; patient well nourished. Alimentary, respiratory and circulatory systems normal, except slight tachycardia. Urinalysis negative. Eyes normal; ears ill-formed. No Argyll-Robertson pupil. Voice normal; no aphasia; slight incoherence. Patellar and plantar reflexes normal; ankle-clonus absent; pupillary reflex greatly reduced. Gait steady and no ataxia present. Poor memory and logical powers. Characteristic paretic type of handwriting.

Treatment and Results.—Wassermann reaction was positive on Dec. 16, 1910.' On Jan. 27, 1911, salvarsan 0.6 gm. was injected subcutaneously. Slight improvement mentally and physically followed. Wassermann reaction was positive on February 11. The patient was rapidly improving and on June 3, 1911, Wassermann reaction was still found to be positive. The improvement continued until the first week in August, when the patient experienced a sudden change for the worse, becoming noisy and destructive. He declined rapidly mentally and physically until present time (Dec. 28, 1911). He is now quieter and seems to be again slightly improving mentally. His health is fairly good.

Case 5.—*Patient.*—W. V. L., a man aged 40, married, a drug clerk, was admitted to hospital Nov. 10, 1910. He is a brother of patient in Case 4. Previous health was good except when

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[15] Neisser: Die experimentelle Syphilisforschung nach ihrem gegenwärtigen Stande, 1906.

28 years old when he was here in the hospital for six months. The cause of the present attack is unknown.

Physical Examination.—No physical defects; general health fair. Respiratory system normal; stomach in poor condition; heart weak. Urinalysis negative. Eyes and ears normal; no Argyll-Robertson pupil. Voice fair; slight incoherence but no aphasia. Patellar reflex slightly reduced; plantar normal, pupillary reduced. Ankle-clonus absent; gait unsteady and ataxia present. Poor memory and logical powers; paretic type of handwriting.

Treatment and Results.—The Wassermann reaction made Nov. 14, 1910, was positive. The patient was restless and erratic from the time of admittance till Jan. 17, 1911, when 0.6 gm. salvarsan was injected subcutaneously. He began to improve from this time, gaining in flesh and becoming more rational. Improvement continued until about the middle of February, when there was a sudden change for the worse and he failed rapidly. His condition at that time was about the same as it was before the injection. He has failed slowly but steadily since then and is at present (Dec. 28, 1911) in the third stage of paresis.

Case 6.—*Patient.*—A. S. S., a man aged 37, single, merchant, was admitted to hospital Oct. 25, 1910. Family history was negative and patient's previous health had been good. The cause of the present trouble was given as syphilis.

Physical Examination.—No physical defects; general health fair. Alimentary, respiratory and circulatory systems normal. Urinalysis negative. Eyes normal; ears large and flat; no Argyll-Robertson pupil. Voice fair; slight incoherence; no aphasia. Patellar reflex slightly reduced; plantar and pupillary reflexes reduced. Ankle-clonus present in right. Gait slightly unsteady; slight ataxia. Poor memory and logical powers; handwriting clear and letters distinct.

Treatment and Results.—This patient was under treatment for a few months before admittance to the hospital. Wassermann reaction was positive in March, 1910. The patient was placed on mercurial treatment and on Oct. 15, 1910, the Wassermann reaction was negative. Dec. 6, 1910, after entering the hospital, the Wassermann reaction was made and found to be positive. The patient's condition remained unchanged; salvarsan was injected April 4, 1911. He improved somewhat physically following the injection and on June 3, 1911, the Wassermann was found to be still positive. June 20, he was reinjected with 0.6 gm. salvarsan. He slowly declined mentally and physically from this time on. Necrosis set in at the seat of the last injection and a discharge from it was present until the middle of November, 1911, when it finally ceased. The Wassermann reaction was again positive Dec. 11, 1911. At present (December, 1911) the patient is slowly failing mentally and physically.

Case 7.—*Patient.*—R. C., a man aged 34, married, a farmer, was admitted to the hospital May 15, 1909. Family history shows one brother insane. Patient's habits had been good. Duration of attack was about one year. Cause of trouble was given as worry.

Physical Examination.—No physical defects; general health good. Alimentary, respiratory and circulatory systems were normal. Urinalysis negative. Eyes and ears normal; no Argyll-Robertson pupil. Voice good; slight aphasia and incoherence. Patellar reflex increased; plantar absent; no ankle-clonus; pupillary reflex greatly reduced. Gait steady; very slight ataxia. Poor memory and logical powers; depression.

Treatment and Results.—From time of admittance on, the patient was disturbed and confused mentally a greater portion of the time. His general health remained good. Dec. 20, 1910, the Wassermann reaction was positive and on April 27 the patient was injected with salvarsan. A mental improvement followed and he became brighter and more rational. His general health remained good. June 5, 1911, the Wassermann reaction was found to be negative. At present (December, 1911) the patient's health is good. His mind, however, is failing slowly and he is confused and talkative at times.

Case 8.—*Patient.*—A. M., a man aged 43, widower, salesman, was admitted to hospital March 30, 1909. Family history was negative. Habits of patient were poor; he was dissipated and gave a specific history of twenty years' duration.

Physical Examination.—No physical defects. Syphilitic scars on chest. Health good. Alimentary, respiratory and circulatory systems were normal. Urinalysis negative. Eyes and ears normal; no Argyll-Robertson pupil. Voice fair; no aphasia; slight incoherence. Patellar reflex normal; plantar reduced; no ankle-clonus; pupillary reflex reduced. Gait steady; slight ataxia. Poor memory and logical powers; exalted.

Treatment and Results.—From the time of admittance the patient was very delusional, restless and erratic; exalted most of the time. General health remained fairly good. Oct. 21, 1910, the Wassermann reaction was positive. Feb. 14, 1911, salvarsan, 0.6 gm., was injected subcutaneously. Marked improvement followed, health becoming better and mental condition brighter. The Wassermann reaction, March 7, 1911, was found to be negative. Health remained good and mental condition somewhat better. The Wassermann reaction was again taken Dec. 11, 1911, and was positive. At present (December, 1911) the patient is slightly confused at times and somewhat exalted, and is slowly declining mentally and physically.

The results obtained as shown in the foregoing cases are far from encouraging any hope for benefit in this disease by the subcutaneous method of administration of salvarsan. In fact, if these few cases are to be taken as examples of its action on general paresis, it is far more humane and will grant the patient a longer lease on life to dispense with it as a mode of treatment. It seems to have a tendency, as in the iodid and mercurial treatment, to aggravate the symptoms and hasten the ultimate end. From past and present results obtained in the treatment of general paresis there is, as I see it, but one method to stamp out this disease, and that is by prophylaxis. The law should require that each and every case of active syphilis coming under a physician's care should be treated by the mercurial method or by salvarsan until the Wassermann reaction becomes negative and remains so for at least one year.

I wish to express my indebtedness to Dr. H. P. Mills, who in performing the Wassermann reactions and administering the salvarsan in these cases, made this paper possible.

HEPATOPTOSIS AND HEPATOPEXY

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REPORT OF CASE AND OPERATIVE METHOD. TABULATIO OF HEPATOPEXIES

The condition of liver prolapse (hepatoptosis, *Wanderleber, hepar mobile,* or *migrans, l'hépatoptose totale*) was discovered by Heister,[1] in 1754, on the dissectin table; but not until 1886 was this interesting hepati malposition brought to general attention, through it clinical description by Cantani.[2]

The priority of its operative remedy belongs to Billroth, who, in 1884, performed the first hepatopexy in case of partial hepatoptosis. The first operation fo complete prolapse was done by Michle, Nov. 17, 188

Since then, about sixty-six hepatopexies have bee performed; of these only four in this country.

Ferrier and Auvray,[3] and especially Boettcher,[4] i splendid articles, describe the condition and report cas up to 1900. Boettcher collected forty-five cases, of whic twenty-one were complete dislocations.

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[1] Heister: Acta Phys. med. naturæ Curiosorum, Nuremb r, 1754.

[2] Cantani: Caso di fegata ambulante, Ann. Univ. di Me Milano, 1886.

[3] Ferrier and Auvray: Rev. de Chir., 1897, Nos. 8 and 9.

[4] Boettcher: Deutsch. Ztschr. f. Chir., 1900, lvi, 252.

ETIOLOGY

The condition may be congenital or acquired. Among congenital causes have been reported absence of suspensory ligaments (Lonquet, Lannelongue and Hague), shortened ligamentum teres causing downward traction on the liver (Langenbach), and elongated coronary ligaments forming a kind of a hepatomesentery (Meissner).[5] Whether this latter condition is really congenital seems questionable, as the extended supports may of course be, and probably are, caused by the dragging of the prolapsed organ, and thus only a secondary affair.

Abnormal elongation of vena cava may also, according to Faure,[6] be a factor in hepatic descensus.

The condition may be acquired by trauma, as in Michle's case, heavy lifting (Ferrari), by the use of improper corsets (Glenard), rapid emaciation, sudden decrease of intra-abdominal pressure, followed by great relaxation of the abdominal walls as in extirpation of large abdominal tumors, following pregnancy, etc.

Langenbach and DePage consider pendulous abdomen as one of the most important causative factors.

Schmidt[7] draws an analogy between hernia and this condition, asserting that in both there is an inherent weakness or predisposition. In some of the cases of partial prolapse (Reidel), disease of the gall-bladder seemed to play an important rôle, as surgical correction of the biliary defect alleviated or completely cured the condition.

In the greatly prolapsed liver cases, pregnancy stands forth as a rather prominent factor, only four or five of these patients being nulliparæ. The condition is, by far, more frequent in the female. There were only two males in the cases as collected below. The average age of the patients was 38 years.

PATHOLOGIC ANATOMY

Various degrees of ptosis have been described with or without version of the organ. The prolapse has been divided into a complete and a partial. As complete, descension has been considered a condition in which the liver at no place touched the diaphragm.

Among the partial prolapses has been included the condition described by Reidel and others, in which there is only a localized hypertrophy of a lobe, although the main body remains in normal position. It seems to me the term *lobe flottant* more correctly describes this condition, as it is really only a movable lobe of the liver, which may be pushed to and fro without at all changing the position of the main liver-body.

If grouped among liver prolapses, it really then should be termed a pseudohepatoptosis. Langenbach[8] describes two topographic types of the completely prolapsed organ; either a horizontal descent, the liver then being found in the mid-abdomen, or else in the right belly cavity with the right lobe first sometimes in the false pelvis. In these positions the liver may be fixed by adhesions.

The liver may, of course, in its altered position, become the prey of any of the pathologic conditions to which it otherwise is liable, thus greatly obscuring the diagnosis. In a great number of cases there was a right prolapsed kidney, and probably more often than reported, a general enteroptosis. Faure believes this to be the case in all totally descended livers.

In some of the cases classified as partial hepatoptosis there is often only a morphologic change of the organ, the main body retaining its normal position. It is really a localized hypertrophy which mostly affects the right lobe. Very often this overgrowth presents itself as a tongue-like, very movable projection, sometimes connected with the liver by a small bridge of connective tissue which may be only 1 cm. thick (Poppert). The lobe itself may be of a firmer consistency than the rest of the liver, owing to intralobular sclerosis.

The condition is very often associated with, and seemingly caused by, gall-bladder disease. At other times the biliary disturbance is due to pressure on the bladder and ducts by the abnormal lobe. With this there is often a dislocation downward of the right splenic flexure, at times interfering greatly with peristalsis.

Right nephroptosis frequently accompanies the condition. Although not reported, I should think that in the early stage of complete prolapse or even throughout there should be some anteversion, the posterior border being somewhat retarded in its descent by the vena cava, thus allowing the anterior border to descend at a more rapid rate than its hindfellow.

SYMPTOMATOLOGY

In acute cases symptoms come on rapidly with severe pain, nausea, vomiting, meteorism, extreme nervousness, etc. In one instance the patient was completely relieved by manual reposition of the organ. Chronic cases are early characterized by insidious symptomatic manifestations.

The usually first and most prominent symptom is pain, often associated with a feeling of heaviness and discomfort in the right side. Pain was present in all the cases. It may be local in the right side or diffuse, and may radiate to the epigastrium, to the back, right shoulder, in the neck or down the right limb. It may be constant or periodic, pulling, tearing, sticking, boring or dragging. As a rule, it is increased by movements and relieved by rest. My patient always felt better in the morning after a night's rest.

Next to the pains come gastro-intestinal disturbances, viz., nausea, vomiting, biliousness, icterus and constipation. With these disturbances there is often associated the phenomena of an extreme neurosis, viz., restlessness, irritability, globus hystericus, clavus hystericus, crying spells, hot flushes, chilly sensations, insomnia, suicidal tendencies, melancholia, etc. The partial prolapse may occur without any symptoms.

DIAGNOSIS

There is nothing pathognomonic in the symptoms. Thierfelder[9] gives three objective signs for total prolapse:

1. The presence of a tumor of about the size, shape and consistency of the liver, in the middle or lower right abdomen.

2. Tympanitic percussion over the usual site of the liver.

3. Ability to replace the liver in normal position. (This is, of course, impossible in case of adhesions.)

Inspection may be negative or show change in the shape of the chest, pendulous abdomen and a tumefaction in the right side. Palpation is the most important method of examination and should be practiced with the patient in both standing and lying position. The shape, size, edge, consistency and great mobility of the liver may enable one to make the diagnosis. Reposition should be practiced. There is tympany over normal liver area and dulness when organ is replaced.

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[5] Meissner: Schmidt's Jahrb., 141.

[6] Faure: L'hépatoptose et l'hépatopexie, Thèse de Paris, 1892.

[7] Schmidt: Handbuch der spec. Therapie inn. Krankh., 1895, vi.

[8] Langenbach: Deutsch. Chirurgie, Lieferung, 45 s, 2 Heft.

[9] Thierfelder: Ziemssen's Handbuch. d. spec. Path. u. Ther., 1880, viii, 2.

TABLE SHOWING HEPATOPEXIES REPORTED IN LITERATURE ‡

Operator.	No. of Case	Sex	Age	Diagnosis	Operation			Oper. Findings	Results	Reference
					Date	Incision	Method of Suspension			
Billroth, cited by V. Haecker.	1	F.	36	Kidney tumor	3/21/1884	Lumbo-abdom.	Silk ligature through edge of liver, through entire abdominal wall and tied on iodoform gauze.	Total liver prolapse	Recovery	Wien. med. Wchnschr., 1886, Nos. 14-15.
Michle	2	F.	20	Total hepatopt.	11/17/1887	Lumbo-abdom.	Two silver sutures, one through edge, one along edge forming cross with the first into abdominal wall.	Total hepatopt.; right nephroptosis.	1894, good condition	Tr. Int. Med. Cong., Moscow, 1897, v, 126.
Tschering	3	F.	36	Uncertain	6/ 9 /1888	Lumbo-abdom.	Silk sutures through edge with subcutaneous tissues; tamponade.	Partial hepatoptosis	1¾ years in good condition.	Zentralbl. f. Chir., 1888, No. 23.
Terrier and Baudouin.	4	F.	52	R. nephropt.	5/ 8 /1888	Median	Cholecystotomy	Same; biliary calculi.	Improved	Prog. med., 1888, No. 33.
Langenbach	5	F.	50	Partial hep.	6/11/1890	Transverse	Six silk sutures through liver into abdominal wall.	Partial hepatoptosis	8/18/1890, good.	Berl. klin. Wchnschr., 1891, p. 68.
	6	F.	*	R. nephropt.	../../....	Outer border r. rectus.	Eight silk sutures around costal arch	Total	3 mos. after oper., good.	Ibid.
	7									Ibid.
Gerard-Marchant	8	F.	37	Echinococcus cyst of liver.	3/28/1891	Same	Liver fixed to abdominal wall and costal arch with four silk ligatures.	Total hepatopt.; right nephroptosis.	8 mos. later, good.	Bull. Acad. de Med., Paris, Aug. 11, 1891.
Desquin, cited by Hannecart.	9	M.	23	Hepatoptosis	../../1892	Same	Liver fixed to parietal peritoneum	Total hepatoptosis	Death, acute periton.	Am. Soc. de med. d'Anvers, 1892.
Depage	10	F.	67	Hepatoptosis; gen. enteropt.	6/28/1893	Special	Laparectomy only	Total	3½ yrs. later, good.	Jour. méd. de Brux., 1898, No. 8; also De l'intervention Chir. dans la splanchnoptose, Bruxelles, 1893.
	11	F.	36	Hepatoptosis	10/15/1893		Same	Total	11/21/1896	
	12	..	40	Hepatoptosis	11/ 5 /1893		Same	Total	Died from shock 32 mos. after oper.	
	13	..	30	Hepatoptosis	11/22/1897		Same	Total	3 mos. later, good.	
Richelot	14	F.	28	Tubercular typhlitis.	4/12/1893	Outer border r. rectus.	Three catgut sutures through edge of liver into abdominal wall.	Total hepatoptosis, with some adhesions.	3½ mos. later, good.	Gaz. Hebd. de méd. et Chir., 1893.
Lannelongue and Taquet, cited by Contonier.	15	F.	52	Omental tumor	../../1892	Median	Same, and scarification of liver	Total hepatoptosis	March, 1895, in good condition.	Contonier: Thèse Bordeaux, 1895.
Bobrow	16	F.	56	Hepatoptosis	1/29/1895		Two silk ligatures, lower edge to cartilage; ninth rib scarification.	Cirrhosis; total hepatoptosis.	Improved	Vrach, 1895.
Franke	17	F.	23	Ren mobilis	12/13/1895	Parallel costal arch.	Catgut sutures, lower edge to abdominal wall; iodoform gauze tampons removed in eight days.	Total hepatoptosis	8/8/1896, good	Zentralbl. f. Chir., 1896, p. 775.
Franke	18	F.	41	Hepatoptosis	3/28/1896	Same	Same	Same	Same	
Pean	19	F.	29	Ren mobilis	6/30/1896	Transverse	Artificial peritoneal sac	Total	3 mos. later, good.	Cong. de chir., 1896.
Treves	20	F.	22	Hepatoptosis Gen. enteropt.	6/../1895	Median	Three silk ligatures, liver to abdominal wall; round ligament to xiphoid.	Total general hepatopt.	Good	Brit. Med. Jour., January, 1896.
Ramsay	21	F.	39	Uncertain	4/24/1896	Middle r. rectus	Silk suture round ligament to cart. 7th rib; two kangaroo tend. liver to abdom. wall rubbed with sterile gauze.	Total nephroptosis	One year later, good.	Brit. Med. Jour., May, 1897.
Areilza	22	M.	20	Echinococcus cyst of liver.	2/12/1896		Four silk sutures, liver to abdominal wall	Total hepatoptosis	5 years later, good.	Riv. Med. y Chir., July 5, 1897.
Blanc	23	F.	35	Hepatoptosis	2/15/1896	Outer border r. rectus.	Scarification; five silk ligatures to cartilage and abdominal wall.	Total hepatoptosis	1½ years later, good	Lyon médicale, 1897, No. 43.
Lucas - Championnière, cited by Tuchiot.	24	F.	35	Hepatoptosis	7/26/1895	Median	Catgut suture; abdominal wall touched liver and perit. with 5% sol. phenol (carb. acid).	Total hepatoptosis	5/1/1897, good	Gaz. d. hôp., Paris, April 1, 1897, p. 372.
Delagénière	25	F.	30	Uncertain	1/16/1896	Outer border r. rectus.	Catgut	Total hepatoptosis; cirrhosis.	5/13/1896, good.	Arch. prov. de Chir., 1897.
Ferrari	26	F.	24	Hepatoptosis	2/12/1897	Transverse	Four catgut sutures to abdom. wall; iod. tampon.	Partial hepatoptosis	Recovery	Atti. Soc. ital. de chir., 1887.
Genouville and Routier.	27	F.	*	R. nephropt.	../../....	Not given	Fixed by two catgut sutures, abdominal wall	Partial	Recovery	Ann. d. Mal. d. org. urin., xvi, 1281.
Genouville and Routier.	28	F.	*	R. nephropt.	../../....	Not given	Same	Partial	Recovery	
Legueu, cited by Chevallier.	29	F.	31	Enteroptosis	8/ 9 /1897	Outer border r. rectus.	Silk ligature through liver, sling fashion	Total hepatoptosis; general enteroptosis.	Uncertain	Chevallier: Thèse, Paris, 1896.
Legueu, cited by Chevallier.	30	F.	27	Echinococcus cyst	8/25/1897	Same	Same	Total	Five months, good.	
Jeannel	31	F.	37	Probable hepatoptosis.	11/20/1899	Parallel costal arch.	Silk lig. suspended liver in trapeze from costal arch.	Total	July, 1900, good.	Arch. prov. de Chir., 1900, ix, 737.
Poppert, cited by Boettcher.	32	F.	28	Hepatoptosis	3/29/1898	Vertical	Silk suture through liver-edge and abdom. wall; iod. tamp.	Anteversio hepatis	Recovery; late result unknown.	Boettcher: Deutsch. Ztschr. f. Chir., 1900, lvi, 252.
Poppert, cited by Boettcher.	33	F.	40	Hepatoptosis	1/28/1899	Vertical	Same	Same	2/15/1900, good	Ibid.

Poppert, cited by Boettcher.	34	F.	36	Hepatoptosis ...	5/ 3 /1899	Along costal arch.	Same ...	Same ...	Recovery ...	Ibid.
Poppert, cited by Boettcher.	35	F.	61	Partial hepatopt.	8/ 5 /1898	...	Silk lig. through liver and round lig. to abdom. wall; iod. gauze tamp.	Constricted liver ...	5/25/1900, good ...	Ibid.
Poppert, cited by Boettcher.	36	F.	43	Partial hepatopt.	8/ 9 /1898	...	Same ...	Corset liver ...	3/23/1900, good ...	Ibid.
Poppert, cited by Boettcher.	37	F.	51	Partial hepatopt.	10/14/1898	...	Same ...	Corset liver ...	Same ...	Ibid.
Poppert, cited by Boettcher.	38	F.	45	Partial hepatopt.	2/ 8 /1899	...	Same ...	Corset liver ...	4/11/1900, good ...	Ibid.
Poppert, cited by Boettcher.	39	F.	54	Partial hepatopt.	6/22/1898	...	Same ...	Corset liver and right nephrotosis.	4/29/1900, good ...	Ibid.
Poppert, cited by Boettcher.	40	F.	29	Partial hepatopt	2/ 4 /1898	...	Same, and r. nephropexy...	Same ...	Three complete recoveries; five improved.	
Poppert, cited by Boettcher.	41	F.	33	Partial hepatopt.	4/26/1898	...	Same ...	Same ...		
Poppert, cited by Boettcher.	42	F.	26	Partial hepatopt.	7/27/1899	...	Same ...	Same ...		
Poppert, cited by Boettcher.	43	F.	23	Partial hepatopt.	5/25/1897	...	Same ...	Same ...		
Poppert, cited by Boettcher.	44	F.	36	Partial hepatopt.	6/21/1898	...	Same ...	Same ...		
Poppert, cited by Boettcher.	45	F.	43	Partial hepatopt.	8/30/1898	...	Same ...	Same ...		
Poppert, cited by Boettcher.	46	F.	22	Partial hepatopt.	4/17/1899	...	Same ...	Same ...		
Poppert, cited by Boettcher.	47	F.	33	Partial hepatopt.	1/20/1899	...	Silk lig., as above, and cholecystotomy...	Partial hepatoptosis and cholelithiasis.		
Lennander ...	48	F.	33	...	9/ 9 /1897	...	Sutured edge of liver, catgut to abdom. wall; cholecystotomy tamp.	Partial hepatoptosis and cholelithiasis.	December, 1897, good	Gaz. d. hôp., 1900, **lxxiii**, 545.
Lennander ...	49	F.	56	Uncertain ...	../../1899	...	Thermocautery on liver; cholecystotomy...	Localized peritonitis, gangrenous chole.; total prolapse.	In November condition good.	Ibid.
Planori ...	50	F.	34	...	../../1901	Not given ...	Sut. of susp. lig. to abdom. wall...	Partial hepatoptosis ...	Recovery ...	Gazz. deg. osp., 1901, **p.** 1515.
Venturoti ...	51	F.	50	Nephroptosis ...	9/11/1900	Lumbo-abdom..	Liver-edge sut. by silk; partial lig. to abdom. wall.	Partial ...	Left hospital 10/29, good.	Atti. d. Soc. ital. Chir., 1900; Rome, 1901, xv, 52.
Carstens ...	52	F.	48	Uncertain ...	../../1902	Vertical ...	Round lig. sutured to upper angle of wound...	Total hepatoptosis ...	3 mos. later, good...	THE JOURNAL A. M. A., 1902, xxxviii, 1294.
Judet ...	53	F.	41	Hepatoptosis: gen. enteropt..	7/ 8 /1901	Outer border r. rectus.	Six catgut sut., liver-edge abdom. wall; gall-bladder fixed in wound tamp.	Partial hepatoptosis and right nephroptosis.	12/6/1911, good ...	Rev. d. gynec., Paris, 1902, vi, 131.
Judet ...	54	F.	46	Hepatopt. stone in gall-bladder; r. neph.	3/24/1901	Same ...	Same, and cholecystotomy...	Hepatopt; cholelithiasis	10/5/1901, good ...	
Judet ...	55	F.	49	Liver cyst or cancer ...	5/24/1901	Same ...	As in No. 53...	Total prolapse ...	2/ 7 /1901, good ...	
Jonas ...	56	F.	41	Cholelithiasis: R. nephropt.	../../....	...	Gall-bladder suture, upper part of wound...	Partial hepatopt.; calculi in gall-bladder.	Recovery ...	THE JOURNAL A. M. A., Jan., 1902, xxxviii, 122.
Lambotte ...	57	F.	28	Total hepatopt...	6/13/1901	Median ...	Round lig. sut. to upper angle of wound; two silk lig. through liver to abdom. wall; scarification.	Total hepatopt.; coloptosis; gastroptosis; no nephroptosis.	Recovery; good ...	Ann. de Soc. de méd. d'Anvers, 1902, lxiv, 93.
Mercier ...	58	F.	†	R. nephropt. ...	3/25/1902	Outer border r. rectus.	Cholecystotomy ...	Partial hepatopt.; biliary disease.	Recovery ...	Union méd. du Canada, 1902, p. 264.
Newman ...	59	F.	40	Uncertain ...	../../....	Same ...	Same ...	Same ...	...	Glasgow Med. Jour., 1902, lviii, 294.
Delbet ...	60	F.	49	...	11/22/1904	Same ...	Catgut...	Partial hepatopt.: stone in common duct.	Recovery...	Bull. de la Soc. de Chir., Paris, 1904, N. S., xxx, 1056.
Le Fort...	61	..	..	Tumor of liver or gall-bladder ...	6/28/1903	Same ...	Catgut through liver into abdom. wall; cholecystotomy.	Partial hepatopt.; stone in gall-bladder.	7/6/1903, good ...	Echo méd. du Nord., 1906, p. 424.
Godart ...	62	*	*	...	...	...	...	...	...	Policlinico, Bruxelles, xvi, 150.
Elliot ...	63	F.	38	...	12/ 7 /1903	...	Sut. of round lig. to abdom. wall scarification...	Partial hepatoptosis ...	5 yrs. in good cond.	Ann. Surg., 1910, li, 258.
Cernezzi ...	64	F.	41	Hepatopt. right nephropt.	1/ 4 /1907	Lumbo-abdom..	Catgut through liver to abdom. wall...	Partial hepatoptosis and right nephroptosis.	Recovery 2 yrs: good	Reforma Med., 1910, xxiv, 877.
Cernezzi ...	65	F.	64	Same ...	8/../1908	Transverse ...	Same ...	Partial hepatoptosis ...	February, 1909, good	Ibid.
Cernezzi ...	66	F.	43	Hepatoptosis ...	10/19/1908	Same...	Same ...	Same ...	Recovery ...	Ibid.

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* Not given.

† Young girl.

‡ Carstens in his article (Case 52) refers to a case of Leube (München. med. Wchnschr., Jan. 23, 1894) as one of hepatopexy with cure. This article, however, I found to describe a case in which the condition of liver prolapse was found only post mortem, and that it has absolutely no reference to any previous operative interference.

DIFFERENTIAL DIAGNOSIS AND PROGNOSIS

The total ptosis may be confounded with tumor or cyst of the liver, nephroptosis, tumor of the right kidney, omental, mesenteric, intestinal, ovarian and uterine tumors. The partial is especially difficult to differentiate from right nephroptosis.

The condition, as seen from cases collected below, has been mistaken for malignancy of kidney, echinococcus cyst, gumma and carcinoma of liver, tumor of omentum, mesentery and gall-bladder. Enlargement of gall-bladder may be very difficult and impossible to differentiate.

Prognosis as to life following hepatopexy is very good, only two deaths in the series reported; also as to relief it seems surprisingly good.

TREATMENT

The non-operative treatment consists mainly in supporting the organ by abdominal supporter, strapping with adhesive straps, rest cures, and measures tending to build up the system in general, etc.

In the operative treatment incisions used have been vertical ones, through the midline, through the rectus, along outer border of right rectus; parallel ones with the costal arch; transverse a few inches above nipple and lumbo-abdominal.

Material used for suspension was silk ligatures, catgut and silver wire (Michle's case). From two to nine ligatures were used, threaded, as a rule, on curved blunt needles.

The following modes of suspension have been employed:

1. *Liver Sutures.*—Bobrow sewed through the entire thickness of the liver; all the others applied sutures through the liver edge, and then into the abdominal wall. Langenbach, Gerard, Marchant and Bobrow tied them to the costal arch. Billroth carried his sutures through abdominal wall and tied them over a piece of iodoform gauze. Lepeau used silk ligatures so as to form a trapeze in which the liver hung from the costal arch.

2. *Suture of the Round Ligament.*—Treves sutured it to the xiphoid appendix; Ramsay to the seventh rib; several attached it to the upper angle of the incision. In my own case, the ligament was passed around the cartilage of the ninth rib.

3. *Anchoring of the Gall-Bladder.*—Le Fort, Poppert, Lennander and others used this means.

4. *Suture of the Peritoneum.*—Pean sutured it so as to form a sac or hammock for the liver.

5. *Diminishing the Size of the Pendulous Abdomen* (Laparectomy).—This was done by Depage in his four cases.

6. *Artificial Production of Adhesions.*—Several men, not relying entirely on the sutures, produced adhesions between the liver and the abdominal wall by application of sublimate solution, 5 per cent. phenol (carbolic acid), rubbing with sterile gauze, scarification with scalpel or needle, thermocautery, heat radiating from Paquelin cautery and, finally, by the use of tampons kept in from twenty-four hours up to sixteen days.

7. *A Combination of Above Methods.*—Several operators combined these operative procedures.

CASE REPORT

Patient.—A woman, housewife, aged 48, was admitted to the Washington Park Hospital, May 5, 1911. Her father died at 89; mother at 90; two brothers and two sisters living and well. The patient's habits were good. She had measles at 16. She had borne six children in normal labors. There had been no severe trauma.

Present Illness.—This extended back for about six years, and came on gradually, by indefinite, irregularly recurring abdominal pains accompanied by a sensation of discomfort and heaviness in the right side of the abdomen. Lately the pain had become constant, as long as the patient was up and about, and disappeared entirely when patient was lying down; this latter feature she particularly emphasized. The pain was always located in the epigastrium, which led some one to diagnose gastric ulcer. At times it radiated toward the lower abdomen and the back. It had no relation to the taking of food, mental excitement or atmospheric changes. The patient often felt nauseated, but did not vomit. There was no hematemesis; bowels had been somewhat constipated; there was no melena. Appetite had been very poor for some time before examination. Except for an occasional palpitation of the heart, there had been no cardiovascular manifestations. The patient had complained for years of a dry cough. There had been nothing referable to the urinary system; menstruation was regular, painless and of about three days' duration. Patient complained of slight headaches, dizziness, great lassitude, nervous irritability, cold sensations, hot flushes, but no crying spells, no clavus or globular hystericus. There seemed to be no disturbance of the special senses. Mental condition was normal. She was utterly unable to perform her household duties. There was quite a loss in weight.

Examination.—The patient's general appearance was that of an anemic, dull-looking, middle-aged woman. Examination of head and neck was negative. Heart revealed a slight, soft, systolic murmur. Auscultation of chest elicited a few sonorous râles here and there. Inspection showed a greatly pendulous abdomen, slightly more full on the right side; no distended veins; striæ prominent. Palpation demonstrated a large, slightly tender tumefaction in the right and middle abdomen, with a sharp edge, the lower part of which, in lying position, was about 2½ inches below the anterior superior spine of the ileum, and ran obliquely upward into the abdomen. The outer surface of the tumor was perfectly smooth, and of the consistency of the liver. The tumefaction was easily movable, especially in an upward and downward direction. The edge of the tumor could be made very distinct by tipping it upward and backward; it was easily replaced. The tumefaction was surely the liver. Percussion gave tympany over the normal liver area, and when tumor was pushed upward, there was a dulness in the same region. Auscultation revealed no friction over tumefaction. Inflation of the intestine was not practiced, as it seemed unnecessary for the diagnosis. Bimanual vaginal examination revealed a lax pelvic floor, and a completely retroverted uterus. The extremities were negative. The skin, reflexes, tactile and pain sensation were normal; there were no areas of anesthesia, hyperanesthesia, analgesia or hyperalgesia. Pulse was 74; temperature 98.4; respiration 20. Urine examination was negative. Blood examination showed erythrocytes 4,900,000; leukocytes 8,500; hemoglobin 85 per cent.

The diagnosis was total hepatoptosis associated undoubtedly with general enteroptosis.

Operation.—May 15, 1911, under ether anesthesia. Anesthetist, Dr. Rollo K. Packard; assistant, Dr. J. W. Albaugh. After ordinary preparation, the incision was made for about 5 inches along the outer border of the right rectus in a curve toward the xiphoid (Mayo-Robson). When the peritoneum was first opened, there was nothing seen but the liver, which was normal in shape, color and consistency, but seemingly somewhat enlarged. It could be easily pushed into the false pelvis or into its normal position. The round ligament was very much elongated. The gall-bladder and ducts were normal. There was also a gastroptosis, coloptosis and a right nephroptosis; in fact, a general enteroptosis. In performing the fixation, I punctured the chest-wall just above the cartilage of the ninth rib, with a pointed forceps, and caught a fold of the ligamentum teres and sutured it over the cartilage to a lower fold of the same ligament (see illustration). Previous to this, I had vigorously rubbed the liver with sterile gauze.

Finally I anchored the gall-bladder in the upper angle of the wound. I used chromicized catgut throughout. The abdomen was closed by layers.

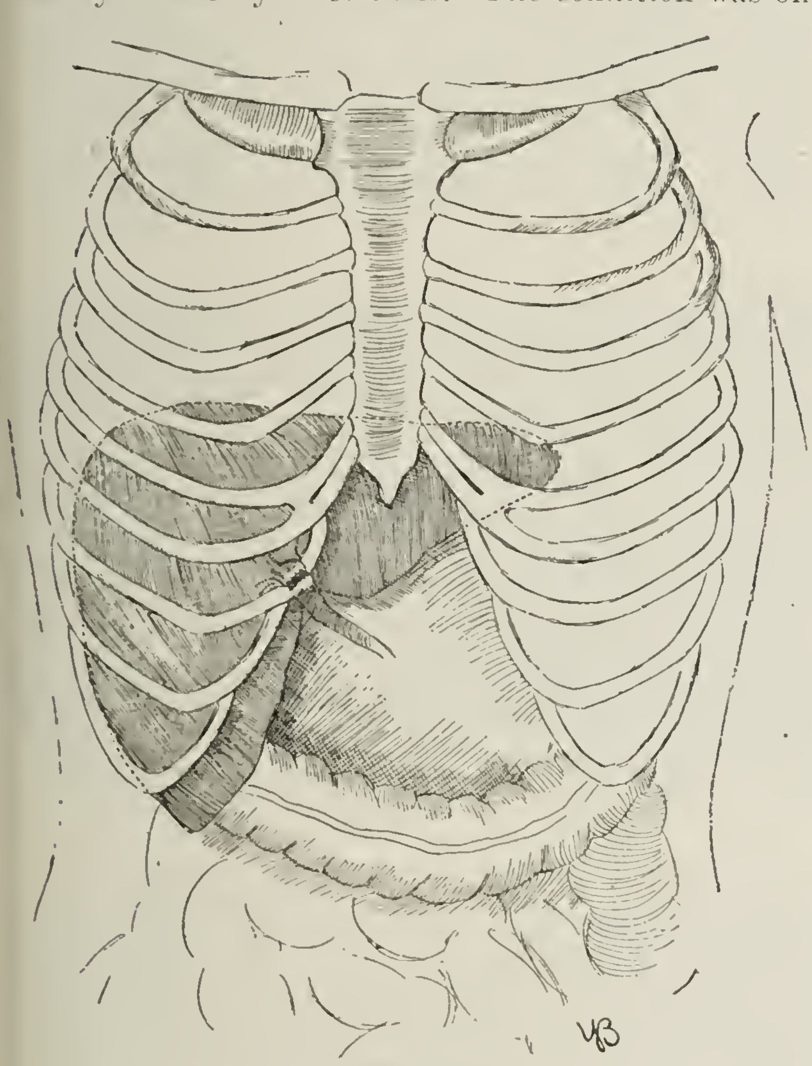
Postoperative History.—Patient was placed in slight Trendelenburg position and remained in bed four weeks, passing through an entirely uneventful convalescence, temperature at no time rising above 100 F., wound healing by primary union. The patient left hospital in good condition, June 10, 1911.

Dec. 11, 1911: The liver edge is felt a little lower than normal, but the organ is not movable. Epigastric pains have completely disappeared. The patient is perfectly able to perform her household duties, neurosis is entirely gone, and she has gained in weight and strength.

SUMMARY

Among the sixty-eight patients (including my own) operated on, there were two males. The average age of the patients was 38 years. There were twenty-eight cases of total, and thirty-eight of partial hepatoptosis.

In the partial hepatoptosis, the diagnosis was made correctly in twenty-three cases. The condition was once diagnosed as tumor of the gall-bladder, six times as right nephroptosis, and an uncertain diagnosis was made in eight cases.



Hepatoptosis.

In the total prolapse, a correct diagnosis was made in thirteen cases. Incorrect diagnosis of echinococcus cyst was made in four cases, in one of tuberculous typhlitis, in one of omental tumor, of right nephroptosis in three, kidney tumor in one, and an uncertain diagnosis was made in five cases.

The incisions used were lumbo-abdominal in five cases, transverse in twenty-two, through the outer border of the right rectus in nineteen, in the median line in five, through middle of right rectus in one, not given in ten, and special laparectomy incision in four cases.

Catgut was used in eighteen cases, silk in thirty, kangaroo tendon and silver-wire in one each. In the rest, either the liver was not sutured, or kind of suture not mentioned.

Round ligament was sutured six times, gall-bladder twelve times; scarification was done five times, and tamponade was used in twenty-three cases.

Liver was sutured to abdominal wall in forty-eight cases, to costal arch in six, to peritoneum in one, to xiphoid appendix in one, and in the rest the organ was not sutured or else not mentioned.

Operative findings, outside of the liver prolapse, were right nephroptosis in eight cases, general enteroptosis in seven (but must surely have been more), gall-stones in five cases, and gangrenous cholecystitis once.

At least 85 per cent. of the total prolapses were in multiparæ.

1230 East Sixty-Third Street.

RHEUMATIC CARDITIS

WILLIAM LINTZ, M.D.
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BROOKLYN

A disease which in the young is the most serious single infection, responsible for almost as many deaths as all the exanthematous affections of childhood together (Osler), a disease whose ravages are responsible for crippling most of the crippled hearts of adults—such a topic certainly needs no apology for its introduction, especially since our opinion with regard to this disease requires frequent revision in the light of advancing knowledge.

By rheumatic carditis we understand the successful invasion of the heart by the causal agent of rheumatism, and its production of various pathologic changes. This may, and generally does, occur during the course of a general rheumatic invasion, although it may be confined exclusively to the heart. When a child is attacked by rheumatism, no matter in what form, it is comparatively exceptional for the heart to escape, while the whole brunt of the disease may fall on that organ, other evidence of rheumatism being either absent or so slight as to pass unnoticed. In other words, the heart is in early life the most vulnerable part of the body to the rheumatic poison. According to various observers, in adults the frequency of cardiac complication during the course of a general rheumatic invasion varies. Strümpell finds that from 25 to 30 per cent. of his acute rheumatics have organic heart lesions. Osler finds that out of 360 patients with rheumatic fever admitted to his wards at the Johns Hopkins Hospital, 35 per cent. showed organic valvular disease. As Bauilland stated in 1840, the rule is for the heart to be involved in all cases of severe rheumatic fever. Indeed, so frequently is involvement present in rheumatism; and since, as we shall see later, the pathologic changes and causal agent are identical with those found in rheumatic arthritis, we should look on the heart involvement not as a complication, but rather as a symptom of the disease, in the same light as the joint involvement.

ETIOLOGY

As to the etiology of this condition it is, of course, as has been said, identical with that of rheumatism. What is the cause of rheumatism? Without going into elaborate details, let me briefly summarize the work done recently on the subject. In 1897, Triboulet was the first one to recover a diplococcus from patients dying from rheumatic infection. In 1899, Wassermann corroborated these findings, and in addition, was able to reproduce the symptoms and pathologic lesions of rheumatism, by the inoculation of this diplococcus in rabbits. In 1900, Poynton and Paine, in a work that is classical, recovered this same diplococcus from a large percentage of their rheumatics, and were able to reproduce in rabbits and other animals every phase of rheumatism including the cardiac lesions, recovering the same organism from these lesions. Many workers all over the world have reproduced the same experiments with identical results. During the last four years I was able to obtain, by blood culture, the same organism from three patients suffering from general rheumatic infection, reproduced the disease in the dog, and then by autopsy recovered the organism from blood and lesions of the dog. I shall not here describe the morphologic and biologic characteristics of this organism, but simply state that it is an exceedingly small coccus, from 0.2 to 0.5 units in diameter, usually occurs in pairs, sometimes in short chains, resembling the ordinary streptococcus, but, to my mind, being an entirely different organism, as proved culturally.

A few workers have found other organisms, bacilli, (Achalme's) and staphylococci, etc., but their work, to my mind, is not at all convincing. Whereas one must concede, in view of these findings, that perhaps a single organism is not responsible for all rheumatic invasions, since we can isolate a microorganism from rheumatics, and since, on inoculation of this microorganism in a suitable animal we can produce the symptoms and lesions of rheumatism and, furthermore, recover from the latter lesions the identical organism—in the face of these facts we must admit the infectious nature of rheumatism. The chemical, the nervous, the thermal and all other theories of rheumatism are no longer tenable, and should be discarded. Acids are certainly found in large quantities in rheumatic patients; but I was able to demonstrate the formation of large quantities of formic and lactic acids particularly, produced in the test-tube by my organisms recovered. If they can do it in the test-tube, on artificial media, why can they not do it in the body? As to the portal of entry of these bacteria, there is already sufficient experimental proof to lead one to lay the responsibility on the tonsil. The reason that we do not get a higher percentage of positive blood cultures in these rheumatic patients, we shall understand when we come to consider the pathology, which is so characteristic of this condition.

PATHOLOGY

When we come to consider the pathology of rheumatic carditis we find that a striking uniformity of results is obtained by the various observers. (This leads me to think that there must likewise be a striking uniformity in the causal agent of rheumatism.) We find that almost never is a single layer of the heart alone involved, that usually it is in combination with the one or the other layers. The relative frequency of involvement of the various layers varies according to different observers. The myocardium is invariably involved most frequently; the endocardium is next in frequency. In a series of autopsies of patients who have died from rheumatism, Coombs finds it affected in 88 per cent. of cases, while Lees and Poynton find it as high as 99.3 per cent. of their necropsy cases. The pericardium is involved in two-thirds of all cases of rheumatic carditis. Williams finds the pericardium affected in 75 per cent. of his cases of cardiac rheumatism.

Pathologically, we find as a rule in all three parts of cardiac wall certain inflammatory lesions, which have been called "submiliary nodules" (C. Coombs). These nodules consist of (a) a groundwork of homogenous material which gives the staining reactions of fibrin; (b) a more or less defined zone of cellular proliferation, the characteristic cells being large and of a fibroblastic type, with a deeply staining cytoplasm and from one to six nuclei, in which a somewhat loose chromatic skein takes hematoxylin with avidity. They are therefore similar in structure to the larger subcutaneous node, so characteristic of rheumatic infection. The shape of the nodule is dependent to some extent on its surroundings, being globular when lying in a loose bed of connective tissue, but fusiform where it is limited laterally, as it is when it develops in the interstitial tissues of the myocardium. In rheumatic lesions of the heart degenerative and necrotic changes are not intense in degree. Emigration of leukocytes is moderate and diffuse, *mononuclear* types predominating.

Myocardium.—The nodules are closely related to *coronary arterioles.* There are more in the wall of the left than that of the right ventricle. Very few, if any, in the right. On the whole, the muscle-cells appear less altered than might be expected, probably owing to the relative coarseness of the staining methods.

Endocardium.—This shows the constant occurrence of nodules in the deeper parts of valves, the presence of a diffuse and mild mononuclear leukocytosis, the ultimate *vascularization* of the inflamed valve. The endothelium proliferates, the surface cells float off because of the degenerative changes, and the fibrin deposited in this stripped surface — sometimes mingled with leukocytes from the intracardiac blood — becomes permeated with new connective tissue *bearing young capillaries.*

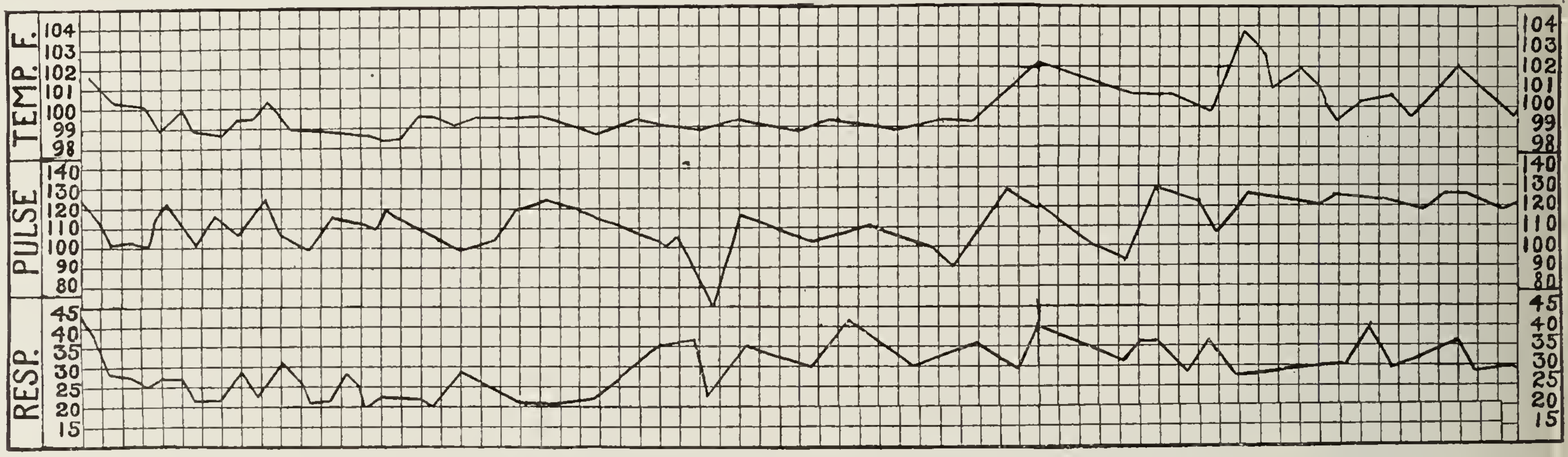


Chart showing relation between respiration, pulse and temperature in a boy, aged 15, suffering

Pericardium.—Here nodules have been found in all cases of active pericarditis, but not in the quiescent cases. So far they have not been seen at the parietal, but only in the visceral layer, where they are scattered over the cardiac surface. They lie at a varying distance beneath the endothelium, in which proliferation, superficial degeneration and stripping, fibrin deposit and capillary formation, as seen in endocardial endothelium, takes place. In the subendothelial tissue a moderate leukocytosis is seen.

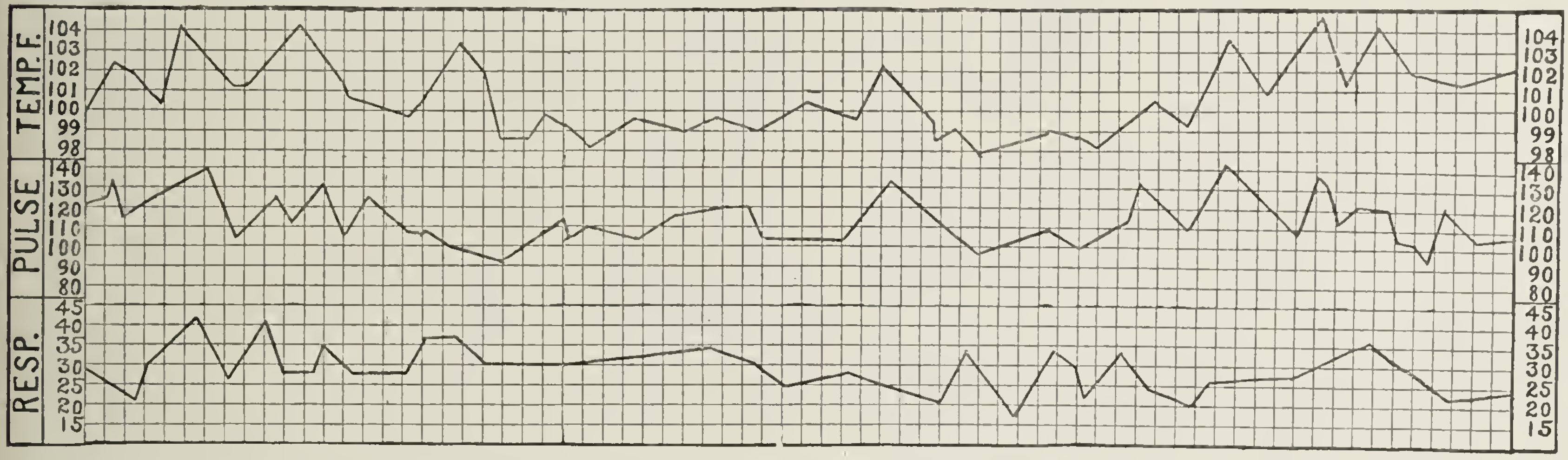
Other types of cardiac infection have been examined, by way of comparison with rheumatic carditis. In practically all cases of destructive endocarditis and purulent pericarditis, foci of inflammation are found in the myocardium, but in no such case has an inflammation of all three layers been seen. Furthermore, the inflammatory exudate has been characterized by a migration of leukocytes usually of the polymorphonuclear types, not by a proliferation of the cells of the part invaded.

It is within these *Knötchen* or submiliary nodules that numerous diplococci are readily found and may be easily cultivated. This adequately explains why, except in very virulent forms, we fail to obtain the organism from the blood by means of blood-culture methods.

In the light of the above consideration of the pathology of this disease, I believe that we are warranted in concluding that the microorganisms of rheumatism are carried to the valves by the coronary blood and not by that flowing through its chambers. In reviewing the literature and the recent text-books on his subject, I find that even most of those who believe in the infectious nature of rheumatic carditis think the organism is simply deposited on the valve by the intracardiac blood. Delafoy tries to explain that the reason why the left heart is selected is that the organism is an aerobe and thrives better in oxygenated blood. Strümpell still believes that the organisms are simply deposited by the blood-stream on the surface of the valves, but deems that an explanation is necessary as to how they stay there and are not swept off, being right in the midst of a swift blood-current—he calls in the phagocytic action of the endothelial cell which seize the bacteria and give them a firmer foothold. But why should the bacteria choose the valves? Do not the same phagocytic endothelia line the auricular and ventricular recesses, the little hooks and nooks among the chordæ tendineæ and musculi pectinati? Mural endocarditis should be far more frequent than valvular, which of course is not so. But, it will be said, the valves have no blood-vessels. How, then, do they get their nourishment? How would the presence of the *Spirochæta pallida* in similarly nourished structures, as the cornea in syphilitic keratitis, be explained? As to why the mitral valve is the one most frequently affected, I do not know. I believe that there will be no explanation forthcoming until we understand better the physiologic chemistry both of bacteria and of the tissues, and their interaction. The same factors that govern the selective action of bacteria in other parts of the body, regarding which we are still in profound ignorance, most probably enter into play here.

Can we explain why one attack of rheumatic endocarditis predisposes the individual to more and graver attacks? A glance at the pathology of the valve explains it. We have seen that rheumatic inflammation of the valve results in its vascularization, and hence during the next attack will admit organisms in larger quantities deep in the valve than it would in a normal non-vascular valve.

The toxin of the *Diplococcus rheumaticus*, unlike those of diphtheria and other bacteria, exerts but slight degenerative power on the heart-muscle. This particular poison exerts its deleterious action mainly by paralyzing the tonicity of the muscle, which loss of function is responsible for the fatal cardiac dilatation. Hence the elaboration of toxins by this organism is by far of greater importance than its production of the local inflammation.



from rheumatic affections of the heart, feeling worse when temperature is down, better when up.

Perhaps one of the earliest objective signs of rheumatic carditis is the mitral murmur. And yet, if we should examine the valve we would find that the local inflammation is but comparatively slight and entirely insufficient to account for early incompetence. The true explanation of this, as first pointed out by Gassage, lies in the fact that it is not the valves but a loss of tone in the mitral sphincter that is responsible for this leakage. The pathologic reason for such loss of tone—as we have seen above—is the development, especially near the mitral ring and near the root of the aorta, of inflammatory nodules. In such nodules, toxins would be elaborated and the lymph of the part would contain these toxins. Hence the muscle fibers of the mitral sphincter would be bathed in toxins, the special action of which is to diminish tonicity while the rest of the cardiac muscle would be much less severely poisoned, since the toxins must be absorbed in the general circulation in order to reach any fibers that are not in close proximity to the nodules. Thus in any rheumatic myocarditis an early loss of tone in the sphincter of the mitral valve would be expected, with the development of a regurgitant murmur. Nodules tend also to form near the root of the aorta; but the aorta has a fibrous connective tissue and not a muscular sphincter; therefore no change is produced during an attack of rheumatic fever. Thus an apical systolic murmur is the sign of rheumatic *myocarditis,* and is indeed quite often the only sign of inflammation of the heart apart from pericarditis.

The relation of the rate of the pulse to the temperature gives invaluable information as to whether or not the heart is affected. In the course of rheumatism, as a rule, there is an increase of ten beats for every rise of 1 degree of temperature. Where the increase in the rate of the heart is greater than that, cardiac involvement should be carefully considered.

Another peculiar phenomenon, the explanation of which is not by any means clear to me, is the peculiar relation of the temperature to the "well-feeling" of the patient. Particularly in the subacute and chronic cases of rheumatic affections of the heart of low vitality, which drag on for months and months, one frequently notices that, when the patients' temperature is normal or thereabouts, they feel and act ill. Should their temperature rise, however, they feel much better. I know that this sounds paradoxical, but it is nevertheless true. The accompanying chart of a boy, aged 15, suffering from rheumatic affections of the heart, is only one of many in my possession illustrating the above statement. He "feels fine" every time he has a rise in temperature. In fact, he himself has found it out, and "I have temperature to-day" is synonymous in his opinion with "I feel fine." Can it be that his heart and all the other cells of his body, particularly the cerebral, are stimulated to increased metabolism by a rise of temperature similar to the sensation of well-feeling accompanying the administration of alcohol?

As to our conception of the relation of simple rheumatic to malignant endocarditis, Venning has found that in a series of 100 autopsies of patients who have died from rheumatism with cardiac involvement, 61 per cent. presented signs of malignant endocarditis. That malignant endocarditis is quite frequent, as we commonly term it, engrafted on a damaged valve, we all know. I take "engrafted" to imply that after the rheumatic organism has damaged the valve and produced what we commonly term a *locus minoris resistentiæ,* either there is an invasion of pathogenic bacteria producing a mixed infection, or the invasion may take place after the exciting agent of rheumatism has disappeared. That this process sometimes takes place cannot be denied, but it appears to be rather the exception than the rule; for one does not see in these cases which pass imperceptibly from rheumatism into infective endocarditis a *sudden exacerbation,* but it is a long chronic illness, the patient gradually losing ground. As a rule, these patients do not come into the hospital until they have been sick for weeks and months and the average length of their illness in hospital is about two months.

The patient may, apparently, be recovering from the attacks of rheumatism and may lose all pain in the joints, yet nevertheless, from the after-history, the endocarditis must have been progressing insidiously. Thus there are several examples of patients who were admitted for acute rheumatism and improved to such an extent as to leave the hospital, but who have returned in the course of a month or so to die from infective endocarditis. The majority of these patients had suffered from rheumatism at some time previous to their illness, and so on admission had signs of endocarditis, and on post-mortem the valves showed old-standing lesions. The pathologic lesion is the same, excepting that it appears to be more intensified than that of simple endocarditis; and malignant forms represent but different degrees of one and the same process. That which causes simple may also cause malignant endocarditis.

The symptomatology and prognosis of this disease are well recognized and readily understood. As to the treatment of this condition, the salicylates are of undoubted value in the treatment of general rheumatic infections, amounting almost to specifics in some cases. The increasing and almost universal use of the salicylates in their various forms in the treatment of rheumatism proclaims their usefulness. The alkalies, the iodids, the magnesium salts, each have their enthusiasts. There are many more drugs employed with apparently brilliant success. But can anyone claim the same brilliant success with the use of these drugs in the treatment of the various manifestations of rheumatism of the heart, once that organ is affected? Can cardiac implication ever be prevented during the course of rheumatic infection by the use of these or any other drugs? While the salicylates are used universally, right from the onset of the disease, and as a rule in large doses—as they should be used according to present opinion—there are by far too many crippled hearts in the cemeteries (or on their way thither) and in the hospitals which testify negatively to both of the previous questions. It would appear that the solution must be made along the lines and principles of our modern conception of immunity, particularly by means of serums and vaccines. As yet my own experience with vaccines in these cases has not been sufficient to warrant any definite conclusion. Rest, a physiologic axiom, is the logical therapy and is well appreciated.

CONCLUSIONS

1. Rheumatism is a specific infectious disease caused by the *Diplococcus rheumaticus.*
2. The pathology of rheumatism is absolutely characteristic of that disease and of no other.
3. The valvular lesions are caused by the dissemination of the microorganisms by means of the coronary circulation, and these organisms are not simply deposited on the valves by the intracardiac blood-stream.
4. The cardiac murmur heard at the apex, even early in the disease, is never functional, but is due to a change in the myocardial mitral sphincter, which has lost its tonicity and hence dilatation of mitral orifice.
5. General cardiac dilatation, the most serious derangement in the disease, is due to the loss of tonicity of the heart-muscle, as a result of the selective action of this particular toxin on the myocardium.
6. A derangement of the pulse and temperature ratio is of diagnostic importance.
7. Rise of temperature is observed to have a relation to the feeling of well-being.
8. Simple and malignant endocarditis represent but different degrees of one and the same process.
9. Finally, we are at present helpless against the ravages of this most serious affliction.

I wish to express my deepest appreciation to Professor Van Cott for many helpful suggestions in the preparation of this work.

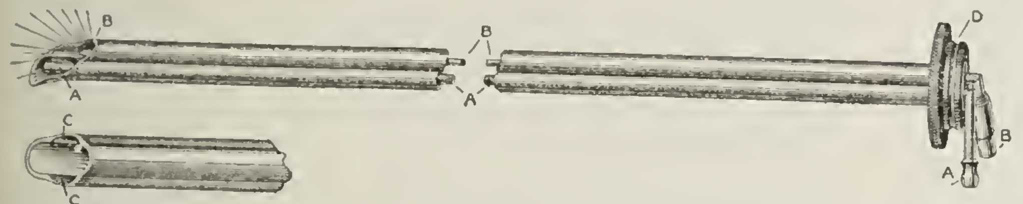
The Campaign for Better Food.—The determination of communities to have food that suits their health and gives their money's worth continues. Among a number of cities which are falling in line, *Collier's* mentions Providence, R. I., which is holding a pure-food and domestic-science exhibition from February 19 to March 12, conducted by the federated women's clubs of Rhode Island, and various butchers' and grocers' associations.

AN IMPROVED ESOPHAGOSCOPE

WILLIAM LERCHE, M.D.
ST. PAUL

The following are, in my opinion, the essential features of a practical working esophagoscope:

1. Simplicity of construction.
2. Ease of introduction without an obturator.
3. The source of illumination must be as near the object to be examined as possible, and so arranged that when instruments are introduced into the tube, the rays of light are not intercepted.
4. By some simple contrivance that can be easily operated the field of operation must be kept constantly dry, in order to enable the surgeon to work rapidly, thus reducing the length of the sitting to a minimum.



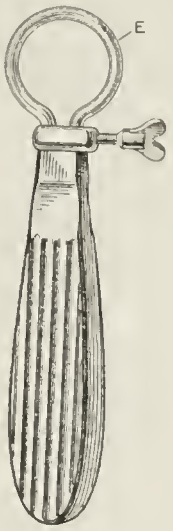


Fig. 1.—Esophagoscope. *A*, indicates suction tube; *B*, light carrier, running in the grooves *C*; *E*, detachable handle to fit in groove *D*.

I have made several hundred esophagoscopies and have tried different instruments with the various methods of illumination, at the proximal as well as at the distal end of the tube. I have also done some experimental work in this line, and the esophagoscope that I here present as an improved instrument has features in common with instruments well known on the market besides some new ones.

It has been my experience that the light at the distal end, i. e., as close to the object to be examined as possible, is the best for work through long tubes. The objection to this has been that the lamp may break and that it becomes easily soiled by mucus and blood. The first objection may be theoretically correct, but practically unimportant, because if such an accident has happened it must have been extremely rare. The second objection is valid and of much importance, but it has been overcome in this instrument by having the suction tube A, Fig. 1, movable and so long that it can be pushed beyond the lamp and to the very end of the instrument. Furthermore, by connecting the suction tube *A* with a Chapman suction pump the field of operation is constantly kept dry. Another important feature is that the instrument is always introduced without an obturator under the guidance of the eye, so that the entire tract through which it passes can be inspected. For this reason the distal end of the instrument is provided with a thick protective lip. The two channels *C* are alike on both sides and open throughout so that the suction tube *A* and the light carrier *B* can be used on either side.

It is particularly to be noted that the suction tube is pulled back under cover of the tube while the esophagoscope is being introduced, or whenever the instrument is pushed forward. The handle is made detachable in order that it may be changed according to the position in which the patient is examined. The instrument is always introduced with the outer surface of its lip toward the epiglottis and the anterior wall of the esophagus, in this way entering with its widest diameter into the most easily distensible diameter of the canal through which it is to pass. Therefore, if the patient is to be examined in the sitting position the handle is put on the side of the instrument that has the lip, while if the patient is examined lying on the back the handle must be on the opposite side. The same handle can be used for the different tubes. It is not always necessary to use the handle.

I do nearly all esophagoscopic work in adults under local anesthesia with 10 per cent. solution of cocain and with the patient in the sitting position. If a general anesthetic is used the patient is examined while lying on the back or on the right side. In children the general anesthesia is always required. Figure 2 shows the patient in the correct position on a low chair with straight back and with the head supported by an assistant. The esophagoscope is shown in position and the suction tube *A* is connected by a long rubber tube with the Chapman suction pump attached to the water faucet and having a Wolff's bottle interposed for the reception of the mucus and blood.

If, in a case to be examined, there is a large quantity of fluid and remnants of food retained in the esophagus, this must first be drawn off by the stomach tube and the esophagus washed out before the esophagoscope is introduced. The suction tube is for the removal of fluids accumulating during the operation.

The introduction of this instrument is easy. The operator stands in front of the patient, and, holding the illuminated esophagoscopic tube near the proximal end with the right hand, places the lip of the instrument on the back part of the patient's tongue pointing somewhat toward the patient's right. While the operator now looks through the instrument it is passed over the epiglottis and down to the inlet of the esophagus. On gentle pressure the cervical part is entered and the open thoracic part of the esophagus soon comes into view.

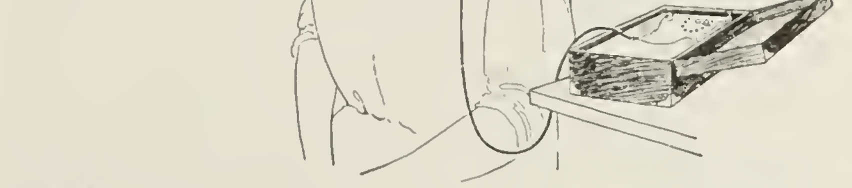


Fig. 2.—Patient in correct position with the esophagoscope introduced and the suction-pump at work.

I never use any lubricant on the instrument and do not guide the instrument by inserting a finger into the patient's mouth. I always use a dry cell-battery for the illumination of the lamps. The street electric current should not be used whenever the instrument is connected with the water faucet.

Three tubes are required. One 10 mm. diameter and 50 cm. long, and one 10 mm. diameter and 25 cm. long, both for adults; one 8 mm. diameter and 35 cm. long for children.

My operating instruments for esophagoscopic work are of corresponding lengths and have been previously described.*

628 Lowry Building.

PHENOLSULPHONEPHTHALEIN AND FUNCTIONAL TESTS OF THE KIDNEYS

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My experience with the use of phenolsulphonephthalein commenced very shortly after Rowntree and Geraghty[1] began their experiments with it. I base my belief in its efficacy on a large number of cases seen in Dr. H. H. Young's clinic at the Johns Hopkins Hospital and in my private work.

I shall also consider here some of the other functional tests of the kidneys, and my purpose in taking them up is more to show their defects than to set forth their manner of use or for the observation of their individual values. I do this that the value of phenolsulphonephthalein may be more readily seen.

THE PHYSIOLOGIC FUNCTION OF THE KIDNEYS

The physiologic function of the kidneys is to eliminate from the body certain substances brought to them by the blood. This is generally supposed to be done by secretion, as defined by the Bowman-Heidenhain theory, rather than by diffusion and filtration as suggested by Ludwig. Without entering into the details of the discussion I shall merely state the following facts:

The kidneys have been shown by Bunge and Schemiedeberg[2] to synthesjze hippuric acid from benzoic acid and glycocoll. The crushed kidney-substance is capable of this when kept under oxygen pressure.

No methylene-blue is found in the blood as such after administration, although it is being passed into the urine at the time, but a substance from which methylene-blue can be reconstructed. Neither is the methylene-blue as passed in the urine the same as that administered, for the latter is not soluble in chloroform while the former is.

When phlorizin is passed through the vessels of an isolated kidney sugar is found in the urine. thus showing that the action of phlorizin is on the kidney-substance itself.[3]

As evidence of the fact that the kidneys actually perform work when water is passing through them the enlarged kidneys of beer-drinkers have been pointed out, as well as the kidneys of those afflicted with diabetes insipidus.

I desire to emphasize the fact that there is a large variation in the normal output of the amount of urea, and nitrogen, and the other urinary constituents. This normal variation occurs, not alone in different individuals, but also in the same individual at different times, and is dependent, to a large extent, on the food and drink and the amount of exercise taken. There is, moreover, a variation in the urine, in the amount of the nitrogen, urea, sodium chlorid, specific gravity, etc., during the different parts of each twenty-four hours. This makes it evident that we must know the kind and amount of food an individual is eating as well as to obtain the total urine passed during a number of hours if we wish to come to any reasonable conclusion from a study of the normal urinary constituents.

In comparing the separate kidneys we find that the work normally done by one kidney is almost exactly similar to that done by the other during a given period of time as long as a half hour. There may be some slight variations during shorter periods of time.

THE NEED OF A FUNCTIONAL TEST OF THE KIDNEYS

The reason for most general interest in this subject is a need for a basis for more accurate prognosis in nephritis as well as some method of telling exactly the amount of destruction of the secreting substance of the kidneys. Anything enabling us to determine the future condition and probable length of life of our nephritic patients will, I feel sure, prove of immediate interest to all careful workers in medicine.

An accurate functional test will enable us to study the conditions of the kidneys in the various diseases, as well as assist us in our experimental work on their physiology.

The determination of the condition of the kidneys before serious operations such as carcinoma of the breast and uterus and prostate, prostatic hypertrophy, etc., etc., would enable us to foretell more surely the probability of the patient surviving the operation.

Last, but not least, there is a great need for some means of determining accurately and simply the condition of each kidney before operations on these so vitally important organs themselves.

FUNCTIONAL TESTS

The literature concerning the functional ability of the kidneys is very extensive, and an immense amount of accurate and valuable work has been done along this line. The blood as well as the urine has been carefully studied, most particularly for the urea and sodium chlorid, and by cryoscopy for the molecular concentration. The reason for the work on the blood is easily understood when we remember that the material passed into the urine depends, not only on the functional ability of the kidneys, but also on the material contained in the blood.[4]

Todd, in 1857, and Roberts, in 1865, wrote concerning the delayed elimination of certain drugs. Bouchard, in 1873, made some experimental observations regarding the elimination of fuchsin and since that time a large number of substances have been tried in attempting to discover some reliable functional test for the kidneys by their quantitative elimination in the urine. Among them may be mentioned quinin sulphate, potassium bromid, salicylic acid, potassium iodid, methylene-blue, rosanilin and iron subcarbonate. Besides these phlorizin has been tried for the elimination of sugar and much work has been done with cryoscopy, electrical conductivity, determination of the urea, nitrogen, phosphates and sodium chlorid.

Cryoscopy, methylene-blue, indigocarmin, phlorizin, the polyuria test and the determination of the amounts of the urea and nitrogen and the total solids have been the most widely used and have been considered by some to be sufficient for very accurate diagnosis, particularly where several were employed. I shall not attempt to prove or disprove such statements, but simply set forth such facts as I have found. These various tests have, at least, served to lower the mortality of kidney operations as has been shown by Casper,[5] who compared the deaths after nephrectomies where they were and were not used. He found that in 129 cases without functional tests there were five deaths, while in a similar number of cases in which ureteral catheterization and functional tests had been used there was only one death. Chetwood,[6] in 1905, concluded that "the great progressive reduction in mortality is attributable to the diagnostic improvement. Marked differences in mortality . . . may be explained by the failure to employ the latest diagnostic resources." Kümmel[7] says that before the use of cryoscopy the mortality of renal surgery was 28 per cent., while afterward it became but 8 per cent., and after nephrectomy but 4.8 per cent. Improvements in surgical technic have, of course, to be considered, but one must feel that it can account for but a small part of the difference in the mortality statistics.

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* Lerche, W.: Surg., Gynec. and Obst., October, 1910, p. 345.

[1] Tr. Am. Assn. Genito-Urinary Surgeons, 1910.

[2] Quoted in Howell's Physiology.

[3] Biel and Kolisch: Quoted by Pasteau, Jr., in Méd. Francais, Jan. 15, 1911.

[4] This points to the fact that absorption must have some influence on the quantitative elimination of any substance over a given period of time. A slow absorption must cause slowing in the elimination, while a rapid elimination could accompany only a rapid absorption. It seems evident, therefore, that for extremely accurate work on the elimination the substance would have to be given directly into the blood-vessels.

Since the two tests, cryoscopy and electrical conductivity of the urine, are related, in so much as both belong to physical chemistry, let us consider them first.

Cryoscopy.—By cryoscopy we mean the examination of liquids based on the principle that the freezing-point of solutions varies according to the amount and the nature of the substances contained in them in solution. By this method the osmotic pressure of a solution and the disassociation of the ions in the solution is determined. It is not a simple matter where we have only one salt in solution, and where we have complex solutions like the blood and the urine we would very naturally expect greater difficulty.

In cryoscopy of the blood we must consider that in uremia the osmotic pressure is not necessarily raised, nor is it necessary for uremia to be present where it is raised, for the products retained in uremia do not necessarily cause a rise in the osmotic pressure. Moreover, retention of water may occur without resulting in the usual corresponding retention of urinary solids and lowering of the osmotic pressure. On the other hand, water may be retained but with more than enough urinary solids to compensate for the amount of water.

A solution of urea, thirty parts to 1,000, gives the same freezing-point as a solution of sodium chlorid, fifteen parts to 1,000. The amount of sodium chlorid in the blood in nephritis is not constant, and a small diminution in the sodium chlorid may, therefore, compensate for the large increase in urea.[8]

That this method is of some value is rather generally admitted, but it cannot be considered sufficiently accurate to be of much assistance to the more exact clinician. Sahli[9] decides that a renal insufficiency may be surely concluded from a distinct elevation of the osmotic pressure of the blood which would, for example, contraindicate the extirpation of one of the kidneys.

In the urine, as in the blood, a difference in the amount of sodium chlorid and urea would make a marked difference in the freezing-point, and small differences in the amount of sodium chlorid would compensate for much larger changes in the amount of urea. Furthermore, since the electrolytic substances are more strongly disassociated in dilute solutions than in more concentrated ones, it would be necessary for the urine to be of the same concentration through the twenty-four hours of collection to enable us to learn the work done by the kidney in that time, if we are going to make our computation from the number of ions passed by the kidney.[9]

Electrical Conductivity.—Electrical conductivity is a measure of the disassociated ions, or electrolytes in solution. In the blood or urine it is practically a measure of a few salts, more particularly of the chlorids. It is not influenced by the urea, or by sugar or albumin.

While it is true that there is a retention of the chlorids in lessened functional ability of the kidneys, there is nothing constant about it, even where definite doses are given. In estimating the functional ability of the kidneys by this method the blood should be examined as well as the urine.

Withal, the test is performed with no little difficulty, and has the disadvantage of being without a stable foundation, such as a definite normal output of the substances on which the results depend.

Methylene-Blue.—This stain was introduced for this purpose by Achard and Castaigne[10] in 1897 and is still used, more particularly by foreign observers, in connection with some of the other functional tests. It is supposed to be a test of the renal permeability rather than of the secretory ability as tested by phlorizin, but it is to be remembered that no methylene-blue is found in the blood at the time that it is being passed into the urine.

The time taken for complete elimination of a hypodermic injection of 15 minims of a 5 per cent. solution is from thirty-six to forty-eight hours. The time of appearance is within fifteen to thirty minutes. The elimination is at first in the form of a colorless chromogen but in a few minutes the blue appears. Only about one-half of the total amount given is recovered in the urine and at least one case has been reported in which no methylene-blue at all appeared in the urine, although it was given for some time for medicinal purposes. In cases of acute and chronic parenchymatous nephritis the elimination may be more rapid than normal. The maximum intensity of the blue in the urine is reached normally in the third or fourth hour.

Besides consuming much time the test is often inaccurate, and, as Emerson says, too many cases with kidneys found at autopsy to be the seat of extensive disease have reacted normally or with abnormal rapidity.

Indigocarmin.—As was shown by Heidenhain the indigocarmin is excreted by the cells of the convoluted tubules. Since 1903 it has been used as a functional test of the kidneys. Only about one-fourth of the dose given, however, is recovered in the urine in from twelve to twenty hours. The time of first appearance is short, being within from six to ten minutes. Twenty c.c. of a saturated solution is the usual amount given. The method of determination of the amount eliminated is inaccurate. The elimination is observed over periods varying from one to three hours.

The test is still used in some of the best clinics but is not believed to be very accurate and is not used alone but usually in combination with one or two other tests.

Rosanilin.—Very little reference has been made to the use of this substance which has never become popular as a functional test, although it seems much better for that purpose than many of the others. It is eliminated almost completely by the normal kidneys; the output varies between 65 and 95 per cent. The chief objection to its use seems to be the time required for the elimination. The first appearance in the urine after hypodermic injection is within thirty minutes, but the point of maximum intensity is not reached before the third hour, and total elimination is complete in about twenty-four hours.

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[5] Quoted by B. Barringer in Surg., Gynec. and Obst., December, 1908.

[6] Chetwood, C. H.: Physician and Surgeon, 1906.

[7] Quoted in Emerson's Clinical Diagnosis, 1906, p. 306.

[8] Strauss: Chronischen Nierenkrankheiten, Berlin, 1908.

[9] Sahli: Diagnostic Methods, Ed. 1905.

[10] Achard and Castaigne: Bull. et Mem. Soc. méd. d. Hôp. de Paris, April, 1897.

The substance was introduced by Lepine and much subsequent work was done by Dreyfus and Pugnat.[11]

Phlorizin.—This substance was used by Klemper,[12] in 1896, to show that such a thing as renal diabetes could exist. Zunst[13] had already shown that phlorizin injected into one renal artery produced sugar in the urine coming from that kidney some minutes before it appeared in the other side. As I have already said, sugar is found in the urine when phlorizin is circulated through the vessels of an isolated kidney. It seems evident that the test is one of the secretory ability of the kidney.

Achard and Delmare used hypodermic injections of 1 c.c. of a 1-to-200 solution while Albarran used 4 c.c. of the same strength solution. The sugar appears in the urine in about a half hour and disappears in from three to four hours.

The results obtained vary; normal cases may pass no sugar at all or there may be a marked diminution in the amount with only mild lesions so that one is not able to learn conclusively the condition of the kidneys from the quantitative elimination.

Although the results are not so accurate, the test has, like some of the others, been of no little value especially when used in conjunction with some of the other methods.

The Estimation of the Total Nitrogen and Urea.—Although some workers have had great faith in the value of the estimation of urea or nitrogen, or of both, these tests have in the hands of the majority of the observers given results which have shown that they were not to be depended on for any very definite information concerning the absolute functional ability of the kidneys.

In the first place, these methods are rendered complicated by our having to know the exact diet of the subject. We must also have a twenty-four-hour specimen of the urine.

In unilateral collections, where it is as a rule inadvisable to leave the catheters in the ureters for so long a period as twenty-four hours, the only information we are able to obtain is concerning the output of one kidney as compared to that of the other over a given period of time. We cannot determine the absolute ability of the kidney by such short collections, but we could come to much more valuable conclusions if we should determine the amount of urea present in the blood at the time of the collection of the urine.

One of the objections offered to the use of the determination of the urea is that there is no sufficiently accurate simple test available, and another is that the results obtained with the Doremus instrument are considerably influenced by the presence of pus. Both of these accusations are wrong, as I have proved to my own satisfaction. The Doremus instrument when properly used is accurate enough for all purposes and there is practically no difference in the amount of urea found when two specimens of the same urine are used, one being freed from pus.

The determination of nitrogen or urea seems of undoubted value where we have no simpler test such as phenolsulphonephthalein, and I believe that the results obtained by the determination of the total nitrogen and urea give more accurate and valuable information than is generally believed.

In some experiments made by A. I. Murphy of Pittsburgh and myself, we found a constant relation to exist between the amount of water drunk and the amount of urea passed in the urine. The more water taken the more urea was passed. The specific gravity was inconstant and bore a somewhat irregular relation to the amount of urine secreted. The paper is to be reported in full by Dr. Murphy.

The Specific Gravity and Total Solids.—The normal specific gravity of the urine varies between 1,015 and 1,020 at 15 C. The drinking of large quantities of water may lower it to 1,002 or 1,003.

It is an accurate indication of the amount of solids which have been passed into the urine by the kidneys, but not a very accurate indication of the functional ability of the kidneys. We can increase the value of our results considerably if we know the amount of water drunk, the kind and amount of food ingested, and the amount of water lost by sweating and breathing, since there is a marked variation in the results when these things vary.

A twenty-four-hour specimen is always necessary, since there is so much variation in the separate specimens voided during the different parts of the twenty-four hours. The urea is the substance which influences the specific gravity the most.

In making collections from each kidney separately it is seldom feasible to leave the ureteral catheters in for twenty-four hours, so we can use only the specific gravity and total solids in these cases to compare one kidney with the other.

The same objections expressed against the results obtained with the use of the specific gravity can of course be used for the total solids.

The Polyuria Test of Albarran.—This test was introduced in 1904 and is applied to the collections from each side separately as well as from both kidneys at once.

The urine is collected for fifteen minutes before the test is begun, so that a reflex anuria, caused by the presence of the catheter, will not be overlooked. Phlorizin or some of the other substances are now given so that they may be tested for at the same time, and the urine collected for half an hour. The patient now drinks from 400 to 600 c.c. of water and the urine is collected for three hours being separated into half-hour collections. The quantity of urine is normally increased during the second half-hour after the water is taken and reaches the maximum during the following one, the third. Then the amount decreases rapidly. Where there is disease on one side the polyuria on that side is supposed to be diminished according to the extent of the lesion.

From this test we can, as a rule, gain an idea as to which one of the kidneys is functioning better, as well as some knowledge of the maximum working ability of each, especially when the test is used in conjunction with some of the other methods.

Some objections have been made, however, to the use of this test, and also to the results obtained thereby. The long period of three hours is too long for the comfort of the patient, and the convenience of the physician. This large amount of water cannot always be borne by the patient. As Geraghty and Keys, Jr.,[14] have both found, it is not always possible to cause a polyuria: this fact is of considerable importance when a polyuria already exists on the diseased side, which is sometimes the case. There is some question as to whether the polyuria test would show the presence of localized lesions of small size, such as are sometimes found in tuberculosis, hypernephroma, etc.

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[11] Lepine: Lyon Médical, 1898.
Dreyfus: Thèse de Lyon, 1898.
Pugnat and Revilliod: Arch. gén. de méd., 1902, viii, 19. Quoted by Rowntree and Geraghty.

[12] Cited by Achard and Delmare.

[13] Arch. f. Anat. u. Physiol., 1895, p. 570. Quoted by Cushny.

PHENOLSULPHONEPHTHALEIN

The pharmacologic action of phenolsulphonephthalein was first tried by Drs. Abel and Rowntree, having been sent to Dr. Abel by Dr. Ira Remsen, who was the first to prepare the substance; Dr. Abel was at this time working with some of the phthaleins in connection with their use in chronic constipation and it was sent to him on that account. The substance was found to be eliminated from the body almost exclusively by the kidneys, and was not toxic even in quite large doses. No lesions could be demonstrated in the kidneys from its use, although a careful study of the urine was made as well as microscopic examinations of the kidneys themselves. These results very naturally led to its being tried in estimating the functional ability of the kidneys and the conclusions arrived at by Geraghty and Rowntree,[15] in using it for such a purpose, were first published in July, 1910.

The solution used is a bright red color, being prepared from the crystalline drug by the addition of certain amounts of sodium hydroxid and normal salt solution.[16]

Most of my experience with the administration of this substance has been in cases of urinary obstruction, renal tuberculosis and lithiasis, a large number of normal cases and a few cases of renal hematuria, and a few cases of ureteral obstruction and chronic pyelitis.

The size of the dose now given is 6 mg., which is contained in 1 c.c. of salt solution and is given intramuscularly or subcutaneously. The urine is collected for two hours after the first appearance in the urine, and the hourly specimens are kept separated. Where ureteral catheterization is employed collections may be made for only one hour.

In a recent article by Rowntree and Geraghty,[17] they recommend the injection of the dye into the lower lumbar muscles. In such cases there is an output of from 5 to 10 per cent. more in the first hour than when it is injected subcutaneously. They have also done some work with intravenous injections, but recommend intramuscular injections for ordinary use.

A colorimeter is used to determine the amount of dye put out in a certain specimen of urine. For very accurate determinations the Dubosque instrument is the one we have used, but there is now on the market a simpler and much cheaper instrument which is sufficiently accurate for all purposes. A simpler method still is the use of graduated or ordinary test-tubes. A standard solution of 3 mg. to the liter is used for comparison.

For the injections, any syringe by which 1 c.c. can be accurately measured can be used. The original work was done with the Record syringe.

The time between the injection and the first appearance of the dye in the urine is in normal cases between five and ten minutes, as a rule. Variations in the time within these limits seem to make very little difference as far as we now know. Some few cases may take as long as fifteen minutes and yet put out from 60 to 70 per cent. The cases I have seen which took longer than this failed to put out normal amounts. Some few cases taking as long as from thirty to forty minutes had a total output which was extremely low, and usually only a faint trace appeared in the specimen collected during the first hour, and subsequent autopsies showed that the kidneys were considerably diseased. It is interesting to note that many of the cases with low outputs showed more dye in the second-hour specimen than in the first. Where there is urinary obstruction the time of first appearance must be noted by the introduction of a catheter into the bladder. The catheter may be left in the urethra throughout the test unless it is too uncomfortable. Where the patient can empty the bladder by voiding, the time of first appearance may be noted by having him void every five minutes.

A small amount of a 20 per cent. solution of sodium hydroxid is added to the urine in all cases, for the dye does not show up distinctly unless it is in a distinctly alkaline solution.

The output in normal cases in which the injection is made subcutaneously is from 40 to 60 per cent. for the first hour and from 20 to 25 per cent. for the second hour.

To insure a free diuresis two or three glasses of water are given to the patient during the half hour preceding the injection of the phenolsulphonephthalein. This is done in all cases in which it is possible for them to drink water. The amount of urine output, however, seems to have very little influence on the output of the dye, for in one case 40 per cent. was recovered in 5 c.c. of urine.

URINARY OBSTRUCTION IN THE LOWER TRACT

The results obtained by the use of this test in cases with urinary obstruction below the bladder, more particularly from prostatic hypertrophy and carcinoma, have proved very valuable.

As is well known, the functional ability of the kidneys is seriously impaired by urinary obstruction and the presence of residual urine in the bladder. The amount of impairment seems to correspond to some extent with the amount of residual urine, but more particularly with the duration of the obstruction and the severity of the infection of the urinary tract and the amount of hydronephrosis.

I have seen the impairment so marked in a few of these cases that the output for the first hour was only from 2 to 3 per cent. and for the second hour, from 8 to 9 per cent. In such cases the determination of the total urea and the total solids in twenty-four-hour specimens has not always assisted us in determining the functional impairment, for in some cases these may show but little decrease, even though the patient is clinically uremic. In one patient, dying without operation, these substances remained nearly normal up to the time of his death, though he was vomiting and nearly unconscious; only a trace of phenolsulphonephthalein was found in his urine at any one time although he was given several separate tests. On the other hand, I have never seen a case showing clinical signs of uremia which did not show a marked fall below normal in the amount of dye recovered, or a decrease from any determination made when the clinical condition of the patient was better.

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[14] Keys, Jr.: Ann. Surg., March, 1910.

[15] Geraghty and Rowntree: Jour. Pharm. and Exper. Therap., July, 1910.

[16] This solution can now be obtained from Hynson and Westcott Co. of Baltimore. It is put up in small ampules containing a little over 1 c.c., so it may be kept without fear of deterioration.

[17] Rowntree and Geraghty: The Journal A. M. A., Sept. 2, 1911, p. 811

These cases show in most instances an increase in the amount of dye eliminated after they have been under proper treatment for shorter or longer periods. This is quite marked in some and may be as high as 25 per cent. of the individual dose. Some cases never put out more than 20 to 25 per cent., or less, even after prolonged treatment, but are then better operative risks than those having similar, or larger, outputs and who have not been under treatment; for the functional ability of the latter may be rapidly decreasing while that of the former is at the highest point and stable. For this reason several tests with the dye should be given in those cases which show some impairment at the first test.

The use of phenolsulphonephthalein in these cases has confirmed the fact that there is great value in properly instituted treatment before operation by evincing the improvement in the functioning of the kidneys, which may occur under such conditions. Moreover, we are able by this method to select the best time for operation and render recovery more rapid and certain, and lower our already low mortality rate. Our prognoses, too, have a more rational basis and we can more intelligently instruct the postoperative patients about the future care of themselves.

EXAMINATION OF THE FUNCTION OF EACH KIDNEY SEPARATELY

In the unilateral or bilateral lesions, where we desire to know the ability of each kidney, the use of phenolsulphonephthalein has proved, if anything, more valuable than in the just-discussed class of cases, for here we are confronted by conditions which often make it desirable or necessary to remove one of the kidneys and the question arises as to what is the condition of the other kidney. For the determination of this point catheterization of the ureters is by far the most satisfactory method of collecting the urines separately.

Should it be found impossible to introduce the catheter into one side, the urine may be collected transvesically from that side by introducing a small catheter into the bladder. In some cases, in which the ureters have been catheterized, leakage into the bladder is very annoying, although the proper size and kind of catheter has been used. Where the leakage corresponds to one side which is doing considerably more or less work than the other side we are not at a loss in making our conclusions. In some other cases we can arrive at no satisfactory conclusion, but, fortunately, these cases are rare.

The time of first appearance is, of course, the same for normal cases here as for the collection from both sides at once. There may be a slight difference in the two sides, but as yet this is not considered of any importance where the reading for the two hours is the same. Reflex anuria caused by the presence of the catheters is usually of short duration but it may last a half hour. The injection of the dye should not be made until the urine is flowing from the catheters as freely as expected from previous observation.

The amount of drug eliminated very accurately indicates the amount of destruction of secreting substance. This has been proved by the examination of about fifty cases in which the kidney was observed at operation in a few, and after removal in the remainder.

I would like particularly to call attention to those cases with one-sided kidney disease and the pain confined entirely, or almost so, to the healthy and hypertrophying kidney. In some of these cases the diseased kidney may be almost completely destroyed; if such be the case, simple ureteral catheterization would be sufficient to determine that only one kidney was working. Where the destruction is not so marked, however, the phenolsulphonephthalein is of immense help. The healthy kidney of such cases has been explored on account of the pain, but ureteral catheterization had not been resorted to.

Not infrequently we are confronted in renal lithiasis by conditions which demand the removal of the kidney from which we merely intended to remove the stone. There are, for example, kidneys from which we are unable to remove completely all of the particles of stone, or ureters strictured beyond remedy. Though we may feel sure from an *x*-ray picture that there is no stone in the other kidney or ureter, yet how can we tell without investigating its functional ability that we are not dealing with a kidney deficient from an old nephritis, an infantile kidney, or a kidney the seat of polycystic change?

It is in the cases of lesions in both kidneys that we have the most trouble to determine what to do for the patients. In tuberculosis or other destructive infections of the kidney-substance we have to consider the influence of the general toxemia on the better kidney. In most of the cases of this kind, so far seen, the removal of the diseased kidney has resulted in an increased output from the remaining one, usually exceeding the total output from both kidneys before operation. In double-sided renal lithiasis the test is of considerable help in determining the better kidney so that our first operation can be done on the more diseased one, and thus avoiding, as far as possible, a postoperative uremia.

According to the amount of phenolsulphonephthalein recovered in cases of chronic pyelitis there is very little disturbance of function. There seems also to be very little reduction in the amount of dye put out where there is an acute pyelitis, therefore the test should help us to distinguish between the more serious condition of kidney abscess and an acute pyelitis.

In the more recent article by Rowntree and Geraghty[17] the use of phenolsulphonephthalein in nephritis is discussed and shown to be of great value.

CONCLUSIONS

Up to the time of the introduction of phenolsulphonephthalein there was no single way or test, by the use of which we could gain an accurate idea of the functional ability of the kidneys. By the use of several of the best-known tests we were able to come to some valuable conclusions which, however, were not always accurate and gave results which were not in accord with those usually obtained. Moreover, there were certain pathologic conditions of the kidneys in which none of the tests would give us the desired information. The length of time required for some of the tests and the extensive observations required with others made their general use impracticable.

Now, in phenolsulphonephthalein, we have a substance which is non-toxic, rapidly appearing in the urine, quickly eliminated by the kidneys without any deleterious influence on them, and the amount passed is rapidly, easily and accurately determined by the colorimeter. The time required for the test is short, therefore the patient has less to suffer and the administrator less time to wait.

The amount of dye eliminated shows us accurately the extent of impairment of the kidney. There is, moreover, no pathologic condition of the kidney in which there is an increased permeability to the drug. The amount of dye passed does not depend on the amount of urine in which it is passed; 40 per cent. has been recovered in 5 c.c. of urine.

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A CASE OF CHRONIC PARALDEHYDISM *

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The infrequency of chronic paraldehydism warrants the report of this case. I know of but three other cases reported in literature. This patient first came under my observation in the psychopathic wards of the Philadelphia General Hospital under the services of Dr. F. X. Dercum, with whose kind permission this report is made possible. In these wards one has the opportunity of studying many cases of alcoholic addictions, as well as morphin, laudanum, cocain and opium habits acquired by individuals. Less frequently are seen patients with the craving for other drugs, as caffein, strychnin, chloroform and acetanilid.

On account of the symptoms and nervous manifestations noted in this case, I was led to believe that it was due to some cumulative toxic action of some other drug than those classed in the above category. Close questioning, however, revealed that I was dealing with a case of chronic paraldehydism.

Paraldehyd is a product obtained by the action of dilute sulphuric or nitric acid on an aldehyd. It is a colorless liquid with an ethereal odor and disagreeable pungent taste. It is readily soluble in alcohol, but less so in water. It is a reliable hypnotic and nervous sedative, being almost equal in its soporific effects to chloral, though its action is less persistent and requires a more frequent repetition in its administration than chloral. It causes a sensible fall in arterial pressure, but is not so depressing to the heart as is chloral. It strengthens and slows the heart action, instead of weakening it. It produces a sound sleep which is refreshing to the patient. It is a useful hypnotic in insomnia from various causes, particularly in fevers, mania and hysteria, and has been used successfully as an antispasmodic in asthma and in the treatment of tetanus. It has no analgesic properties. Its disadvantages are that it has to be given in comparatively large doses and it has a disagreeable taste and odor. The dose of paraldehyd is from 20 minims to 2 fluidrams; but the latter quantity has frequently been exceeded without any ill effects. Very few cases of poisoning resulting from this drug are recorded. In one case on record the patient recovered from a dose of 3½ ounces after thirty-four hours of sound sleep. (MacKenzie, Douglas, Isle of Man.)

Chronic paraldehydism is infrequently seen. The individual presents a train of symptoms not unlike those observed at times in delirium tremens. Tremulousness, restlessness, mental anxiety and agitation with incoherent speech are most frequently noted. Emaciation, anemia, gastric derangements and cutaneous eruptions are also observed.

REPORT OF CASE

Patient.—J. R. T., white, American, aged 47, salesman, was admitted to the hospital Oct. 15, 1909, with chief complaint of insomnia and nervousness. He had been using alcohol for a long time, but never to excess; used tobacco to excess. He had a brother in an insane asylum suffering from recurrent mania.

The patient dated his present trouble to five years before admission when he was in a hospital for treatment for insomnia, from which condition he had suffered for the past twenty-five years. While in the hospital he received 1 fluidram of paraldehyd at bedtime with the desired result of a sound sleep. After four weeks' stay in the hospital he was discharged as cured of his insomnia. For the next three years he abstained from the use of paraldehyd. The insomnia then recurred and he gradually began to resort again to this drug to alleviate sleeplessness. At first 1 fluidram sufficed to induce sleep, but gradually he increased the dosage until during the year previous to admission he became so enslaved to the drug that he took on the average of 2 fluidounces daily to produce the desired hypnotic effect. After each such dose he felt intoxicated, this being followed later by a state of contentment; a panorama of beautiful pictures and recollections of pleasant things, long forgotten, passed through his mind in rapid succession; he felt exhilarated and appeared stronger. He had not noticed any ill effects from its use on the stomach but had observed a tendency toward looseness of the bowels. A sound sleep would generally follow the administration of 6 or 8 fluidrams of the drug and on awakening his head would always be clear. Though his hands and feet perspired, yet they felt cold.

Examination.—The patient was a small, stockily built white man apparently much older than his years. He was very restless and continually interrupted to ask questions. While in bed he refused to lie down, but sat up and was forever taking notice of his environment. His face was erythematous, the small capillaries were markedly dilated and there was a prominent cyanotic tinge to the facies. The nose had the appearance of an acne rosacea. The hair was thick and almost gray, skin warm and moist. His eyes were of medium size and reacted to light and accommodation. A prominent arcus senilis was present. The vessels over the entire body showed evidence of an existing arteriosclerosis. The lymph-glands and muscles were normal. The patient showed a fine tremor of fingers, lips, tongue and facial muscles, much more marked than is commonly seen in alcoholics. The hands were cyanotic, fingers broad and clubbed. The buccal mucosa was congested. The tongue was dry, coated and fissured, large and centrally protruding with fine tremor. The teeth were in bad state of preservation. The chest was rounded and barrel-shaped. The skin over the thorax was mottled and showed some acne lesions. The lungs and heart were normal; the abdomen flabby and distended, liver and spleen were not palpable. Ophthalmoscopic examination of the eyes, and examination of urine and blood proved negative.

On the evening of admission insomnia was marked. The patient slept but a half hour at a time, although under the influence of powerful hypnotics, as the following which was repeated three times during the night:

	Gr.
Sod. bromid	xxv
Chloral hydrate	xv
Hyoscin hydrobromid	1/100

During the entire night he was restless and constantly craved for a drink of paraldehyd. He drank large amounts of water and expectorated freely. The following night the same treatment was administered, but with very slight effect on the insomnia. He remained in the hospital for one week and was discharged with no perceptible improvement in his condition.

Age of Parents and Expectancy of Life of Children.—The expectancy of life of those born at the maturity of the parents is about fifty years, and at the extremes about half that figure. Now, as the object of reproduction is to reproduce, births in these late years are in a collective sense valueless.—R. J. Ewart in *Eugenics Review.*

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* Read before the Philadelphia Psychiatric Society, Nov. 16, 1911.

SHORTENING AND ADVANCEMENT METHODS WITHOUT EMPLOYING SUTURES UNDER TENSION

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I was led to attempt to devise new methods of shortening and advancing ocular muscles, first, by the great variety of such methods, indicating that no one is entirely certain of results, and, second, by the constant repetition of the necessity for marked overcorrection to allow for subsequent slipping.

The great defect in all methods of which I have seen descriptions is that the sutures are under the elastic pull of the muscle, thus violating one of the important principles of surgery in relation to suturing. The problem, then, is to devise methods in which either (1) no suture—in the sense of being employed to hold two parts together—is used, or in which (2) if such sutures are used, they are so supported as to be under no tension. At first thought one is tempted to believe that the above propositions are impossible but, in my opinion, the methods here described will prove to be satisfactory solutions.

The solution of the first proposition was suggested to me by the method of shortening saddle-girths employed in the military service. The girth is made of many strands of horse-hair rope. The shortening is done by looping each strand about a piece of rope run transversely. The two marginal strands are fastened securely and the girth is shorter an amount equal to the circumference of the rope. The only force acting on the rope is one of constriction and there is no cutting force acting on the strands of the girth. There can be no slipping as the greater the pull the more secure is the point of shortening.

This principle may be applied to an ocular tendon as follows in the following manner:

1. Expose the entire tendon to clear view.
2. Elevate tendon on a spatula, about 1 cm. in width, which will flatten out the tendon and aid materially in the next step of the procedure.
3. Divide the tendon longitudinally, preferably by a blunt separation of the fibers, into four strips of equal width.
4. Loop a strand of twenty-day chromic catgut around each strip of the tendon, as shown in Figure 1. This will be more easily passed if made flexible by moistening.
5. Throw slack into the tendon by any convenient means such as a Prince forceps. While held thus the catgut is straightened till taut. This will throw around it a loop of each section of the tendon, as shown in Figure 2; the four loops should then be slid along the catgut till in contact with each other.
6. Secure each marginal strip, as shown in Figure 2, which will prevent those strips from becoming unlooped. Tie ends of catgut over the tendon, but not tight enough to bunch it, thus avoiding any constriction. The tendon will be left flat and about its original width. Close conjunctival wound.

It is evident that the tendon is shortened by the circumference of the catgut, therefore the amount of such shortening may be varied according to the size of the gut or by the number of strands used. It is also evident that there is no tension on the catgut, consequently there can be no tendency for it to cut the tendon. The latter can, of course, stand the slight increase of tension when unaccompanied by cutting, in fact such increase renders more secure the point of shortening. This fact renders unnecessary the bandaging of both eyes which is a great advantage.

The shortening is equal throughout the width of the tendon. By dealing with each half separately, however, the shortening may be made unequal if correction for cyclophoria is indicated. A doubtful point is the possibility of the loops straightening on the absorption of the catgut, but there is no reason why cicatrization should not be as prompt and secure as by any suture method.

The amount of shortening necessary to correct even great defects is but little if permanent. For instance, a permanent shortening of 3 mm. is equivalent to 14 degree of arc. Catgut 1 mm. in diameter, therefore, will shorten the tendon 3 mm. This, however, does not mean an equal shortening in the total length of the muscle, owing to the stretch of the muscle-tissue. If a muscle is very weak the pull of its more powerful opponent may even stretch it and reproduce the original defect. For this reason I favor a partial tenotomy of the more powerful muscle by the method shown in Figure 6. The cut near the insertion is a central partial tenotomy including all but two or three fibers at each margin. The effect is graduated by the length of the lateral cuts, and one equal to a complete tenotomy may be obtained as well as very slight effects suitable for low degrees of heterophoria. I devised this method several years ago and have used it with excellent results in many cases.

It remains, therefore, for experience to determine how much shortening of the entire muscle can be expected from a definite shortening of its tendon. This, as mentioned before, would depend on its tone and strength as compared to that of its opponent. The slight possibility of the loops straightening on the absorption of the catgut led me to consider the second proposition and to solve it in the following manner:

1. Expose entire tendon and raise on spatula.
2. Separate from each margin of the tendon a strip about 1.5 mm. in width.
3. Place a loop of twenty-day chromic catgut (made flexible by moistening) about each strip, as shown in Figure 3. Care must be taken to have it in the center of the tendon when drawn moderately snug, otherwise there may not be enough tendon available to make the loops.
4. Slack the tendon and, while held so, straighten the catgut by pulling its two ends in the directions indicated by the arrowheads in Figure 3. This transfers the double half hitch from the catgut to the tendon. Slide the two loops of the double half hitch into close contact. Then, still holding the slack, tie the catgut snugly over this double half hitch, but without constriction, as the gut is not intended to take any tension, but simply to prevent the double half hitch from straightening; with large sizes of gut the knot will be quite large. In my case No. 3 was used, and while the knot was large it was easily covered by the conjunctiva and caused no particular trouble.
5. The central section of the tendon is now slack by the amount of shortening of the margins and may be tucked or advanced by any method preferred, and the sutures employed will be under no tension unless the attempt is made to exceed the marginal shortening. I prefer to pass this holding suture of 00 chromic catgut exactly as in Verhoeff's method of advancement, but

through the point of insertion instead of the sclera. This suture should simply hold the tendon in close contact with the globe, carefully avoiding undue constriction. It seems to be proved that an advanced tendon becomes attached back to the original point of insertion, therefore there is no use in placing the holding suture near the cornea, the same result being secured by bringing a point farther back on the tendon up to the line of insertion. The concluding procedure, of course, is to suture the conjunctiva.

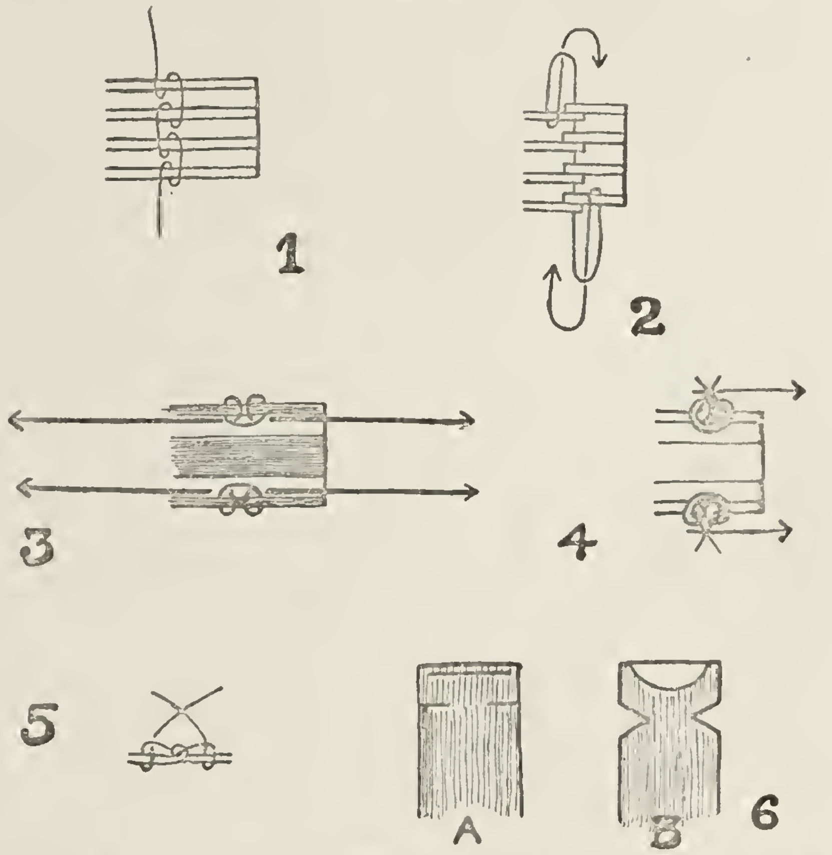
The double half hitch in the tendon will probably become a double loop, as shown in Figure 4, but it cannot straighten because of the knotted catgut. This may be proved by using two pieces of string to represent tendon and catgut. When tied as described, the pieces representing tendon will break without slipping; consequently the weak pull of the muscle can have no such effect. Therefore the shortening is equal to twice the circumference of the catgut employed. With No. 3 catgut, which is about 0.75 mm. in diameter, we would shorten the tendon about 4.5 mm. This should be sufficient, in almost any case, to support the central section of the tendon as it is certain there can be no slipping until the chromic catgut is absorbed. Long before that occurs, the central section should be firmly attached and will serve to support the marginal strips, should they need it, which is very unlikely. In any deviation requiring a greater shortening than 4.5 mm., the effect should be divided between the two eyes. With this method, as in the first, the amount of shortening may be varied equally or unequally, according to the indications for cyclophoria.

For equal sizes of catgut, however, it gives double the shortening because two loops are made. If, in correcting for cyclophoria, only one loop be desired, the method of finishing the catgut to prevent straightening of the loop is shown in Figure 5. As in the first method, and for the same reason, only the eye operated on need be bandaged. Both operations may therefore be called office operations. Because the suture is free from tension so long, thus giving good chance for firm attachment, it is thought that but little overcorrection will be required and that only for the stretch of the scar tissue and of the muscle.

All things considered, it is thought that this method is preferable to the first, although a little harder to perform. The best feature is an attachment to the globe which is under no tension, even when the muscle is in action. When we learn to estimate closely the amount of shortening to expect in an entire muscle from a definite shortening of its tendon, we shall be able to figure mathematically the size of catgut to use and the number of loops to make. At least, by this method we eliminate one great cause of uncertainty in results, namely, the slipping that so frequently occurs in the first few days after the operation. It is thought the final stretch of the scar tissue will be less, as the point of contact is free from tension for so long.

After working out the details of this method on rubber-band models it became necessary to find a suitable case. A Mexican was soon found with a blind exotropic eye (10° arc). He gladly consented, in order to have his personal appearance improved. The second method was used, as considerable effect was desired all in one eye. It was rendered more difficult than usual by a vascular pterygium. As far as the peculiar technic of this method is concerned, no difficulty at all was encountered, in fact, in my opinion, it is easier than the scleral stitch methods and not so painful. The marginal strips looped easily. The central section was slack and easily sutured without tension to the line of insertion, being shortened about 4 to 5 mm. In order to give the method as severe a test as possible, only the eye operated on was bandaged and the patient was allowed to get off the operating table and go to work at painting, in fact he stopped only while the operation was being performed, for he was at the time engaged in painting the hospital operating room. On the second night he got drunk and was so disorderly that confinement in the guardhouse was required. In spite of all these unfavorable conditions there was no slipping whatever.

It is thought that this operation combines the advantages of the tuck and advancement without the disadvantages of either. It may prove to be a good plan to so modify the above-described technic as to include the Tenon capsule in the shortenings. This could easily be done by making an incision through it along each border of the tendon and by then treating it as a part of the tendon. This would save the trouble of dissecting it from the tendon, which procedure frequently is accompanied by troublesome hemorrhage.



Figs. 1-5.—1. Method of passing loops. 2. Catgut loops, to be drawn snug before ends are tied. 3. Method of placing double catgut loops. 4. Double loop transferred to tendon strips. 5. Catgut loops, to be drawn snug and ends tied. 6. A shows diagram of incision; B, the effect.

In case any reader may desire to try this method and the descriptions and diagrams are not sufficiently clear, I will gladly furnish models showing unmistakably all the details of the various steps. In the military service one is frequently handicapped by being stationed where ophthalmic work is scarce, which is my situation at present. Suitable cases are rare among soldiers, as it is only in exceptional instances that cases of strabismus are enlisted. Therefore it will take me a long time to get a sufficiently large series of cases to prove the value of the methods.

My one case, however, proves the technic to be not only practicable, but very easy. Consequently the method is announced thus early in the hope that some of those who have a large amount of such work may be persuaded to "try it out."

A FINGER-GUARD

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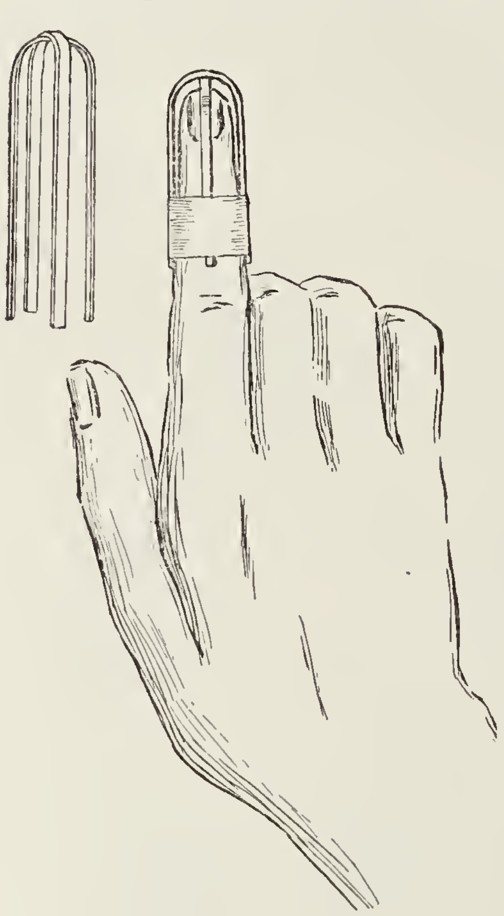
This protective device I have found very practical and useful in all cases of contusions received at the ends of fingers and toes, as well as after amputations of these members. Particularly will the guard be indicated at these points named where cicatricial tissue has been deposited or is being deposited during the healing process. The guard will be found useful in this class of injuries received by mechanics and workingmen who are obliged to continue at their work for economic reasons while the fingers are still "very tender." All blows or contacts to the injured member, it will be noticed, are received on the metallic breastwork or conical point, and the force of any jar and impact is thus carried down and received on the body of the finger or the healthy, normal tissue, and the shock to the affected part is, consequently, greatly lessened and better distributed than if received directly on the primary injury.



Finger-Guard.

At tinsmiths may be secured strips of tin or zinc, about 1/16 or 1/8 inch wide and approximately 4 inches in length (strips of cardboard so cut will answer nicely if the former material is not at hand). Two of these pieces or strips should be bent to fit over the end of the finger in loop or horseshoe form, each loop being placed at right angles or crossing the other, flat side down, so that there is an anterior and a posterior, as well as two lateral bars (four in all), extending downward nearly to the second phalangeal joint, or lower, if this point is involved in the injury. A strip of adhesive plaster about ½ inch wide is now bound firmly around (it may be split between the bars if member tends to swell much without impairment of anchorage) the finger covering the distal ends of bars to the same depth, or it may lap over the distal ends on the tissue of the finger; the cage or guard will then be securely held in a firm position.

A turn or two of gauze, to be first applied when strips are bent, will protect skin of finger from edges or ends of tin and prevent laceration, or the edges may be bound or rolled in adhesive plaster for the same purpose. A space of from ⅛ to ¼ inch may be left between the end of the finger and the inside of the guard through which the wound may be dressed from time to time.

The whole contrivance may then be closed with turns of a bandage or may be left, if desired, with strips of metal exposed

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ACETONURIA AND THE RELATION OF ACETONE TO "ACID INTOXICATION" *

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The purpose of this paper is to report progress on some investigations regarding the nature of acetone and of its relative importance in the symptom-complex known as "acid intoxication." The present conception of this condition is that the toxemia is due to the acid qualities of the acetone bodies, and that the acids, namely, diacetic and beta-oxybutyric acids, although not in themselves toxic, produce a condition of toxemia by uniting with the fixed alkalies of the blood. The blood no longer being able to extract the poisonous carbon dioxid, the subject succumbs to "internal suffocation" from its accumulation in the tissues, the acids being excreted as ammonia compounds, resulting in a larger excretion of ammonia and a consequent diminution of urea.

Ewing[1] reports a study of acid poisoning by injecting intravenously eighth-normal to fourth-normal hydrochloric acid into rabbits. He found that they could stand large quantities of acids slowly administered (one receiving 1,485 gm. in eleven days), drowsiness being the chief symptom, with no dyspnea and no fatty degenerations of the liver or kidneys. He gives the following objections against the purely acid nature of diabetic coma: Munser and Strasser reported cases with acetone and diacetic acid but no oxybutyric acid; coma may improve while the urine is still acid; alkalies may not reduce the urinary ammonia; miliary tuberculosis and erysipelas have been found to reduce the carbon dioxid of the blood. Ewing concludes that some process is responsible for both coma and acids. He is of the opinion that none of the principles of the theory of acid intoxication have been proved, namely, carbon-dioxid asphyxiation, degenerations of vital organs by withdrawal of alkalies and reduced alkalinity. He concludes that more fundamental knowledge of the source, occurrence, chemistry and physiology of the acetone bodies is needed before correct interpretation can be obtained. The appearance of these bodies in such a variety of toxic and debilitating conditions demonstrates that they must play an important part in the pathology of metabolism. An attempt, therefore, to know more of their nature and to become more familiar with their properties is at least worth while.

From the experiments of Knoop and others it seems to be definitely settled that the acetone bodies are derived principally by faulty oxidation of fat and fatty acids, although they can be formed to some extent from proteids. This abnormal splitting of fats can take place during abnormal catabolism or during faulty digestive processes in the intestine. As proof of the latter contention can be offered the following data: Geelmuyden noticed acetonuria after adding olive oil and butter to a normal diet. Neuberg and Blumenthal found that butyric acid by mouth increased acetone output, while subcutaneous injection did not, ascribing this to activity of intestinal bacteria. Beer and Blun fed organic acids to diabetics and found an acetone output in each instance. Schwartz found that fatty diet increased acetone output in diabetes but not in health. Geelmuyden

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* Read before the Fort Wayne Medical Society, Oct. 31, 1911.

[1] Ewing: Arch. Int. Med 1908, ii, 330 and 448.

ound acetonuria after ingestion of sodium salts of liacetic acid in health. In cyclic vomiting acetone is ound in the stools and vomitus. Acetone formed in he intestines reaches the liver by direct route in its nost concentrated form and its destructive action, if ny, would be exerted on the liver. Acetone is excreted y the lungs and kidneys, where again it would be conentrated and exert its deleterious action if any. In ccord with this idea are the experiments of Embden, Minkowski, von Schroeder and others, which showed he liver to be the principal seat of acetone, that the ynthetic processes that change ammonia into urea, etc., ake place in the liver and that the appearance of large uantities of ammonia in the urine is due to disturbed iver function.

Acetone is a thin colorless fluid with a peculiar fruitike odor and belongs to a class of compounds produced y incomplete oxidation of secondary alcohols. It will lissolve fat, resins and dehydrate tissues, having such owerful dehydrating properties that in using the cetone method for paraffin sections, the water from resh tissue can be entirely extracted within twenty ninutes, thus allowing direct transfer to paraffin. Acetone and its associates, diacetic and oxybutyric acids, re possibly being constantly formed in minute quantiies in normal metabolism, although, unfortunately, it s impossible to determine this accurately. In certain liseases some of the intermediate products of catabolism (faulty?) appear in the urine, especially in such acute onditions as acute yellow atrophy, phosphorus poisoning nd acute toxemias, in all of which there is rapid lestruction of body tissues with selective action on the iver and kidneys. They constantly appear in lesions of he pancreas, which fact is another point in accord with he intestinal origin of some cases of acid intoxication, ince disturbance of pancreatic function would reduce ligestive activity in the duodenum with resulting faulty leavage of fats.

It is a well-known fact that, under conditions of owered body resistance, substances which ordinarily are nert may have considerable toxic power; for instance, Howland and Richards have shown that while in health s high as 18 gm. of indol was innocuous, yet under owered resistance 0.25 to 0.5 gm. was extremely toxic nd produced vomiting, hematemesis, blindness, convulions and death in animals. As regards the toxicity of he acetone bodies it can be said that diacetic and oxybuyric acids have been found to possess absolutely no lirect toxic power. Acetone has been found to possess, vhen taken by mouth, an intoxicating power similar to hat of alcohol. Dreschfeld took 20 gm. without sympoms, but by injecting it subcutaneously in rabbits, after ive or six injections, produced coma, slow breathing, onvulsions and albuminuria. Kussmaul tested its oxicity on dogs and rabbits and concluded that it was ess toxic than chloroform and slightly more so than lcohol which it resembled in action.

It is said that oxybutyric acid is the precursor of liacetic acid and acetone the final product of the series; et there is no good reason for doing so except the order f their appearance in the urine, the similarity of their hemical formulas and the fact that diacetic acid when eated changes to acetone. Against this view is the fact hat acetone can be readily formed by a number of other ubstances.

Naunyn believes that both acetone and diacetic cid are direct derivatives of oxybutyric acid and leclares that he has always found it present in the urine when either of the others was present. In the natural course of synthetic chemistry acids are formed from alcohols instead of vice versa. Dakin and Wakeman have shown that the administration of sodium acetoacetate is followed by the urinary elimination of betaoxybutyric acid and that minced liver-tissue from dogs will convert aceto-acetic acid into hydroxybutyric acid, the rate of reduction being quite rapid at the beginning of the action in the incubator. This is just the reverse to the common understanding of their order of formation.

The acetone bodies appear in the urine in diabetes, sometimes in cancer of the stomach, sometimes after anesthesias, in starvation, psychoses, in certain diseases of children, acute fevers, sometimes in pregnancy, in certain poisonings, after extirpation of the pancreas, in cholera, pneumonia, Vincent's angina, and as an independent disease, i. e., cyclic vomiting and, as described by Anders, where there are fatty acids in the stomach and intestines (so-called enterogenous and alimentary acetonuria). The manifestations of toxemia from the acetone bodies vary with the individual, and consist of circulatory and cerebral phenomena, nausea, vomiting, tachycardia, pruritis, vertigo, coma and convulsions. The vomiting center is usually first involved; this is followed by coma and other toxic symptoms. The liver and kidneys undergo more or less rapid degeneration, which may be in the form of hemorrhagic infiltration and central necrosis, but usually is in the form of fatty degeneration, resembling acute yellow atrophy. Bacterial resistance is lowered, resulting in the entrance of infection, and pyelonephritis develops.

Toxemia from the acetone bodies is then a complex condition causing essential changes in the blood-vessels, excretory organs and brain, ending in acute degeneration of the liver, the fulminating cases having symptoms identical with acute yellow atrophy. As a clinical index of this form of toxemia (in pregnancy) urea estimations were found to be without value. Ewing then proposed estimating the ammonia nitrogen, which was also found to be unreliable. Attention has also been given to the condition of the kidneys as evidenced by the appearance of albumin, pus and casts in the urine, but we now know that the kidney lesions are secondary phases of the toxemic condition, lowered bacterial resistance and the excretion of the irritating acetone bodies being responsible for them.

In order to have a clear understanding of the import of acetonuria in pregnancy, I have so far tabulated ninety urinary examinations in different pregnant stages. According to the clinical findings they are divided into four groups; normal pregnancy, nephritic cases, neurotic cases and toxemias. From these data, the following points have been gathered: In normal pregnancy, there were no pathologic urinary findings except occasionally in the last two months a trace of sugar. In the nephritic cases with headache, occasional nausea, vomiting and edema, the urine showed large albumin percentages, casts, usually some pus and occasionally indican. In the neurotic cases, the urinary findings were negative. The toxemia cases may show nausea, vomiting, usually pernicious in character, severe headache, intestinal infection, dizziness and eclampsia. The urine showed acetone in every case and diacetic acid in 20 per cent. of the cases. Pus cells were always present and during the late stages of toxemia traces of albumin and casts appeared. From these data, it is my opinion that the principal reliance should be placed on the appearance in number and quantity of the acetone bodies in the urine as danger signals of toxemia. From the foregoing statements it may be gathered that acetone is apparently the most toxic of the acetone bodies.

The experiments on animals by injection of acetone caused death, which however, was attributed to other causes, because the symptoms did not conform with dyspneic coma in that rapid breathing did not occur. To test the toxic power of acetone, I made the following comparative tests by injection of guinea-pigs with various combinations of pure and impure acetone. Realizing that it would be impossible to reproduce the state of "insidious and continuous saturation of the blood," as is found in man, I selected a dose that would have a slight intoxicating effect. I found that 1.5 c.c. of a 25 per cent. solution of acetone per 100 gm. by weight of pig could be given with slight drowsiness as the only symptom of the initial dose. This dose would be large if applied to man. It must be understood, however, that such a comparison cannot be made, since we do not know to what extent the factor of resistance of species influences the dosage. For instance, I gave 0.75 c.c. of methyl alcohol to a 200 gm. pig daily for a period of twenty-three days, only the first half dozen doses producing intoxication. This proportionate dosage, applied to a man weighing 150 pounds, would mean 8 ounces of methyl alcohol daily for twenty-three days. Considering that 8 ounces is usually a fatal dose of methyl alcohol, it can be readily seen that the resistance of species plays a large part here, since the man would probably not survive even one dose.

REPORT OF EXPERIMENTS

Experiment 1.—Guinea-pig weighing 300 gm. given five doses of a 25 per cent. solution acetone in water in a period of twenty-four days; the first two doses were 10 drops, the remainder 5 c.c. The first dose caused some itching of the skin, the second, slight drowsiness and a few spasmodic twitchings of facial muscles. The third dose was followed by deep stupor lasting seven hours with respirations of 40 per minute. The fourth dose was followed by coma, cyanosis and rapid breathing, 86 per minute, also clonic alternating spasms involving individual sets of muscles in neck, face and extremities. Coma lasted two hours, followed by stupor. The pig was stupid and thirsty next morning. The fifth dose caused only irritability followed by drowsiness. The sixth was followed in about twenty seconds by deep coma, cyanosis and rapid respiration, 98 per minute. Some type of convulsive spasms as in the fourth injection except stronger and occasionally rigidity and opisthotonos. The animal revived in about an hour with respirations of 70 per minute, drowsy, thirsty. Strong odor of acetone in room. Drowsiness continued for nine hours accompanied by weakness in legs. The animal then relapsed into deep coma, occasionally waking up slightly and was dead next morning. Post-mortem showed hemorrhagic extravasations at sites of injections with mummification. No pathologic changes were found in the liver. Bladder urine showed trace of acetone.

Experiment 2.—Deep coma was produced in a 200 gm. guinea-pig by 3 c.c. 25 per cent. acetone, and then 3 c.c. saturated solution of sodium bicarbonate were injected without apparent effect on coma.

Experiment 3.—A pig having received three injections of 5 c.c. 25 per cent. acetone solution in water on successive days, each injection causing coma, was on the following day given 5 c.c. of a 25 per cent. acetone solution in 0.25 per cent. hydrochloric acid solution (representing gastric juice acidity). This was followed by some uneasiness, itching of skin and slight drowsiness lasting about thirty minutes. On the next day an injection of 5 c.c. acetone solution in water again produced deep coma.

Experiment 4.—A 200 gm. pig was injected with 3 c.c. 25 per cent. acetone in 0.25 per cent. hydrochloric acid daily for thirteen days without apparent effect except slight drowsiness during last six days and some emaciation.

Experiment 5.—A 200 gm. pig was injected with daily doses of 3 c.c. 25 per cent. solution methyl alcohol during a period of twenty-three days, the first nine injections producing coma lasting about an hour with slow gasping respiration and with ears, face and extremities bright red, followed by several hours' drowsiness and unsteady gait. The pig was not emaciated and not much damaged. The last ten injections caused only slight intoxication, the pig apparently becoming accustomed to it.

Experiment 6.—Five c.c. saturated solution of sodium bicarbonate was injected into a pig without effect, except at site of injection.

Experiment 7.—A 200 gm. pig was injected with 3 c.c. 25 per cent. acetone solution in saturated solution sodium bicarbonate. The first dose caused only drowsiness, the second dose stupor, the third dose was followed in two minutes by stupor, hiccough and tremors of extremities. In ten minutes the animal began to have clonic spasms of face and neck muscles. Respirations could not be counted owing to continuous tremors of body; continued in deep coma and died in about ten hours. Strong odor of exhaled acetone in the room. Bladder urine showed trace of acetone. Post-mortem showed lungs bright red and right heart filled with blood. Lower lobe of liver showed a yellow area about the size of a grain of corn. Microscopic examination of liver and kidneys showed quite marked cloudy swelling and fatty degeneration of both. The yellow area in the liver showed complete fatty degeneration.

Experiment 8.—A 300 gm. pig was injected daily with 1 c.c. of 25 per cent. solution of acetone for thirty-two days. At first the injection was followed by a period of quiet, but after several days the injections were followed by periods of excitement, jumping and whirling rapidly and with itching of skin. After about ten injections some unsteadiness of gait developed and the animal seemed delirious after the injections. After the last three or four injections of the series, the animal apparently developed mania and had to be segregated on account of biting other pigs. Both hind legs became partially paralyzed. Later the excitement after injections was replaced by stupor, dulness and somnolency all the time, causing death from starvation.

Experiment 9.—A 400 gm. pig was injected daily for twelve days with 5 c.c. 25 per cent. acetone solution. The first injection was followed by slight drowsiness; the second caused unsteady gait; the third, fourth and fifth caused stupor in from one to two and one-half hours. The sixth injection was followed in ten minutes by severe intermittent rapid clonic convulsions, alternating in individual sets of muscles lasting about one-half hour. The animal was then somnolent for an hour when the convulsions reappeared lasting four minutes; but it recovered in five hours and was very thirsty. The twelfth injection was followed by sudden death in one minute. Post-mortem showed cyanosis; both auricles were filled with blood. The mediastinum was filled with blood. The liver was quite large, hard and brittle; the stomach and bowels were filled with food, no emaciation. Hemorrhagic infiltrations at site of injections and muscles beneath were dry and tore easily. There was an odor of acetone in internal organs. Microscopic examination of liver showed beginning fatty changes throughout the liver. The protoplasm in most of the liver-cells was breaking down, leaving vacuolated cells containing fat and contracted nuclei. The blood-vessels were engorged and there was hemorrhagic infiltration into all of the intercellular spaces. Microscopic examination of one of the hardened hemorrhagic areas of injection showed a sterile mummification of the subcutaneous and muscular tissue. The blood-vessels were hardened and in numerous places broken up like a clay pipe-stem with hemorrhage into the tissue spaces.

Experiment 10.—A 200 gm. pig was injected with 8 c.c. 25 per cent. acetone solution; result, coma with respiration of 92 and death in a few hours.

Experiment 11.—Another set of experiments similar to the foregoing was made with a different sample of acetone. The oxicity of this sample was found to be insignificant. On esting it, the sample of acetone was found to be impure and ontaining a large amount of oxidizable substance.

CONCLUSIONS

1. Subcutaneously injected, acetone has a slow cumuative toxic power which may, during periods of individal susceptibility, effect serious or even fatal damage.

2. Subcutaneously injected, the toxic power of acetone s much greater than methyl alcohol.

3. Guinea-pigs not only have an individual susceptiility, but have daily variations of their individual usceptibility.

4. Acetone dehydrates and hardens tissue, is a local rritant and causes hemorrhagic extravasations.

5. If acetone is formed in the intestine or liver it nust be in a pure strong state at the site of formation nd would there exert its destructive action on the eighboring cells.

6. As shown by the above typical examples of experinents repeated several times, following a toxic dose of ure acetone, guinea-pigs develop coma, rapid respiraions and nervous phenomena, including itching, dizziess, muscular twitching, temporary mental disturbance, nd may develop convulsions in the form of rapid clonic pasms. The acetone is excreted almost entirely by he lungs.

7. Post-mortems on guinea-pigs killed by acetone oisoning show fatty degeneration of the liver and idney, with hardened and ruptured blood-vessels and emorrhagic extravasations.

8. Acetone is to be considered a far more important iagnostic sign of toxemia in pregnancy than urea or lbumin and should always be looked for as a premoniory danger signal of toxemia.

CASE REPORTS

The following cases serve to illustrate some of the onditions in which acetone is found, and some of them, n my opinion, point entirely to an intoxication due to cetone:

Case 1.—*Fatal Acetone Intoxication.*—A girl, aged 6, taken ick suddenly, with negative previous history, with fever and apid pulse, became drowsy and sank into coma with temperture 103 F. and pulse 140. There were no other symptoms. rinary examination was negative, except that a large amount f acetone was found but no diacetic acid. The patient died n the fourth day of illness. Post-mortem examination evealed no macroscopic lesions.

Case 2.—*Acidosis after Operation.*—Mr. J., aged 48, had had ttacks of summer diarrhea since childhood. In winter he sually had attacks of constipation, passing bloody mucus vith stools; stomach and bowels quite irritable, accompanied y heavy indicanuria. Examination of stools show dark cybala, very offensive, containing much undigested vegetable naterial, muscle-fiber and some fat crystals, pointing to panreatic indigestion. The patient was operated on for hemrrhoids and was given an opiate to lock the bowels. On he third day he became violently delirious, requiring three nen to hold him. At times he was apparently rational but ad very marked delusions. During these intervals he would ake food. Urine contained an excessive amount of acetone nd indican. This condition lasted for a period of eleven ays and gradually subsided under eliminative treatment with horough cleansing of the bowels. On two of the days when his attack was at its height, diacetic acid appeared in the rine. The acetone gradually disappeared with the symptoms.

Case 3.—*Fatal Acid Intoxication.*—Miss P., aged about 25, ell sick, with a temperature of 100.2 F., pulse 62. The atient vomited twice during the next day and had severe ontinuous headache. On the third day temperature was 102 F., there was headache, extreme nervousness, and constipation. The patient gradually grew weaker with prostration, complaining of pain in the abdomen; the breath was very offensive. Temperature fluctuated from 100 to 103, the patient was very nervous and vomited occasionally. She gradually went into stupor and coma; passed urine involuntarily; was delirious at times. Pulse gradually rose from 70 to 150 on the thirteenth day, at which time she died. Blood examination showed 12,600 leukocytes and polynuclear cells 82.6 per cent. Widal negative. Two ounces of urine obtained by catheterization for examination on the twelfth day showed specific gravity 1034, acidity 100 degrees tenth-normal sodium hydroxid, 4 per cent. albumin by volume, faint diazo reaction, acetone reaction was very heavy, diacetic acid very heavy, 0.8 per cent. of sugar and few pus cells (no sugar in urine at beginning of illness). Post-mortem showed a mass of calcified tuberculous glands retroperitoneally, and some congestion of the kidneys and pancreas. The tuberculous glands showed no evidence of activity. The colon was full of dark foul-smelling semisolid feces. Microscopic examination showed congestion of the kidney; pancreas was congested with slight interstitial hyperplasia. The liver was not sectioned.

Case 4.—*Light Typhoid with Severe Acetone Toxemia.*—Miss M., aged 22, had slight headache and malaise for a week, with constipation and chilly sensations. July 19 temperature in the afternoon was 102, pulse 85. July 22 blood-examination showed 70 per cent. hemoglobin, 10,000 leukocytes, Widal negative, polynuclear cells 60 per cent., large lymphocytes 23.3 per cent., small lymphocytes 13.3 per cent., transitional cells 3.4 per cent., no eosinophils. Urine showed specific gravity 1024, acidity 75 degrees tenth-normal sodium hydroxid, 0.03 per cent. indican, strong diazo reaction, strong acetone reaction and faint diacetic acid. July 23 the patient was removed to hospital, a rise of temperature to 102 followed, after which it fluctuated from 100 to 102.5. There was great prostration and excessive perspiration; tenderness in bowels. Patient was restless and sleepless and complained of pain in the right arm. July 24 small hemorrhagic spots appeared on both arms, which became very painful to touch. She could not move arms without considerable pain and it was necessary to swathe them in bandages, on account of pain caused by contact with bed-covering. Patient was constipated throughout sickness; pulse rose steadily from day to day and on July 25 stood at 145. Blood-examination, July 25, showed 17,900 leukocytes, 72.4 per cent. polynuclear, large lymphocytes 17.6 per cent., small lymphocytes 8.8 per cent., transitional cells 0.6 per cent., no eosinophils, mast cells 0.6 per cent., Widal incomplete reaction. July 26, pulse 150, patient was quite weak; there was considerable prostration with some cyanosis and tendency to light delirium. July 27 the muscular pains had extended through limbs and back; perspiration was quite heavy. July 28, pulse at noon was 156; at 6 p. m., pulse 168, temperature 102. Urinalysis on July 28 showed specific gravity 1028, acidity 60 degrees, trace of albumin, trace of sugar, a large amount of acetone, no diacetic acid, a few hyaline and granular casts, trace of blood-cells, some pus and many kidney cells. July 29, at 10 a. m., pulse stood at 172 and was very weak. Patient was *in extremis*. At 1 p. m. there was a slight hemorrhage from the bowels. Diagnosis: light attack of typhoid with severe acetone toxemia. Treatment was instituted in the morning for extreme toxemia, dram doses of bicarbonate of soda every three hours and digitalis, both tincture and infusion. Under this treatment the pulse dropped at 2 p. m. to 156; at 3:30 pulse was 130; at 6 p. m., 120; temperature, 101. July 30, pulse rose again to 175 at 4 a. m.; patient complained of extreme weakness; was so weak that she could scarcely talk or raise the head. Prognosis was made that the patient would live only a few hours; under digitalis, strychnin and bicarbonate of soda in large and frequently repeated doses, however, the pulse dropped to 120. Next day patient showed marked improvement; cyanosis was gone, mind clear, and patient felt a great deal stronger; at 3 p. m., pulse 125. July 31, temperature dropped to 98.6, pulse 120. Acetone test showed a faint trace. August 1, acetone test was negative. From this time on patient steadily improved and was discharged from hospital August 19; temperature normal, pulse 80.

Case 5.—*Pernicious Nausea in Typhoid.*—Mrs. R., admitted to hospital July 28, with temperature of 103.2, pulse 100, respiration 32, severe headache, constipation, slight nausea, continued in about this condition until August 14, with temperature 101.4, pulse 88, respiration 30; vomiting became pernicious, occurring after each meal, accompanied with severe headache and severe nausea. Temperature during illness fluctuated from normal to 102. August 22, she complained of pain in lower part of abdomen, intermittent in character. August 24, there was hemorrhage from bowels, large clots. Blood examination, August 24, showed 11,000 white cells; Widal, faint positive reaction; polynuclear cells 78 per cent. Urinary examination specific gravity 1026, acidity 60 degrees, trace of albumin, no sugar; indican 0.04 per cent., diazo reaction present, trace of diacetic acid and large amount of acetone, hyaline, granular and epithelial casts, trace of pus-cells and many kidney-cells. Lower part of abdomen was tender on palpation; temperature 100.4, pulse 108. September 2, temperature was 99, pulse 86, but patient vomited several times a day. Urine showed specific gravity 1010, trace of albumin, heavy acetone and strong diacetic acid reaction, few hyaline casts and 0.75 per cent. pus (by volume). Dram doses of bicarbonate of soda were now administered three times a day, under which vomiting occurred four more times and then stopped entirely, after having continued for five weeks. September 6, urine showed no acetone, but trace of albumin and 0.33 per cent. of pus. September 14, the patient was removed to her home, with still some pain in lower part of her abdomen. One month later she was again taken to the hospital and a small abscess was opened in a scar of the abdominal wall, which accounted for the abdominal pain and increase of polynuclear leukocytes.

Case 6.—Miss S., aged 21, single, domestic, constipated, with a temperature of 102.2, pulse 120, complained of frequent urination, spasmodic pain in right lower abdomen, nausea, vomiting and extreme nervousness. She had had previous attacks of this nature; no other illness. Physical examination showed well-defined mass in right inguinal region most marked when pain was present. Blood showed polynuclears 85 per cent. Urine on the day she entered the hospital showed 3 per cent. albumin, a few waxy and hyaline casts, and 0.5 per cent. by volume of pus. Strong acetone reaction, no diacetic acid. On the third day acetone disappeared coincident with marked improvement under treatment of sodium bicarbonate, 60 grains three times a day, hexamethylenamin (urotropin) 8½ grains three times a day, and autogenous colon vaccine 250 million. Improvement was shown on the third day and she left the hospital in one week.

Case 7.—Woman, four months pregnant, suddenly fell over in coma and died in twelve hours. Pulse was 130 to 150; temperature normal and respiration 40 to 50. Frothy mucus ran from mouth and diagnosis of pulmonary edema was made. Bladder urine catheterized just before death showed specific gravity 1035, acidity 130 degrees, no albumin or sugar, no pus, heavy acetone reaction and faint trace of diacetic acid.

Case 8.—W. C., aged 26, following ingestion of lobster salad had attack of vomiting and diarrhea lasting two days, followed by slight jaundice, fever and pernicious nausea. Urine examination showed specific gravity 1032, acidity 125 degrees, albumin 3.5 per cent. by volume, strong bile and acetone reactions, no diacetic acid. Sediment showed trace of hyaline casts. Blood showed 21,000 leukocytes, differential count normal, Widal negative. Stupor gradually developed and granular casts appeared in the urine. Examination of vomitus showed a sediment amounting to one-third the total bulk and consisting of changed blood-cells, no hydrochloric acid, but organic acids amounting to 105 degrees tenth-normal sodium hydroxid present. Lactic and butyric acids negative, acetone reaction strong. Diagnosis by consulting physicians: "Toxemia resembling acute yellow atrophy of liver." Patient died on the sixth day of illness. Post-mortem was not obtained.

902 Calhoun Street.

THE VACUUM-BOTTLE AS AN INCUBATOR

Henry S. Satterlee, M.D., New York

Recently J. H. Schrup[1] of Dubuque, Ia., described the use of the vacuum-bottle as a means of incubating bacterial cultures. As I have had some experience with the method I think that it may not be amiss, while interest in the subject is still fresh, to communicate a brief summary of the observations which I have made.

The vacuum-bottle occurred to me as a convenient expedient in a case of some urgency seen last June in the country where no laboratory method of incubation was available. I had never heard of a vacuum-bottle being used for this purpose before, and, after several satisfactory trials, it seemed so valuable a resource that I undertook some experiments to test its reliability under varying conditions. One series of experiments was made in June, 1911, during very hot weather, and I had intended, for comparison, to make a second series of tests during this winter.

In a preliminary series of tests with five vacuum-bottles, comprising three pints and one quart with cork stoppers, and one quart carafe with ground-glass stopper, there was an average drop of 4 C. in twelve hours and 5.5 C. in eighteen hours, which corresponds very closely with Schrup's observation.

I also found that plain water retained its heat better than any other liquid medium which I employed, and that the introduction of from one to three tubes in a single bottle made no appreciable difference in loss of heat, provided the precaution was taken of warming the tubes just before introduction.

From 40 to 41 C. (from 104 to 106 F.) seemed to be the best starting point to give an optimum growth from throat cultures in the minimum time.

For practical tests I made triplicate streak-cultures from the throats of diphtheria patients in the Willard Parker Hospital, using the regular slant tubes of Loeffler's blood-serum furnished by the New York Health Department, and placed one of each set in a quart vacuum-bottle, another in a pint bottle and the third, as control, in a laboratory incubator in the Research Laboratory of the New York Health Department. Each set of tubes was placed to incubate at the same time, and always within a half hour after the time of taking the cultures from the throat. The culture tubes were removed from the bottles at varying periods of time (from eleven to eighteen hours), and with their controls examined as to macroscopic and microscopic appearance of the growth.

In each experiment the following points were noted: (1) site and character of the exudate; (2) time of taking the culture; (3) time of beginning incubation period; (4) temperature of water in the bottles and of the incubator at the start and finish of incubation; (5) time of ending the incubation period; (6) temperature of outside air at beginning and end of the incubation period; (7) macroscopic appearance of the growth; and (8) microscopic appearance of the stained specimen.

The results of these experiments were very nearly uniform. The growth in the vacuum-bottle tubes was, in general, more abundant macroscopically and showed greater moisture; and in some of the positive cultures it was noted on microscopic examination that the Klebs-Loeffler bacilli appeared larger and slightly more numerous than in the control.

These differences were explained by the facts that the control tubes were at a constant temperature in the laboratory incubator at about 34.5 C., while the mean temperature of the bottle tubes was about 37 C., and that the bottle tubes were tightly capped with rubber, whereas the controls had, in most cases, paraffined cotton stoppers but no rubber caps.

For examining cultures and making notes on the findings I am indebted to Miss H. L. Wilcox, of the research laboratory, without whose valuable aid I could not have made these experiments with the necessary precision.

780 Madison Avenue.

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[1] Schrup, J. H.: The Journal A. M. A., Jan. 27, 1912, p. 273.

RELATION OF ALBUMINURIA TO INDICANURIA

ISRAEL BRAM, M.D., PHILADELPHIA

From the records of 500 specimens of urine examined in the clinical laboratories of the Medico-Chirurgical and Jewish Hospitals, during 1909 and 1910, including specimens from my own practice examined in my office, I find an apparent definite relationship existing between the occurrence of albumin and indican. I could find no previous record of such relationship in the standard works on clinical uranalysis. The following tabulation will illustrate the matter clearly:

	No. of Specimens
Albumin reaction, but no indican...........	187
Indican reaction, but no albumin...........	210
Albumin reaction with questionable trace of indican	4
Indican reaction with questionable trace of albumin	2
Neither albumin nor indican reaction.......	97
Total examined	500

This illustrates that it is not common to find albumin and indican present in the same specimen of urine, and when present, either one or the other will usually exist in so minute a quantity as to give a questionable reaction with the usual tests.

The tests used for the detection of albumin were those usually employed in the above-mentioned laboratories, namely, (a) the nitric acid contact test; (b) the heat test, and (c) contact test with Roberts' solution.

The test employed for the detection of indican was the procedure described by Daland, i. e., to 10 c.c. of filtered urine add 1 drop of a 1 per cent. solution of potassium chlorate, then 5 c.c. of chloroform, and lastly 10 c.c. of chemically pure hydrochloric acid, to be mixed thoroughly by pouring repeatedly from one test-tube to another. Within two or three minutes the indican, if present, is reduced to indigo, which dissolves in the chloroform and imparts a blue color to it. In about ten minutes the maximum coloration is reached.

The apparent relationship between albuminuria and indicanuria is a question to be solved.

717 North Eighth Street.

TWO CASES FROM CESAREA

A. R. HOOVER, M.D., TALAS, CESAREA, TURKEY

REPEATED REFORMATION OF STONE IN BLADDER

Patient.—A Greek, aged 76, in good general condition, presented himself at our clinic, complaining of painful micturition, strangury and often blood-tinged urine. Examination showed suprapubic scar and perineal scars; examination of bladder showed presence of stone.

History.—In August, 1905, patient was first operated on for stone in the bladder, through the perineal incision. The operation was performed at Talas American Hospital by Dr. Post of Beirut; and, according to patient's account, a very large, hard, nodular, irregular-shaped stone was extracted. The second operation for stone in the bladder was performed January, 1906, when a small bird's-egg-sized stone was extracted. The patient says that both perineal and suprapubic incisions were made. The third operation was one year later; through perineal incision, and a stone the size of an olive was extracted.

Operation.—The fourth operation was performed after an interval of four years, on Nov. 23, 1911, at the Talas Hospital, by the perineal route. A bird's-egg-sized stone was extracted and the patient made an uninterrupted recovery.

ACCIDENTAL COMPLETE INVERSION OF UTERUS

The status of midwifery practice in Turkey is well illustrated by the following case:

Patient.—A young American woman from the city of Cesarea came to us complaining of an almost continual hemorrhage since the birth of her child four months previously. Examination showed a well-formed woman, aged 20, extremely anemic; mucous membranes and conjunctivæ showing pale and bloodless. Local examination revealed a completely inverted uterus, contracted to normal size, firm in consistence, lying entirely within the vaginal cavity; the slightest manipulation caused blood to ooze from the exposed mucous membrane of the uterus.

History.—On being questioned the patient told the following story: "I had been well throughout this pregnancy, and, not anticipating any trouble, did not consult any physician but when labor pains came on I called a midwife to assist me. She made the usual examination and assured me that all was right and told me to have no fear. I brought forth my child with considerable difficulty, after which the midwife made another examination, and to my consternation said that there was a second child. She then tried to force the child out by pressing forcibly on my abdomen, but when that failed she began pulling at something from below. She pulled and pulled until she found it impossible to accomplish anything, when, on more careful examination, she found that what she was pulling at was no child at all, at which she became frightened, and, saying she could do no more, she left me to my fate. I did not realize what had happened but knew that something was wrong and I almost died from the effect of the ordeal through which I passed. Finally, after some weeks, I recovered somewhat but found that the hemorrhage continued and I decided to come and consult you."

Operation.—Median abdominal incision was made in the hope of being able to dilate the cervix forcibly and replace the uterus, although after a lapse of four months it was considered very doubtful. The cervix was found rigid and unyielding and after a few minutes' effort the replacement of the uterus was abandoned. The tubes and round ligaments were disposed of through the abdominal incision, after which the hysterectomy was completed *per vaginam*. The patient made an uneventful recovery, leaving the hospital in eighteen days.

The midwives of this country are for the most part untrained women who know little of the principles of asepsis, and in practice disregard them entirely. As a consequence puerperal fevers and pelvic trouble of all kinds are very common.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. ITS ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

ATOPHAN.—Phenyl-quinolin-carboxylic-acid.—Atophan is 2-phenyl-quinolin-4-carboxylic acid, $C_9H_5N.C_6H_5.COOH,2:4 = C_{16}H_{11}O_2N$.

2-phenyl-quinolin-4-carboxylic acid was described by Doebner and Giesecke in 1887 (*Annalen der Chemie-Liebig*, Vol. 242, p. 291), who prepared it by warming together pyroracemic acid, benzaldehyde and anilin in alcoholic solution. Its therapeutic action was described by Nicolaier and Dohrn in 1908 (*Deutsches Archiv für Klinische Medizin*, Vol. 93, p. 331).

Atophan crystallizes in small colorless needles, melting at 208°-209° C. It is insoluble in water but readily soluble in alkalies, hot alcohol and boiling glacial acetic acid. It has a slightly bitter taste.

Actions and Uses.—Atophan in doses of 0.25 to 0.5 Gm. (4 to 8 grains) increases uric acid excretion, within one hour. In doses of 2 to 3 Gm. (30 to 45 grains) the normal average uric acid excretion is doubled and sometimes even trebled in twenty-four hours. This action of atophan is said to occur both under purin-containing and purin-free diet. Its influence on uric acid excretion is stronger and more prompt than that of sodium salicylate. It does not increase the number of leukocytes, or affect the quantity of urine, or the amount of total nitrogen or of the purin bases or the phosphoric acid.

It is said to be useful in gout, particularly in the acute attacks, acting more promptly than colchicum and without undesirable by-effects. In non-uratic joint affections, particularly in acute articular rheumatism, the results reported are also said to be favorable, while the chronic forms seem to yield to atophan only in isolated cases.

Dosage.—In gout the dose is from 0.5 Gm. (7½ grains) four times a day to 1 Gm. (15 grains) three times a day suspended in large quantities of water. In order to prevent the precipitaton of free uric acid from the urine with possibly resulting renal colic, Weintrand considers it necessary to administer simultaneously 15 Gm. (225 grains) of sodium bicarbonate in the course of the first day and 5 to 10 Gm. (75 to 150 grains) on the following days. In articular rheumatism Heller prescribes daily doses of 3 to 5 Gm. (45 to 75 grains).

Manufactured by the Chemische Fabrik auf Actien, vormals E. Schering, Berlin, Germany (Schering & Glatz, New York). No U. S. patent. U. S. trademark No. 84,596.

Atophan Tablets.—Each tablet contains atophan 0.5 Gm. (7½ grains) and a small amount of cacao.

Therapeutics

THE PUERPERIUM

After the completion of the third stage of labor the physician should remain by his patient for at least one hour and should carefully watch the condition of the uterus, occasionally placing his hand on the abdomen over it so as to be sure that the organ shows a proper degree of contraction.

Shortly after the labor has been completed, many patients suffer a chill. While the active pains of labor are still coming and going, the patient usually feels abnormally warm, perspires abundantly, and eagerly desires to throw off the bed-clothing which has been placed over her. After the completion of labor the body is more or less covered with perspiration, and the blood and other discharges from the uterus, which vary largely in quantity, increase the moisture on the surface of the body. These two conditions coupled with the small amount of clothing tend to produce a sensation of chilliness indicated by shivering. Care should be taken as far as possible to prevent this by removing the wet cloths, pads and clothing from under her, and by covering the patient more warmly as soon as labor is completed. If the chilliness is severe and continued, one or two teaspoonfuls of whisky in some warm water may be given.

At the end of an hour, if the uterus is well contracted, if there is not a more copious discharge of blood than is usual, and if there are no untoward symptoms manifest, the physician may leave the patient. Before doing so, he should instruct the nurse to put the baby to the breast after from four to six hours, and also to have the patient urinate at the same time. The length of time before these duties should be attended to varies somewhat according to the time of day and the condition of the patient. If the patient is sleeping, and especially if it is in the late hours of the night and the baby and mother are both quiet, it is well to postpone them until the mother awakes in the morning.

The physician should see the patient again within twelve hours. The number of subsequent visits is determined by the progress or condition of the patient.

At his first visit the physician should inquire whether the patient has urinated, whether there has been an unusually copious flow, and whether the baby has nursed. He should feel the patient's pulse, and learn her temperature and respiration. He should also feel of the uterus through the abdominal wall in order to learn if it is still satisfactorily contracted.

If the patient is unable to pass urine, after she has been encouraged by delay until the bladder has become completely filled, she may be allowed to get up to do so. In some instances it may be necessary to pass a catheter. This should not be delayed until the bladder has become overdistended, on account of the danger of producing a temporary paralysis of that viscus. The catheter should be passed with strict antiseptic technic. The instrument, which is preferably of glass, should be boiled; the physician should sterilize his hands; the parts surrounding the opening of the urethra should be bathed in an antiseptic solution, and the catheter should be passed with the aid of the sense of sight so as not to introduce any vaginal discharge containing bacteria into the interior of the bladder. The passage of the catheter should be repeated at least twice a day, if the patient is unable to urinate voluntarily.

After-pains often cause great discomfort to women, and especially to multiparas. It appears probable that sometimes the severity of after-pains is diminished by securing thorough contraction of the uterus with expulsion of any clots which may be present after the completion of labor. Some believe that the administration of small doses of fluidextract of ergot, as for instance, 1 c.c. (15 minims) every four hours, will secure regular contraction of the uterus and the emptying of clots from its interior, with a diminution of after-pains. If one is sure that the pains are not kept up by the presence of clots within the uterus, codein may be given, in doses of ¼ grain, repeated every two hours until the pains cease. Quinin has often been found valuable in causing sufficient uterine contraction to prevent these after-pains.

The nurse should take the temperature, pulse and respiration of the patient three times a day, preferably at 8 in the morning, 2 in the afternoon, and 8 in the evening, and should record them for the information of the physician.

It was formerly common practice to have the nurse administer a vaginal antiseptic douche twice a day during the first week after labor. This custom has now been generally abandoned, and no vaginal douche is given unless there is some special indication for it; but the vulva should be bathed two or three times a day with sterilized water which, if there has been much laceration, may contain some antiseptic, such as phenol, or the bichlorid of mercury. The pads placed to receive the flow should be changed with sufficient frequency so that the patient may always be comfortable.

Until the secretion of milk appears in the breasts, the baby should be put to the breast at intervals of three or four hours. After the secretion of milk becomes well established, it will be necessary for the mother to nurse the baby at intervals of from two to three hours.

When the breasts become congested the weight causes discomfort and it is necessary to support them by a well-applied bandage which does not compress the breasts but simply holds them up on the chest-wall. If this congestion causes considerable discomfort it may be relieved by the application of ice-bags. Sometimes massage will give relief, but massage for this purpose must be applied properly and must not cause pain. The object of the massage is to empty the distended lymph-vessels and veins. Consequently, it should be directed from the circumference of the breasts toward the axillæ.

If the milk is scanty or is secured by the infant with much difficulty, the nipples are apt to be injured by the nursing; also when the nipples are deformed with a tendency to fissures they are more easily injured and erosions appear, and sometimes blood-serum forms little scabs on the nipples. Such nipples are very easily infected and the infection is apt to extend down into the breasts and cause abscess. The infecting germs may be on the skin of the breasts or may be brought there by the hands and fingers of the mother or nurse, or they may come from the skin of the child. Possible infection from any of these sources should be avoided. The breasts, and especially the areolar regions, should be thoroughly washed with soap and hot water before the first nursing and at least once a day during lactation. The nipples should be bathed after each nursing by some harmless antiseptic, like boric acid or a solution of alcohol. In the intervals of nursing the nipples should be covered with aseptic gauze. Infection may be avoided by forbidding the mother or nurse to take hold of the nipples with the fingers, and also by avoiding with greatest care contamination with pus from the child. This is apt to occur if there is a purulent discharge from the infant's eyes, or if there are pimples or pustules on the face of the child, a not uncommon condition. If abrasions or fissures occur, a glass nipple-shield should be used during the nursing.

The question of diet is one which at the present time is somewhat unsettled. Some advise limiting the patient for two or three days to milk, ordering a cupful to be taken every two hours. In addition the patient may be allowed water if she is thirsty. But recently so much has been said and written about the inadequacy of milk as a food for healthy adults, that there is a strong tendency to add other food to the milk, even during the early days of the puerperium, and, barring complications, many physicians early place their patients on a general diet, moderate in amount.

It is usually better not to order alcoholic stimulants for puerperal women, unless there is some particular indication for them.

If the patient has been accustomed to drink tea or coffee, she may be allowed to take either in moderate amount, if it does not cause wakefulness.

A movement of the bowels should be secured after forty-eight hours. It is usually necessary to give a laxative in order to insure this. Perhaps the most useful is half an ounce of castor-oil. If the patient is unwilling to take this, she may be given effervescing citrate of magnesia solution. If there is difficulty in having the bowels move, an enema may be given to soften the fecal matter in the rectum. A movement of the bowels should be maintained every day, and usually this may be effected most satisfactorily by giving an enema of warm soapsuds.

As the period of inactivity of the patient in bed is of considerable length, all hygienic conditions should be observed to promote the health and comfort of the patient.

The room should be well ventilated, and certain forms of "bed exercises" with the windows open are sometimes recommended. The patient may be instructed in deep breathing, with or without slightly resisted movements of the arms, and similar resisted movements of the legs may be employed. Otherwise the patient should be surrounded by conditions conducive to rest, with freedom from care and from responsibility on account of household management or otherwise.

There is considerable difference of opinion as to the length of time the patient should be kept in bed after labor. There is, at the present time, some tendency with certain practitioners to allow their patients to get out of bed after three or four days; but it is safer to keep most women in bed for ten days, allowing them after that, if they have no untoward symptoms, to sit up half an hour on the first day, on the next day an hour in the morning and an hour in the afternoon, on the next day two hours in the morning and two hours in the afternoon, and so increasing the period an hour each day, but not allowing them to sit up all day at any time during the first month without requiring them to lie down for two hours, or for one hour twice, each day until the baby is a month old.

It is usually the rule that the patient should not be allowed to go out of doors until the baby is four weeks old, but in hot climates, or in summer, when the temperature is high, she may be allowed to go out of doors at the end of two or three weeks.

The question of the abdominal binder is another one on which there have been varying opinions. Probably its importance has been overestimated by some and underestimated by others. Most women prefer to have an abdominal binder adjusted, although unquestionably some do perfectly well without it. It is advisable, however, in the absence of some good reason for not doing so, to apply the bandage after parturition. It should be applied snugly, and should come down over the hips so far that it will not slip up and become loose, when of course it is of no value.

When the woman commences to walk about and go out of doors, the question of a corset naturally arises. When one is worn it should be of such a character as to support the lower abdominal walls and the viscera in the lower part of the abdomen and not to press tightly around the waist and so displace the abdominal and pelvic organs downward and allow the downward displacement of the abdominal wall.

It may be suggested on behalf of the physician that when, after examination, he finds the patient is progressing favorably and his services seem to be no longer needed, he should definitely terminate his contract by informing the family that he will make no further visits unless called on, but that the patient should call at his office in a month for an examination. This relieves him from censure or liability on account of after-arising complications in case he is not promptly called.

Stream Pollution.—Modern populations must have modern sewage systems, for they will be poisoned by their own excreta by the old ways. Indeed it is known, remarks *American Medicine*, that certain districts have almost reached the limit of their population by old ways of passing on the wastes to become a nuisance elsewhere. Then again, the dense populations need more water than is available except by depopulating a distant highland and piping the water down, the cost of which may soon be prohibitive and not produce enough water even if it was within our means. The minds of engineers are therefore turning to nearby streams, which must be kept clean enough to use without expensive filtration. Indeed, we may have to use such water for street cleaning and fire purposes even before it is cleaned sufficiently to drink. Some of such supplies may receive unavoidable filth and never be fit for household use, for no system of filtration is perfect, and it is a cardinal principle that drinking-water should be so pure and so guarded that filtration or sterilization will never be necessary. This is then the trend of municipal sanitation and we might as well adjust ourselves to it.

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SATURDAY, MARCH 2, 1912

THE AMMONIA EXCRETION IN THE URINE

It is well known that a small fraction — about one-twentieth as a rule — of the nitrogen eliminated through the kidneys appears in the urine in the form of ammonium compounds, and is usually referred to analytically as ammonia-nitrogen. This fraction, along with the other nitrogenous companions of urea, such as creatinin, uric acid, etc., has been the subject of special interest and study for some time; and it has long been hoped that a better appreciation of the metabolic history and significance of all the regularly appearing excretory products would lead to useful applications in the field of clinical diagnosis. Lately the meaning of large variations in the ammonia-nitrogen of the urine has particularly been discussed in relation to certain pathologic states, notably the pernicious vomiting of pregnancy and the disturbances of nutrition incident to complete or partial starvation.[1]

Obviously the import of the "normal" excretion of ammonium compounds needs to be understood before it is possible to theorize very extensively regarding variations therefrom. We do not refer, of course, to so-called ammoniacal urines whose reaction is distinctly alkaline from ammonia liberated by bacterial decomposition of urea either within the bladder or on standing after its excretion. For the real metabolic processes this ammonia has no meaning; and it might seem superfluous to refer to it, were there not such a wide-spread lack of appreciation among physicians of the necessity of preserving carefully and with antiseptic precautions specimens of urine which are to be subjected to the more refined methods of chemical analysis. Persons who would never think of submitting a sample of soured milk for examination find no incongruity in expecting intelligent investigation of urine which has been kept for hours without any pretense of preservation. The innocent indifference in such matters is little short of appalling.

The ammonia of a "normal" urine is recognized to represent in some measure the effort of the organism to neutralize acids introduced into the body or formed in metabolism and not further altered. When indestructible acids are ingested they are eliminated combined with bases as salts. When there is an excess of acids over bases calling for elimination, ammonia becomes available to adjust the neutralization. Does the ammonia ordinarily found represent such a function alone? Or may it have additional significance? It was at one time seriously debated whether, inasmuch as ammonia is undoubtedly the immediate precursor of urea, some of the urinary ammonia does not represent a failure of complete urea synthesis. Since the latter is associated with the liver, the finding of high ammonia outputs in hepatic disease was at once associated with a failure of the urea-forming mechanism. We know now, however, that organic acids are formed in abundance in such conditions and thus account for the associated increased output of ammonia from the acidosis standpoint. Furthermore, the feeding of ammonium salts in such conditions fails to furnish any evidence, except in extreme cases, of an insufficiency in urea production therefrom.

A further suggestion offers itself, namely, that ammonia may represent in some measure a reversible reaction by which it is formed from urea itself. It has frequently been observed that the administration of alkalies in the form of sodium bicarbonate, for example, will greatly depress the output of ammonia in the urine. This is conspicuous in the management of diabetes, in which the acids formed in intermediary metabolism draw heavily on the store of alkalies and call for the metabolic ammonia unless added alkali is furnished. As a rule, however, an inevitable rest of ammonia remains even when 15 or 20 gm. of bicarbonate have been administered. In Müller's clinic at Munich, Dr. Janney[2] of Philadelphia has attempted, at Neubauer's suggestion, to decide whether this ammonia rest actually represents something more than an acid-neutralizing function. He administered large doses of sodium bicarbonate (or citrate, which burns to carbonate in the organism and is better tolerated) to individuals free from nutritive disorders as well as to patients with liver diseases, and observed the effect on the acidity and ammonia content of the urine. Urea was also administered as such to some of the subjects, with the object of eliciting a "reversible" ammonia formation, if this ever occurs. The latter could not be demonstrated. More suggestive, however, was the observation that with a sufficient supply of the alkali it is possible to make the ammonium derivatives practically disappear from human urine. For this purpose about 8.6 gm. of sodium bicarbonate for each gram of nitrogen output are necessary. On an average diet 15 gm. of bicarbonate suffice to reduce the acidity to zero, the ammonia output to one-third.

These investigations, together with numerous earlier ones, lend emphasis to the conclusion that the ammonia found combined in human urine has the sole function of neutralizing acid products, i. e., of correcting one feature of acidosis. A realization of its true significance cannot fail to favor the true interpretation of urinary analyses in which ammonia is correctly determined. Simple analytic methods for this purpose are now easily available.

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[1] Underhill: A Consideration of Some Chemical Transformations of Proteins and Their Possible Bearing on Problems in Pathology, Arch. Int. Med., 1911, viii, 356

[2] Janney: Die Ammoniakausscheidung im menschlichen Harne bei Zufuhr von Harnstoff und Natron, Ztschr. f. physiol. Chem., 1912, lxxvi, 99.

SEWAGE DISPOSAL AND BAD ODORS

While there is no reason to suppose that bad smells are in themselves injurious to health, the prevention of offensive putrefactive processes must always remain one of the chief aims of sewage disposal systems. Often, indeed, the only problem sewage disposal presents to a municipality is the avoidance of a nuisance. It is well known that the non-living organic matter in sewage may either be broken down by oxidizing processes, in which case no objectionable odors are produced, or be split up by reducing agencies in the absence of oxygen, in which case malodorous by-products are generated. From this standpoint, then, the prevention of a nuisance consists simply in providing for oxidation of the organic matter in the sewage. Under certain conditions this end may be accomplished by diluting the sewage with a sufficiently large volume of oxygen-containing water. The discharge of sewage into the water of a large lake or river is hence often sufficient to prevent a nuisance; on the other hand, such a practice may be fraught with great danger to the public health if a public water-supply is derived from the lake or river in the neighborhood of the point of sewage discharge.

During the past few years many special processes for the direct or indirect oxidation of sewage impurities have been experimented with and have been used under practical conditions. Intermittent sand-filters, contact beds, sprinkling-filters and numerous other devices have each been thought to possess special advantages and to lead to avoidance or at least to minimization of a nuisance. Looking at the results so far obtained it cannot be said that actual certainty in this field of experimentation has yet been reached. At the same time it may reasonably be asserted that it is possible to-day to treat large volumes of sewage much more expeditiously and with much less offense than it was a few years ago.

Intermittent sand-filters, in localities where the winter climate is not too severe, will yield an effluent of relatively high purity which may be discharged without further treatment into neighboring water-courses. This method is adapted for small plants only, since about an acre of surface is required for treating the sewage of 600 people.

Contact filters, made of stone, slag or other coarse material, will give a non-putrescible effluent of fairly good appearance when operated at a rate about five times as high as intermittent sand-filters, but the degree of oxidation reached is not so great. Filter-beds of the contact-filter type on the surface of which fresh sewage is sprayed by a variety of ingenious devices are known as sprinkling-filters and have won much favor in the experiments of the last decade. When properly constructed and operated an acre of sprinkling-filters will ordinarily dispose satisfactorily of the sewage of 20,000 to 25,000 people.

Whatever method of filtration be used, it is desirable first to free the sewage from as much suspended matter as possible before applying it to the filter. This may be brought about by simple sedimentation basins where, however, the disposal of the sediment or sludge gives rise to much difficulty. The most recent development along this line is the introduction of the two-story settling tank (Imhoff or Emscher tank), in which sedimentation takes place in the upper chamber and digestion of the sludge in the lower chamber. The essential feature distinguishing the Imhoff tank from the so-called septic tank is that none of the contents of the digestion chamber are allowed to mingle with the effluent of the settling chamber above. The sewage that reaches the filter beds is therefore not "septic sewage," but is substantially as fresh as the unsettled sewage and can hence be much more effectively oxidized than the sewage from a septic tank.

It is evident that several methods are now available by which sewage can be disposed of on a large or small scale without the production of objectionable odors, and also that the choice of method must be determined by a study of local conditions. It is not possible to settle a sewage disposal problem offhand with any universally applicable formula. Each case should be studied by an expert or body of experts with regard to local conditions and local requirements. Only in this way can mortifying and costly mistakes be avoided.

UNAPPRECIATED FACTORS IN DIET

The statement of the fact that there are in various dietaries specific properties of which the physiologic value is not measured by the actual nutrients that the foods may contain, is by no means new in these columns. Indeed, we have repeatedly tried to bring home the truth that numerous and presumably mostly unknown constituents of the food intake of man serve uses in the body in ways that are as yet both mysterious and inscrutable. These components of the diet are of importance to our nutritive welfare for reasons quite aside from any energy-yielding functions possessed by them; for they usually represent minute traces of substances which serve to initiate special responses in the organism or direct its activities into appropriate channels. One recalls the interesting studies of Reid Hunt on the variations in the resistance or susceptibility of animals to poisons in relation to the character of the diet on which they have been maintained. According to these investigations certain foods, notably dextrose, oatmeal, liver and kidney, greatly increase the resistance of white mice to the poison acetonitrile, whereas others, notably eggs, milk, cheese and various fats, greatly lower it.[1] Such phenomena are not readily detectable or measurable by the ordinary methods of metabolism study.

The earlier nutrition studies concerned themselves largely with the quantitative aspects of the dietary. It was necessary to ascertain the amount and kinds of the foodstuffs which are required to maintain nutritive equilibrium. Short periods of observation often sufficed to bring out the essential facts. Whenever some new and unexpected feature or claim was advanced the cry often went forth that the experiments were of too short duration to permit a final word. The fact that man can live comfortably on comparatively small intakes of protein, provided that abundance of energy is supplied in other forms, was long appreciated; but the objection was raised that observations covering a few days or even weeks are inadequate to settle the problem of the protein minimum. When Chittenden successfully completed his familiar low protein experiments covering many months of observation the critics in turn asked what the outcome of such living would be in the long run, i. e., in the course of a generation, rather than weeks or years.

No better illustration of the value of observation over long periods of time can be afforded than the recent admirable investigation of Hart, McCollum, Steenbock and Humphrey at the University of Wisconsin,[2] involving the physiologic value of rations for domestic animals. By "long duration" is meant such periods of time as will cover the growth of the animal to maturity and reproduction. The added feature of exceptional interest in this research is that the sources of nutrients for each of a series of groups of cattle were limited to a single plant. Furthermore, it was arranged to satisfy the standards for what the writers on animal production are accustomed to call a properly balanced ration in which the gross quantity and proportions of protein, fat, carbohydrate and roughage were approximately alike. One lot of cattle was thus nourished on products derived entirely from corn; another on wheat products; a third from oats; while a fourth lot received a ration made up of exactly one-third of each of the three other rations.

The outcome of this elaborate research deserves careful study and affords most interesting reading. Its bearing on the problems of human nutrition cannot be overlooked, especially since it is practically impossible to conduct comparable experiments on the human family. We cannot reproduce even a small portion of the wealth of surprising details here. A few conclusions from the four years' study may be recited, however.

"There is evidence from the data that there is a distinct and important physiologic value to a ration not measurable by present chemical methods or dependent on mere supply of available energy. While the latter are important and give valuable data for a starting point, they are nevertheless inadequate as final criteria of the nutritive value of a feed.

"Animals fed rations from different plant sources and comparably balanced in regard to the supply of digestible organic nutrients and production therms were not alike in respect to general vigor, size and strength of offspring and capacity for milk secretion.

"Animals receiving their nutrients from the wheat plant were unable to perform normally and with vigor all the above physiologic processes.

"Those receiving their nutrients from the corn-plant were strong and vigorous, in splendid condition all the time, and reproduced young of great weight and vigor.

"Animals receiving their nutrients from the oat-plant were able to perform all the physiologic processes of growth reproduction and milk secretion with a certain degree of vigor, but not in the same degree as manifested by the corn-fed animals.

"Where a mixture of all the above plant materials was used, the animals responded to the ration with less vigor than to the corn or oat rations alone, but with more vigor than to the wheat ration.

"These are the records from the continued use of rations for three years. Monotony of diet was not a troublesome factor and is not of such importance in nutrition problems as usually supposed. . . . The influence of a normal ration, depressing or stimulating, may be felt in a single gestation period. Wheat-fed animals were changed to the corn ration with marked improvement within the year in the size of offspring and in milk secretion. The converse was true when corn animals were taken to the wheat ration."

Here is a story of combinations of food materials which, in the long run, may make for vigor, resistance, and splendid physique, or for debility and decline. It teaches us how little, after all, dietetics has emerged from the purely empirical stage, and how much needs to be solved before it can be put on a sound theoretic basis.

THE PHYSIOLOGY OF LACTATION

For many years physiologists have been familiar with evidence indicating that the secretion of milk is largely or entirely independent of nervous control. There are cases of spinal cord lesions in women with normal lactation, and experimental destruction of the cord in animals has not interfered with this function. Transplanted mammary glands develop during pregnancy, and secrete milk after parturition, although all their connections with the nervous system have been divided. Furthermore, drugs, such as pilocarpin, which stimulate secretion in other glands, are without effect on the secretion of milk. It is only recently that we have been able to supplement this negative evidence by positive information on the mechanism by which the body controls lactation; and, as was to be expected, this control is found to depend on internal secretions which take the place of nervous stimuli. First in order came the discovery of Miss Lane-Claypon and Professor Starling that the growth of the mammary gland during pregnancy is influenced by a specific hormone which is developed in the fetal tissues. This observation, which has been repeatedly confirmed in experimental animals, received support from the interesting case of the pygopagous Blazek twins: one of the pair became pregnant, and the mammary glands developed in both and secreted milk after the child was born.

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[1] Hunt, Reid: Bull. 69, U. S. Public Health and Marine-Hospital Service, Washington, 1910.

[2] Physiological Effect on Growth and Reproduction of Rations Balanced from Restricted Sources, Univ. Wis. Agric. Expt. Sta., Research Bull. No. 17, June, 1911.

The first demonstration of a hormone which stimulates the secretion of milk was made by Ott and Scott of Philadelphia,[1] who reported that an extract of the posterior lobe of the hypophysis (infundibulin) has a very powerful galactagogue effect on the secreting mammary gland, and that corpus luteum, pineal gland and thymus extracts have a similar but less marked effect. Since that time they have extended their work considerably, and recently it has received corroboration from the laboratory of Professor Schäfer at Edinburgh.

The latest paper from this source, by Mackenzie,[2] reports that of a great number of tissues examined only the posterior lobe of the pituitary, corpus luteum, pineal body, lactating mammary gland and involuting uterus give active extracts, and with the two last named the results are inconstant. The pituitary extract is much the most active, and it is active whether from lactating or non-lactating animals, whether from the same or different species, and even when the hypophysis is from birds in which, of course, no galactagogue effect can be a natural function of the gland.

Whatever the active principle may be, it is very stable, not being injured by boiling, drying, or treatment with alcohol, in which it is insoluble. That the pineal gland furnishes an active substance is of particular interest because hitherto no effect has ever been demonstrated with preparations of this organ, and also because the only thing known about the pineal gland suggesting that it has a function is the fact that there are recorded a few cases of pineal tumor associated with exaggerated or premature sexual development and function. Corpus luteum, on the other hand, might be expected to have this effect, for it is known that these bodies persist during lactation. Extracts of both placenta and fetus were found to inhibit the galactagogue effect of the active extracts, which may account for the normal suppression of lactation until after the discharge of the products of conception.

All these results are of great interest, advancing immensely at one step our knowledge of a subject of much practical importance. Therapeutic possibilities at once present themselves, and we shall hope for favorable reports on this side of the work. The practicability of treating dairy herds with infundibulin concerns us less.

A TRIUMPH OF SANITATION

Too much of what appears in print on public health subjects bears internal evidence of having been written by those without first-hand knowledge of the subjects discussed. The result is a vast accumulation of platitudinous and often inaccurate advice, not only as to personal hygiene, but as to the solution of nation-wide health problems. On the other hand the real sanitarians, those who actually go into the field and accomplish something, too frequently content themselves with brief and technical accounts of their work. The consequence is that much of the enthusiasm of the public is misdirected and the limited funds usually available for health work are expended on matters of comparatively minor importance.

These remarks do not apply to the campaign against typhoid conducted last summer in Yakima County, Washington, or to the manner in which the results are recorded in a recent Bulletin[1] of the United States Public Health Service. In this bulletin Dr. L. L. Lumsden gives a clear and succinct discussion of the causation and prevention of typhoid and illustrates each point by reference to conditions observed in the State of Washington.

Space prevents our doing more than mentioning the salient features of the Yakima campaign. The conditions were as follows: A densely populated semi-rural community, provided only in small part with public water-supplies and sewerage systems; a very large number of insanitary privies, frequently in close proximity to shallow wells; a number of stables and manure-piles, breeding innumerable flies; an extensive system of irrigation ditches, accelerating the prompt and wide distribution of pollution; typhoid prevailing throughout the year, but with a marked increase each summer, the annual typhoid death-rate being about 150 per hundred thousand. The methods employed were the creation of a popular sentiment for improved sanitation by means of public addresses; an exhibit at the health department, etc.; the enforcement, in a practical and common-sense way, of ordinances requiring the connecting of houses with the sewerage system and, when this was impracticable, the construction of cheap but efficient sanitary privies; the protecting of the water- and milk-supplies; the proper disinfection of human excreta; the destruction of the breeding-places of flies, etc. Those directing the work did not stop with sententiously advising the citizens to expend immediately large sums of money in filtration and sewage purification plants and, in the meanwhile, to "boil the water" and leave the rest to Providence; simple, practical measures were at once employed.

The result was, as already indicated, a practical elimination of the disease. This signal triumph of sanitation is worthy of more than passing attention by other communities, for like conditions may be found, with variations, throughout the United States. The campaign conducted in Yakima Valley clearly and indubitably lowered the annual typhoid rate there by about 90 per cent. Were similarly successful campaigns carried out throughout the country, the number of cases of typhoid in the United States would soon be reduced by 400,000, and the deaths by over 30,000 per year. Such a statement seems incredible, but any one carefully studying the conditions at Yakima will be convinced that they were not in any respect more favorable for the suppression of the disease than those existing elsewhere; in fact, conditions are more favorable in most localities.

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[1] Ott, Isaac, and Scott, John C.: Proc. Soc. Exp. Biol. and Med., 1910, viii, 48.

[2] Mackenzie, Kenneth: An Experimental Investigation of the Mechanism of Milk Secretion, with Special Reference to the Action of Animal Extracts, Quart. Jour. Physiol., 1911, iv, 305.

[1] Lumsden, L. L.: The Causation and Prevention of Typhoid Fever, with Special Reference to Conditions in Yakima County, Washington. Government Printing Office, Washington, D. C. Copies of this bulletin may be obtained by applying to the Surgeon-General, U. S. Public Health Service, Washington, D. C., or to a Congressman

Current Comment

"U. S. P. AND N. F. PROPAGANDA"

To further the intelligent and rational use of medicines, The Journal, with the assistance of the Council on Pharmacy and Chemistry and of the Chemical Laboratory, has exposed the false claims made in regard to the composition and the action of many proprietary medicines. This "propaganda for reform in proprietary medicines" has been supplemented by the efforts of pharmacists to promote the use of certain pharmacopeial and National Formulary preparations whose composition is similar to that claimed for some of the proprietaries which have been exposed. This "U. S. P. and N. F. propaganda" of the pharmacists falls short of our ideal in that it merely aims to substitute a ready-made, usually complex and unscientific mixture of known composition, for a ready-made, equally complex and unscientific mixture of unknown composition. But in so far as it promotes the use of preparations of known composition in place of those of unknown, uncertain or fraudulent character, the medical profession is indebted to pharmacy for the aid which has been given. The medical profession cannot, with good grace, criticize pharmacy for having chosen the path of least resistance when it attempted to wean physicians away from proprietary nostrums by encouraging the use of similar official preparations. There is danger, however, that the pharmacists' propaganda may mean only that the physician who previously used certain proprietaries uncritically will be led to use just as uncritically the official preparation from which the proprietary was derived. For instance, the physician who used Glycothymoline and expected the wonderful results claimed by the manufacturer, may use the alkaline antiseptic solution of the National Formulary with equally absurd expectations. Or the physician who gave his patient Churchill's or Fellows' Syrup of Hypophosphites will prescribe the Compound Syrup of Hypophosphites, U. S. P., in the same haphazard and unscientific way. Let us hope therefore that those physicians who substitute official preparations for proprietary nostrums will do so with a full realization that they are still in their professional swaddling-clothes and that they should make a serious effort toward individual, rational prescription-writing.

A RATIONAL CALENDAR

The calendar and the hours of the day seem to most of us almost like part of the natural and immutable order of things, and however much trouble the present indefensible system has caused, men have felt that it was rash—almost impious—to suggest a change in it. "Give us back our eleven days!" cried the mob when the Gregorian calendar was introduced into Great Britain. From the days of Julius Cæsar to our own, he has been a bold reformer indeed who would suggest changes in the disorderly procession of the months. Now enters Moses B. Cotsworth of Victoria, B. C., with a proposal for a rational calendar. He would divide the year into thirteen months, each of twenty-eight days, which would leave one extra day in the year, and this he beautifully plans as a free day for every one — free from interest charges on money, the necessity to work, the wage scale, etc. Then each month would commence on Sunday and the first, eighth, fifteenth and twenty-second days of each month would be Sundays. President Hadley of Yale is quoted as saying that the month of four weeks "will come as a commercial necessity." The adjustment to the change would be very small compared to that necessitated when standard time was introduced on transcontinental railways. Mr. Cotsworth has literature to distribute, poking fun at the present system. If he wins, school children need no longer learn: "Thirty days hath September."

A RATIONAL HOLIDAY SCHEDULE

A writer[1] in that eminently practical paper, the *Survey*, attacks a problem related to the one discussed above. He observes that the irregular distribution of the holidays throughout the year and their changing coincidence with the days of the week often entail hardship. "For instance, where a holiday falls on Tuesday or Friday, many business concerns seize the opportunity in dull time to cut their pay-roll by closing down on the Monday preceding or Saturday following, thus enforcing a two-day holiday with corresponding loss to the employee; then again, when such holidays fall in mid-week, the holiday spirit on the days preceding and following seriously interferes with the efficiency of the worker and thus involves a hardship on the employer." The remedy proposed is the transposition of most holidays to Mondays and their more even distribution throughout the year; thus Washington Day would be observed on the Monday following February 22, Lincoln Day on the first Monday in April, and so on. "This order would secure for our industrial army a two and one-half days' respite from toil, with loss of only one day's pay, and would insure for the employer a better week's product from five consecutive days' labor after two and one-half days' rest." The reformer excepts Christmas and New Year's Day from the working of this rule, but he certainly ought to make the reformation complete and include them — and, while the operating instruments are sterilized and ready, free Easter from its adhesions to the vernal equinox by giving it a definite date.

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[1] Wevill, R. H.: The Holiday Calendar; Can We Improve It? Survey, Feb. 17, 1912, p. 1756.

FAITHFUL WORK

When the meningitis epidemic broke out in Texas, it was necessary that the serum to combat the disease be administered by one familiar with its use, as is explained in a letter in our Correspondence Department. When Dr. Sophian — the physician chosen — was sent to the field, he may not have realized the hard work that lay before him, but we find no record of his flinching from his task. At any rate, a few days later he was in the midst of the epidemic, working twenty or more hours a day, bending all his energies to the humanitarian work he was sent to perform. When medical men work like this and fall a prey to disease, exposure or strain, we honor them as martyrs. It is not unfitting that we occasionally chronicle a fine piece of self-sacrificing devotion to duty, even though the recipient of the praise has returned to his routine work and will doubtless deplore the publicity we thrust on him.

ANNUAL CONFERENCE ON MEDICAL EDUCATION, MEDICAL LEGISLATION AND PUBLIC HEALTH

Each year since it was created in 1904, the Council on Medical Education of the American Medical Association has held a conference on medical education, and the eighth of these conferences was held this week. They have constituted an open forum where the problems confronting medical education have been brought up and given thorough discussion. It has been largely on these discussions that the Council has based its efforts which have effected so many improvements in medical colleges and in educational standards. These conferences are having a wider influence than was ever hoped for. For the third year the Council on Health and Public Instruction has held its conferences conjointly with those on medical education. For two years past the Association of American Medical Colleges and the two confederations of state licensing boards arranged their meetings in Chicago during the same week. Hence there has developed a series of conferences on medical education, medical legislation, medical licensure and public health. This has enabled members of state boards, medical educators and others to attend all these meetings at a smaller expenditure of energy, time and money and, on the other hand, all the organizations have secured a larger attendance than would have been possible otherwise. Of more importance, however, is the fact that there is a closer cooperation between the organizations, with programs so coordinated as to prevent needless duplication of discussions, and more unanimity of effort, which is bound to bring greater results. This is apparently the most satisfactory meeting yet held. The first instalment of the reports of the session begins on page 652.

The Physician as a Citizen.—A medical man should be first of all a desirable citizen. By virtue of his calling his responsibilities as a citizen are greatly increased. He cannot afford, and has not the inclination or the time, to be a politician, who is too often more of an echo of a class than a molder of public opinion; but he should be capable not only of analyzing the principal public questions of the day, but also of recognizing his duty in the preservation of the health of the State. —J. D. Gatewood in *United States Naval Med. Bull.*

Medical News

ALABAMA

New Officers.—Lee County Medical Society: president, Dr. George H. Cooper; secretary, Dr. Homer S. Bruce, both of Opelika.——Dale County Medical Association: president, Dr. William D. Mixon; secretary-treasurer, Dr. Malcolm O. Grace, both of Ozark.——Hale County Medical Society: president, Dr. Edgar P. McCollum; secretary-treasurer, Dr. Charles A. Poellnitz, both of Greensboro.——Barbour County Medical Society: president, Dr. John S. Tillman, Clio.

Personal.—Dr. Francis Marion Inge, Mobile, has succeeded Dr. Harry T. Inge as division surgeon of the Louisville and Nashville system.——Dr. Harry T. Inge has accepted the position of chief surgeon of the Mobile and Ohio Railroad.——Dr. Barney B. Rogan, Selma, fell down a flight of steps in a theater in Selma, January 24, injuring his left patella.——Dr. Walter H. Bell, editor of the *Alabama Medical Journal*, who was recently operated on for appendicitis at the South Highlands Infirmary, Birmingham, is reported to be convalescent.

ARKANSAS

Medical Department to be Reorganized.—An order has been issued by the adjutant-general abolishing the medical department of the Arkansas National Guard and providing a new medical corps, consisting of three majors, two staff captains, six line captains and three lieutenants. Col. James C. Minor, Hot Springs, will continue in charge of the department.

Personal.—Dr. James M. Keller is reported to be seriously ill at his home in Hot Springs, Ark., as the result of injuries received in a fall.——Dr. Russell G. Floyd, Eureka Springs, who has been taking a trip eastward around the world, has reached San Francisco on the return trip.——Dr. Merrieman L. Norwood, Lockesburg, was operated on recently for appendicitis at the University Hospital, Little Rock.——Dr. Homer A. Stroud, Jonesboro, was painfully injured in a runaway accident, February 1.——Dr. John W. Ringold, Ashedown, while hunting recently, received an accidental gunshot wound of the right knee

CALIFORNIA

Yellow Fever on Ship.—The British ship *Akalis* is said to have put into Salina Cruz, asking for medical aid, on account of five cases of yellow fever among its crew.

Personal.—Dr. Albert E. Osborne, Santa Clara, has been elected medical superintendent of the Napa State Hospital for the Insane, vice Dr. Elmer E. Stone, Napa, resigned.——Drs. William J. Jackson and Tilton E. Tillman, assistant surgeons in the Emergency Hospital, San Francisco, have resigned.——Dr. Wilfred H. Kellogg has been appointed director of laboratories, and Dr. Carl L. Powers, assistant sanitary inspector of schools, both of San Francisco.——Drs. Louis Michelson, Berkeley, William H. Harrison and Leo Elsesser, San Francisco, have been appointed Emergency Hospital surgeons.——Dr. Frank K. Ainsworth, San Francisco, has resigned as member of the State Board of Health. Dr. Ainsworth is soon to leave for a stay of a year in Europe.——Dr. August C. Bothe, city chemist, and Dr. Sydney R. Dannebaum, city bacteriologist of San Francisco, lost their positions March 1, on account of the abolition of the department by the mayor.

GEORGIA

Appropriation for Hospital Continued.—The commissioners of Ware County have agreed to continue the annual appropriation of $1,200 for the King's Daughters Hospital, Waycross.

Fire in Sanatorium.—Fire in Dr. Henry D. Allen's Invalid Home for the Insane, Milledgeville, February 8, caused only slight damage. The 100 female patients in the institution were removed without accident.

Personal.—Dr. L. Benjamin Clarke has been elected president; Dr. Cyrus W. Strickler, vice-president, and Dr. Luther P. Stephens, secretary, of the Grady Hospital Medical Board, Atlanta.——Dr. Arthur D. Little has been elected chairman and Dr. Harry B. Ainsworth a member of the health board of Thomasville.

The Book and Journal Club.—The Book and Journal Club of the library committee of the Georgia Medical Society, at its meeting, February 6, reviewed the literature on pellagra and of snake venom; and at its meeting on February 20, the facts and theories about tuberculin were discussed, some recent advances in the pathology of intestinal obstruction were described and the lesions of pellagra were demonstrated by lantern slides.

Druggists and Doctors Hold Joint Meeting.—On February 13 a joint meeting of the Georgia Medical Society and the Association of Retail Druggists was held in Savannah. An address was made on the co-work of the physician and the pharmacist; proprietary drugs were discussed from the standpoint of the physician and of the pharmacist, and a paper was read on the work of the Council on Pharmacy and Chemistry of the American Medical Association.

ILLINOIS

Personal.—Dr. Virgil D. Crone, Canton, was operated on for cholelithiasis, February 15, in St. Francis Hospital, Peoria.

Epidemic Disease.—Assistant Secretary J. C. Westervelt, of the state board of health, Springfield, has been sent to Wetaug to investigate a reported epidemic of scarlet fever.

Appropriation for Medical Department Held Unconstitutional.—The Illinois Supreme Court handed down an opinion February 23, holding that the appropriation of $60.000 for the medical department of the University of Illinois was unconstitutional on the ground that the bill in its final form was not printed before its passage by the legislature. This decision may also affect the law making an appropriation for the Kankakee State Hospital.

Typhoid in Rockford.—Up to February 21, the epidemic of typhoid in Rockford had affected 158 people and caused six deaths. The investigation of Prof. E. O. Jordan of Chicago University showed that the infection came from Well No. 2 of the city water supply, a well which had not been in constant use. The water from this well showed 400 or 500 times as many germs as the water from the other wells tested, and in his opinion this is the source of the epidemic. The use of the well as a reserve supply will be discontinued.

Chicago

Entertainment for Health.—A lecture on the Garden of Allah was given at Orchestra Hall by Dwight Elmendorf, February 19, for the benefit of the maternity and children's ward of the Post-Graduate Hospital, and about $2,000 was realized for the institution.

Military Evening for Physicians' Club.—The Physicians' Club of Chicago will hold a joint meeting with the Medical Reserve Corps, U. S. Army, and the Medical Corps, Illinois National Guard, March 8, at the Hotel Sherman, at 7 p. m. The general subject for discussion is to be "Medical Service in the Philippines and Cuba."

Street Car Ambulances Urged.—Dr. George C. Hunt, chief of the Ambulance Bureau, has recommended to the local transportation committee that ambulance street cars be provided to run to the Emergency and Cook County hospitals, and further, that an ordinance be passed making any street car an emergency ambulance car in case an ambulance or ambulance car is not at hand.

MARYLAND

Personal.—The governor has appointed the following coroners: Kent County, Dr. Frank W. Smith, Chestertown; Cecil County, Dr. William P. Dean, and Cumberland County, Dr. William H. Shaw.——Dr. Ryon Devereux has been appointed a school commissioner of Montgomery County.

Baltimore

New Dispensary Opened.—The Baltimore General Dispensary opened its new building in Paca and Fayette streets, February 15. The physicians in charge are Drs. Henry M. Baxley, Edward E. Mackenzie and Edmund A. Munoz.

Remsen in New England.—After the founders' day exercises of Johns Hopkins University, February 22, Dr. Ira Remsen, the president, went to Boston where he delivered addresses before the New England Alumni Association and Tufts College.

Personal.—The governor has appointed the following coroners for Baltimore: Drs. Thomas R. Chambers, David I. Macht, J. Frederick Hempel, Elijah J. Russell, Harry C. Hyde, Michael A. Abrams, Harry C. Algire, Robert G. Davis and John G. Jeffers.

MASSACHUSETTS

Medical Ward Dedicated.—The new children's ward of the Boston Dispensary was formally dedicated, February 7. Among the speakers were the president of Harvard University; Dr. Abraham Jacobi, New York City, President-elect of the American Medical Association, and Dr. Malcolm Storer, president of the medical staff. The new ward occupies the third and fourth floors of the dispensary building, and has accommodation for thirty patients, besides a small isolation ward and two balconies for fresh-air treatment.

New Officers.—Eastern Hampden Medical Society, February 1: president, Dr. Raymond A. Kinloch; secretary and treasurer, Dr. Ernest L. Davis, both of Springfield.

Harvard a Medical Center.—Within a radius of half a mile of Harvard Medical School there are already built or under construction sixteen medical institutions, representing in value of buildings and capitalized funds about $20,000,000. The five new hospitals, two of which will move into new quarters, added to the eleven medical institutions already constructed, will make the hospital and clinical facilities of the school extraordinary. The buildings at present under construction are the Harvard Memorial Cancer Hospital, the Thomas Morgan Rotch, Jr., Building, which will house the Infant's Hospital, the Children's Hospital, the Peter Bent Brigham Hospital, the State Psychopathic Hospital, the Robert Brigham Hospital, and in addition a Harvard dormitory and medical union club house, the latter of which is only projected at present.

The Canteen Question.—At the meeting of the council of the Massachusetts Medical Society, February 7, resolutions were adopted unanimously and even with enthusiasm, urging the restoration of the canteen to the Army, under proper regulations, in accordance with the provisions of the Bartholt bill. Statements were made that venereal disease is the most common and most serious disease in the Army, that it disables about 20 per cent. of the force every year; that the abolishment of the canteen from the Army in 1901 seems to have increased the evils it was designed to restrain or remove, and that the surgeon-general and medical officers of the Army, with few exceptions, and the chief of staff, are of the opinion that venereal disease, drunkenness, insubordination and desertions are less prevalent when beer is allowed to be used in the canteen under proper regulations.

Personal.—Dr. George W. Dow has been elected city physician and a member of the board of health of Lawrence.——Dr. Ernest V. Scribner has been elected superintendent of the State Hospital, Worcester, and Dr. Henry L. Stick superintendent of the State Asylum, Worcester, both appointments to take effect April 1.——Dr. Horace S. Moran, Wakefield, is said to have been declared insane and committed to the Northampton State Hospital.——Dr. Michael H. Chrystal, Leominster, has been elected secretary of the Doctors' Club.——Dr. Marcus L. Dillon, superintendent of Franklin Square Hospital, is reported still to be seriously ill with septicemia, due to an operation wound.——Drs. Eliza J. Dadmun, Laura A. C. Hughes, Bradford Kent and Roland W. Brayton have been appointed school physicians of Boston.——Dr. Frederick C. Shattuck, Jackson professor of clinical medicine in Harvard University, has resigned to take effect September 1, owing to his having reached the retiring age limit.——The governor has nominated Dr. John G. Blake, Boston, as trustee of the Gardner State Colony.——Dr. Henry I. Klopp, Westboro, has been appointed superintendent of the State Homeopathic Hospital for the Insane, Rittersville.

MICHIGAN

Personal.—Dr. George M. Kline, Ann Arbor, has been elected superintendent of the Danvers (Mass.) State Hospital.——Dr. Harry A. Sibley has been appointed medical inspector in the public schools of Pontiac.

Health Bulletin.—The first issue of the *Bulletin of the Department of Health of Kalamazoo* appeared February 10. It contained statistics regarding the work of the board of health for January, the contagious disease record, and the scores of the different dairymen of the city under the new merit-score card system.

Appropriation for Sanatorium.—The city council of Lansing on February 19 voted to appropriate $2,000 to be applied to the purchase of a site and the erection of a sanatorium for the care of persons afflicted with tuberculosis, subject to the vote of the people of Ingham County to raise $4,000 by general taxation for the same purpose.

State Health Officers' Meeting.—At the annual Michigan Health Officers' Convention held in Ann Arbor, January 30-31, under the presidency of Dr. Victor C. Vaughan, the chief subjects of discussion were: "The Michigan Method of Water Analysis"; "The Need of a State Hospital for Cases of Advanced Tuberculosis"; "Water Purification"; "Disease Carriers"; "Occupational Diseases"; Hotel Sanitation"; "The Medical Milk Commission"; "Garbage Disposal"; "The Small-Pox Situation," and "Eugenics Work in Michigan." A permanent organization was effected with the following officers: president, Dr. Guy L. Kiefer, Detroit; vice-presidents, Drs. Langlois, Wyandotte; Thomas M. Koon, Grand Rapids; Arthur F. Fischer, Hubbell, and Edward Goodwin, Bay City; and secretary, Dr. Robert L. Dixon, Lansing.

MISSOURI

New Officers.—Lewis County Medical Society, January 30: president, Dr. Thomas F. McGlasson, Lewiston; secretary, Dr. Paul F. Cole, Steffenville.

Fire in Hospital.—Fire in the Levering Hospital, Hannibal, February 13, caused damage estimated at $15,000, and necessitated the removal of twenty patients. No casualties occurred.

College Will Issue Monthly.—The University Medical College, Kansas City, announces that a monthly bulletin, to be known as the *College Spirit*, will be issued every month under the auspices of the college, showing the work that is being done by the institution.

Personal.—Dr. Thornton E. Moore, Trenton, suffered amputation of a leg for gangrene in Dr. Wright's Hospital, Trenton, February 9.——Dr. William S. Sanders, Clarence, reports that he has been greatly improved in health by his stay in San Antonio, Texas.

Convalescent Home Founded.—A home for convalescents, established by Trinity Episcopal Church, was opened in Kansas City, February 11, with accommodation for six patients. It is known as Trinity Convalescent Home, and is located in East Missouri Avenue, overlooking the river and close to the Cliff Drive and North Terrace Park.

Hospital Notes.—A five-room house in Galena is to be remodeled and made into an eight-room hospital with two wards, one for men and one for women, each accommodating six patients, and operating room.——Fayette is making an effort to obtain a hospital, which is much needed in that city. ——Arrangements have been made by the executive committee of the board of trustees of Springfield Hospital for the construction of the proposed wing to the hospital building.

St. Louis

Fire in Hospital.—A fire in the L. C. McLain Orthopedic Sanitarium, February 4, caused about $900 damage and necessitated the removal of 140 patients from the building.

Makers of Medicine.—Dr. James J. Walsh, dean of the Medical Department of Fordham University, New York, and a member of the consulting editorial staff of the New York *Herald*, delivered an address before the St. Louis Medical History Club, February 5, on "Old-Time Makers of Medicine."

Well-Known Pharmacist Dies.—Enno Sander, a well-known pharmacist of St. Louis, a charter member of the Association of Military Surgeons of the United States, and a pharmaceutical member of the American Medical Association, died in St. Luke's Hospital, St. Louis, February 12, from malignant disease, aged 90.

Warns Against Meningitis.—Dr. Max G. Starkloff, health commissioner of St. Louis, has sent notices to physicians of the city asking them to take every step possible to prevent an epidemic of meningitis in the city, and placing the services of health department physicians at the disposal of any physicians who may apply.

Personal.—Dr. William Porter has purchased a residential property in Ocean Springs, Miss.——Dr. Robert M. Funkhouser, former coroner of St. Louis County, suffered a broken rib, a cut on the forehead and severe contusions in an automobile collision, February 10.——Dr. August H. Vordick sailed for the Mediterranean February 15.——Dr. Richard A. Bolt of Pekin, China, formerly of St. Louis, writes that he organized the Red Cross work in China in the war of revolution.——Dr. Rollin C. Blackmer, St. Louis, has been elected president of the Maplewood Physicians' Club.

Hospital News.—Ground has been secured by the St. Louis Children's Hospital Corporation of Washington University, with a frontage of 150 feet on King's Highway, at a cost of $26,142 for a children's hospital. The building will overlook Forest Park and is expected to be ready to receive patients in July.——Tentative plans for a new hospital for tuberculosis are announced by Dr. Cleveland H. Shutt, hospital commissioner. It is planned to establish the hospital, which is to cost $75,000, near the Robert Koch Hospital, south of Jefferson Barracks, and the institution will accommodate 150 patients.——A new dispensary, in which emergency cases will be treated, was opened February 10 at the City Hospital.

NEW YORK

Small-Pox and Vaccination.—In view of the prevalence of small-pox in this state the Medical Society of the County of Erie adopted resolutions at its last meeting stating that in view of the increase in number of cases of small-pox during the last decade and of the extensive propaganda of the anti-vaccinationists they wished to request those in authority in city, state and nation, to take suitable action to provide that, hereafter, in reporting cases of small-pox, mention and record should be made of the fact, time and efficiency of vaccination and revaccination in every case. The report card for cases of small-pox authorized by the State Department of Health of New York State covers practically all of the points in these resolutions.

Communicable Diseases in December, 1911.—The records of the State Health Department for December show that scarlet fever increased during that month, there being 1,548 cases as compared with 1,260 for November. There were reported 2,441 cases of tuberculosis compared with 2,692 for November. There were almost twice as many cases of measles reported during December as during November when 1,465 cases were recorded. Only 661 cases of typhoid were reported for December, a decrease of 100 cases as compared with November, although a slight increase as compared with the corresponding month of 1910, when 577 cases were reported. Whooping cough was not prevalent as in November, when 739 cases were recorded, while the December record shows only 662 cases. Small-pox reported 166 cases. This disease is present in at least eleven counties. December gave 170 deaths from diphtheria which was unusually few for that month and the year ended with a record of 2,000 deaths from that disease the lowest on the annals of the state. In the thirten years 1885-1897 there occurred 71,043 deaths from diphtheria, while in the following thirteen years there were 35,460, or less than one-half as many, notwithstanding the increase of population from 6,000,000 to 9,000,000.

New York City

Harvey Society Lecture.—The tenth Harvey Society lecture given at the New York Academy of Medicine on March 3, at 8:30 p. m., is by Prof. H. S. Jennings of Johns Hopkins University on "Old Age, Death and the Meaning of Conjugation in Lower Animals."

Medical Library on Inspection.—The Medical Library Association of Brooklyn announces a public inspection of the Brooklyn Public Library, which includes many very old printed books and many manuscripts, at the library building, March 25-30, from 3 to 5 and from 8 to 9 p. m.

Personal.—Dr. Alvah H. Doty has been elected a member of the medical advisory board of the Department of Health.——Dr. Stephen Smith, president of the State Board of Charities, celebrated his eighty-ninth birthday, February 19.——Dr. Joseph O'Connell, Brooklyn, has been made health officer of the port of New York.——Dr. Frank Dietrich, ambulance surgeon at the German Hospital, was seriously injured in a collision between the ambulance and a street car.

Venereal Diseases Now Reportable.—At the regular weekly meeting of the Board of Health on February 20 the Board of Health adopted resolutions calling for the reporting of venereal diseases to the department of health in accordance with a plan for the sanitary control of such diseases which has been under consideration for many months past. The Board of Estimate and Apportionment has granted the appropriation of $55,000 which the Board of Health asked for the purpose of erecting a new venereal disease hospital to be situated on North Brother Island. The resolutions adopted require that superintendents and those in charge of public institutions including all institutions which are supported in full or in part by voluntary contributions, shall report promptly to the Department of Health the name, age, sex, nationality, race, marital state and address of every patient under observation suffering from these diseases. All physicians are requested to furnish similar information concerning private patients except that the name and address of the patient need not be given. If these conditions are complied with the Board of Health will make the sero-diagnostic test for syphilis and for gonorrhea. Apparatus and directions for the drawing of blood may be had on application and only glassware specially prepared by the research laboratory may be used. With the apparatus an outline for the history of the patient is also sent. All data obtained in connection with these facts will be for laboratory use only and not accessible to the public. The tests will be made free of charge for those unable to pay, but will only be made at the request of the physician in charge of the case. If it is desired the blood will be drawn at the Research Laboratory on Mondays and Thursdays between the hours of 10 and 12. Usually a positive reaction is not obtained in syphilis within six weeks to three months from the time of infection, nor within six weeks in cases of gonorrhea. A negative reaction does not exclude the possibility of infection either before or after treatment. Patients should be advised against the ingestion of alcohol within twenty-four hours of the collection of the specimen of blood as it interferes with the accuracy of the test.

NORTH DAKOTA

New Officers.—Northwestern District Medical Society: president, Dr. Andrew Carr; secretary-treasurer, Dr. Frank E. Wheelon, both of Minot.——Cass County Medical Society: president, Dr. Martin P. Rindlaub; secretary, Dr. William C. Nichols, both of Fargo.

Personal.—Lieut. Henry G. Fish Hope, M.C., N.G., N. Dak., Wheatland, has been placed on the retired list with the rank of captain and Dr. Arnt G. Anderson, Hillsboro, has been appointed first lieutenant in the Medical Corps in his stead.——Dr. Harry W. Miller, Jamestown, has returned from Europe.

PENNSYLVANIA

Hospital Notes.—The plans for the Amanda Howard Memorial Building, to be a $15,000 addition to the Williamsport Hospital, have been approved.

Reading Sewage Criticized.—Dr. Samuel G. Dixon, State Health Commissioner, notified Mayor Stratton of Reading, February 23, that the sewage filters of that city were overtaxed and that another unit is needed at the disposal plant. The purification of the city's sewage means a great deal to Philadelphia, as that city obtains its drinking water from the Schuylkill. Reading has already spent $5,000,000 to purify its sewage.

Typhoid at Coatesville.—Although up to February 24, 220 cases of typhoid had been officially reported to the Board of Health of Coatesville, the authorities feel that crisis is passed and that no new cases are developing. The regular and emergency hospitals are filled and the Masonic Lodge and Elk banquet rooms have been offered as emergency hospitals and two fire companies offered their services for ambulance and patrol duty. State inspectors have been sent to Christiana, where seven cases have been reported. The town council will have a filtration plant installed at once, at a cost of $5,000.

Personal.—Dr. Logan E. Hull, Altoona, has been elected a member of the staff of the Altoona Hospital.——Dr. Walter A. Landry, Chester, who has been ill with pneumonia, is reported to be convalescent.——Dr. William G. Johnson, Major M.C., N.G., Pa., assigned Sixteenth Infantry, has resigned.——Dr. Lewis Edwards, Kingston, has resigned as a member of the staff of Mercy Hospital, Wilkes-Barre.——Dr. Edwin C. Bullock, Upland, has been appointed a member of the staff of the Jefferson Hospital and will specialize in diseases of children.——Dr. Francis R. Crawford, Pittsburgh, has been appointed resident physician at the Clifton Springs (N. Y.) Sanatorium.——The following appointments have been made on the staff of the Williamsport Hospital: genito-urinary surgery, Dr. John P. Harley; diseases of children, Dr. George R. Drick, and Drs. Robert K. Rewalt and Fred. W. Meddaugh have been added to the dispensary staff.

Philadelphia

Personal.—Dr. Henry E. Applebach was assaulted and robbed near Bryn Mawr, February 14.——Dr. Joseph Cook, Jr., has resigned as resident physician at the University Hospital, Philadelphia, and will go to Persia as a medical missionary.

Hospital Ward Quarantined.—A small child admitted to a private room in Ward B of the University Hospital, February 10, for operation, about a week later developed scarlet fever, and was removed to the Municipal Hospital and Ward B has been under quarantine.

University Day.—Dr. Edwin Anderson Alderman, president of the University of Virginia, delivered the address at the exercises of the University of Pennsylvania, February 22, and six honorary degrees were conferred. A portrait of Dr. James Tyson, emeritus professor of medicine in the university, was presented by the physician's friends and former students. Dr. William Pepper made the presentation speech and Dr. J. William White received the portrait in behalf of the university.

Weir Mitchell.—Dr. S. Weir Mitchell, neurologist, author, poet and naturalist, celebrated his eighty-third birthday anniversary, February 15.——On February 22 he delivered an address on George Washington on the thirty-sixth commemoration day of Johns Hopkins University, Baltimore, and had conferred on him the honorary degree of LL.D.——At a special meeting of the College of Physicians and Surgeons of Philadelphia, in conjunction with the Section on General Medicine, February 26, Dr. Mitchell delivered an address on "Some New Facts Concerning William Harvey."

Prevention of Social Disease.—At the February 20 meeting of the Pennsylvania Society for the Prevention of Social Disease, the subject for discussion was prostitution as the means of the spread of contagious diseases. Dr. Howard A. Kelly, Baltimore, treated the failure of reglementation of prostitution in European cities and countries; the superintendent of police described the conditions now existing in Philadelphia, with respect to public prostitution; the director of public safety detailed the methods and means planned for the elimination of public prostitution in Philadelphia, and the director of public health defined the attitude of the department of health toward prostitution as a health problem.

UTAH

Personal.—Dr. Samuel G. Paul was reappointed health commissioner of Salt Lake City, February 15; Dr. Hugh B. Sprague, police surgeon and assistant health commissioner, and Dr. Robert W. Fisher member of the board.——Dr. Clarence Snow has succeeded Dr. Franklin H. Raley as a member of the board of health of Salt Lake City.——Dr. Francis S. Bascom has been elected a member of the board of education of Salt Lake City.

Board of Health Laboratory.—Arrangements have been consummated whereby the state board of health laboratory is to be connected with the medical school of the University of Utah and the state bacteriologist is to be professor of bacteriology at the university. While this has been nominally the case for three years past, sufficient funds have never been provided for the maintenance of the institution, and consequently the work has been done on a very meager scale. Through the efforts of Dr. Ralph L. Byrnes, professor of bacteriology in the university, funds have been made available, so that the laboratory is now able to do its proper work.

VIRGINIA

Small-Pox in Virginia.—The State Health Department has sent out warning that small-pox is scattered through twelve counties of the state.

Health Officials May Organize.—A number of health officers of tidewater Virginia met in Norfolk, February 7, to discuss plans for organizing a health association, to be composed of the health officers of that section of the state.

Health Train.—To carry the gospel of good health to farmers, the State Health Department has detailed Dr. Allen W. Freeman, Richmond, assistant health commissioner, to accompany the agricultural train on making a tour of the state.

Tuberculosis Society Incorporated.—A charter has been granted to the Tuberculosis Society, Incorporated, formerly known as Pine Camp, located in Henrico County, the object being the maintenance of a sanatorium for the treatment and cure of tuberculosis.

New Pavilion for Sanatorium.—The Catawba Relief Sanatorium Association has raised the $1,500 necessary to cover the amount offered by S. T. Morgan to complete the proposed pavilion at the Catawba Sanatorium.——The Graduate Nurses' Association has collected $500 of the $1,000 to be secured.

Hospital Opened.—St. Elizabeth's Hospital, Richmond, a private institution built by Drs. J. Shelton Horseley and Claude C. Coleman, was opened for inspection, February 14, and received patients on the following day. The building is located on West Grace Street, is four stories high and constructed of fireproof material.

New Officers.—The South Side Virginia Medical Association: president, Dr. Japheth E. Rawls, Suffolk; secretary-treasurer, Dr. Emmett F. Reese, Courtland.——Richmond Academy of Medicine and Surgery: president, Dr. Alfred L. Gray; secretary, Dr. Mark W. Peyser.——Richmond Medical Association (colored): president, Dr. Albert A. Tennant; secretary, Dr. Jeremiah M. Newman.

Inspection of School Children.—The physicians and dentists of Fredericksburg, through their respective organizations, have offered to make without charge a careful examination of each child in the public schools of the city, in order to detect any existing contagious diseases or physical defects, and give to the parents of the children ample notice, so that the defects found may be remedied.

Personal.—Dr. William S. Love, Winchester, who has been seriously ill with pneumonia, is reported to be convalescent.——Dr. Herbert Mann, Richmond, has assumed his duties as surgeon at the State Penitentiary.——Dr. Samuel B. Moore, Alexandria, has been reappointed coroner of Alexandria County.——Dr. Clarence T. Lewis, Staunton, who has been seriously ill with bronchitis, has recovered.

GENERAL

Finlay and Agramonte Proposed for Nobel Prize.—Dr. Carlos J. Finlay of Havana, Cuba, first suggested the possibility that the mosquito might be responsible for the transmission of yellow fever, and preached this for many years before the fact was finally established by the American Commission. The *Revista de Medicina y Cirugia* of Havana is urging that the Cuban Academy of Sciences take the necessary steps to present his name as a candidate for the Nobel prize in medicine this year. Our Havana exchange suggests further that the name of the only surviving member of the American Commission be linked with Finlay's and the prize be asked for the absolute triumph of an idea, and that it thus be divided between the originator and the surviving practical worker out of the idea, Finlay and Aristides Agramonte. The *Revista* expresses the hope that American scientific societies will cooperate in the effort to obtain this manifestation of appreciation of the benefits conferred on the world by the discovery of the mosquito transmission of yellow fever, and hence its effectual prophylaxis. None of the Nobel prizes in medicine has yet crossed the Atlantic, and only one of the thirty-three prizes in three branches of science that have been awarded during the eleven years since the Nobel prizes have been distributed. This one scientific prize that has come to America was the prize for physics, conferred in 1907 on Professor Michelson of the University of Chicago.

FOREIGN

Ross in Russia.—Prof. Ronald Ross of the Liverpool School for Tropical Medicine, recently visited St. Petersburg, on which occasion an honorary degree was conferred on him by the Military-Medical Academy, and the local medical society elected him an honorary member.

Campaign Against Plague in Southern Russia.—Dr. Sabolotnyi has recently been given powers and means to enlarge the scope of the campaign against plague which seems to be endemic in the Astrakhan district. He has organized nine flying squadrons for bacteriologic examination of all the camels in the district, and the insects and rodents near the habited parts are to be systematically investigated for the presence of plague.

Penalty for Adulterating Liquor with Methyl Alcohol.—The court of appeal at Szegedin, Hungary, recently reaffirmed the fine imposed by the lower court on a liquor dealer and his servant for adulterating liquor with wood alcohol in 1909. The court of appeal added a three months' prison sentence to the fine of $750 (3,000 kronen) for the manufacturer; the employee was let off with a fine of $50. The adulterated liquor was responsible for fifty-nine deaths.

Deaths in the Profession Abroad.—In addition to the deaths mentioned by our foreign correspondents, the profession has lost recently: Dr. A. Serafini, professor of hygiene at the university of Padua. Dr. M. Ledesma of Madrid, assistant general sanitary inspector of the Spanish army, and dean of the Facultad de Medicina. From Madrid is reported further the death of Dr. Ribera y Sans, one of the leading surgeons of Spain, aged 59. From Zurich is reported the death of Dr. F. Simon, who had made a specialty of bacteriologic research for fifteen years, mainly on the streptococcus, finally succumbing to a laboratory streptococcus infection.

LONDON LETTER

(*From Our Regular Correspondent*)

LONDON, Feb. 17, 1912.

Lord Lister's Funeral

Lord Lister, a report of whose life, achievements and death was given in THE JOURNAL, February 17, pp. 485 and 499, had long ceased work and had been in failing health for some years. The funeral took place yesterday, and, as was befitting, his remains were offered sepulcher at Westminster Abbey, where rest our great dead, but as he expressed a wish to be buried with his wife, this was declined by his executors, and the interment took place at Hampstead. The funeral service was held at the Abbey and was attended by representatives of the king and the learned societies of this and other countries, the universities and other learned bodies, and by the foreign ambassadors, the prime minister and other distinguished persons.

From an early period of his career he was deeply impressed by the great mortality of operations and severe injuries attended by external wounds, such as compound fractures. In those days almost every operation was followed by what was termed "surgical fever." Lister became acquainted with the great discovery of Pasteur, that fermentation and putrefaction are due to microbes. He recognized that the wound complications were due to putrefaction from the same cause and grasped the surgical possibilities. His first idea was to kill the germs already admitted to wounds and then to prevent the entrance of others. The first agent he selected for this purpose was phenol (carbolic acid). His articles, which inaugurated the antiseptic system, were published in 1867 in the *Lancet* under the title "A New Method of Treating Compound Fractures, Abscesses, etc." He freely applied phenol (carbolic acid) to the interior of the wounds in order to destroy the air-borne germs, and covered the opening in the skin with lint charged with phenol and protected by an external layer of thin sheet metal. His results showed a marvelous improvement. Hospital gangrene, pyemia and erysipelas, which had been frequent in his wards, disappeared. With indefatigable industry he constantly experimented to improve his technic, using in turn phenolized putty, phenolized shellac, the phenol spray, perchlorid of mercury, sal alembroth and double cyanid of mercury and zinc. His appointment as professor of clinical surgery at King's College gave greater opportunities for the diffusion of his teaching, which now was receiving much attention abroad, as well as at home. Indeed, the antiseptic system was earlier recognized by foreign than by British surgeons. The conservatism of his own country proved a strong barrier, as it has always done, to reforms, however great and beneficent. Some of the leading surgeons of the day not only refused to adopt the antiseptic system, but violently opposed it. Even a man of the eminence of Sir James Simpson wrote a lengthy article to prove—what was already admitted—that Lister was not the first to use phenol and that his methods were not original. Sir William Savoury, the most eloquent surgeon of the day, who enjoyed the unprecedented distinction of being president of the Royal College of Surgeons for five years in succession, threw ridicule on the antiseptic system. Lawson Tait, the greatest and most original gynecologist of the day, adopted the same attitude. But, like Darwin, Lister never descended to controversy; he was too busy with research. So bitter was some of the opposition to him in high places that, incredible as it may seem, the Royal College of Surgeons never honored itself (for that is the way to put it) by appointing him president. It was said of him in 1900 that he had saved more lives than had been destroyed in all the wars of the century. Proposing his health at a dinner of the Royal Society, Mr. Bayard, the American ambassador, said, "My lord, it is not a profession, it is not a nation, it is humanity itself which salutes you."

He made one discovery which, even apart from the antiseptic system, would entitle him to enduring fame—the absorbable catgut ligature. He found that silk ligatures were a source of trouble in his treatment of wounds because of the irritation and suppuration which sometimes followed. He experimented by tying the arteries of dogs and calves with catgut and found that it underwent complete absorption without causing suppuration. He applied the result to man and was able to announce that surgeons "may now tie an arterial trunk in its continuity close to a large branch, secured alike against secondary hemorrhage and deep-seated suppuration." He subsequently evolved the chromicized catgut ligature. He made many other important contributions to surgical knowledge which have been overshadowed by his great discovery. As a man, he was singularly modest and unassuming, and his solicitude and gentleness with patients were almost feminine. It is related of him that when speaking to the great Austrian surgeon, Billroth, who was skeptical about the antiseptic system, he simply said: "If you tried it I am sure you would be pleased with it."

PARIS LETTER

(*From Our Regular Correspondent*)

PARIS, Feb. 9, 1912.

Three New Deaths from Salvarsan

On February 9, Dr. Gaucher, clinical professor of cutaneous and syphilitic diseases at the Faculté de médecine de Paris, reported before the Académie de médecine three new cases of death due to salvarsan. The first was the case of a young man of 24, of good general health and free from other dis-case, who had contracted syphilis two years previously. The case had been well treated, and there were no manifestations after the roseola. Against the advice of his physician, he went to Paris, and although he had at the time no manifestation of the disease, he went to a physician who in thirteen days gave him three intravenous injections of 0.03 gm. salvarsan. The day after the third injection he went home, and six days later, after violent headaches, he was stricken with convulsions, soon fell into coma, and died in twenty-four hours.

The second case was reported to Professor Gaucher by Dr. Vaubourdolle of Bléré. A man aged 53 had contracted syphilis in 1894. Three years afterward, he had a right hemiplegia, due to a cerebral arteritis, which was cured by specific treatment, leaving only a little paresis, with a tendency toward contraction of the leg. In spite of Dr. Vaubourdolle's opposition, the patient had another practitioner give him an intramuscular injection of 0.03 gm. of salvarsan. Two days afterward, there were generalized pains in all the limbs, accompanied by a persistent headache, and the patient died suddenly twelve days after the injection.

The third case was reported by Dr. Yakoub, surgeon in chief of the Bulgarian hospital at Constantinople. The patient was a woman aged 25, who had been married five years. She had been infected by her husband, who had contracted syphilis a year before her marriage. In the first year of her married life she had had a miscarriage at three months and a half, and a year afterward she gave birth at term to a child that died at the age of 10 months of meningitis. This woman, when she had been pregnant six months and a half and presented only a buccal leukoplasia without any visceral lesion, received on Dec. 17, 1911, an injection of 0.04 gm. salvarsan in the right basilic vein. After the usual discomforts of the first day, the patient was very well the two following days. December 20, however, she was seized with nausea, vomiting and violent headache. At midnight, she lost consciousness; the next day, she was in coma. Lumbar puncture drew off a limpid normal liquid. The urine contained no albumin. December 22, the coma persisted, the face and the extremities became cyanotic, the respiration became Cheyne-Stokes in character, and, in spite of a blood-letting of 200 gm., the patient died the same day at noon.

Glycerin in Food

Some manufacturers have asked the minister of agriculture whether glycerin is to be considered an alimentary substance. It is used in the manufacture of certain drinks, effervescent lemonade and in syrups and jellies and in the preparation of pastes from which gum drops are made in order to avoid hardening. The superior council of hygiene consulted by the minister decided that it was not. It appears from the report presented by Dr. Pouchet, professor of pharmacology and materia medica at the Faculté de médecine de Paris, that without being considered a food glycerin may play an important accessory rôle in alimentation on condition of being used in small proportions and occasionally. The constant elimination by the kidneys and liver may not be without inconvenience, as has been shown by the experience of Dujardin-Beaumetz and Audigé. In short, it is rather a drug than a foodstuff and its use ought not be considered compatible with hygiene. Dr. Pouchet proposes therefore that the use of glycerin as a food substance should not be authorized and this conclusion was adopted.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Feb. 9, 1912.

Personal

The chair of ophthalmology at Berlin is finally filled. Professor Krückmann, professor of ophthalmology at Königsberg, a pupil of the Leipsic ophthalmologist Sattler, has accepted the call.

Professor Theobald Smith, of the chair of comparative pathology at Harvard University, our first medical exchange professor, delivered a short time ago his inaugural address, entitled "Parasitismus und Krankheit." It was published in the last number of the *Deutsche medizinische Wochenschrift*.

Kaiser Wilhelm Society for the Advancement of Science

The Kaiser Wilhelm Gesellschaft zur Förderung der Wissenschaften, founded under the protectorate of the Kaiser about eighteen months ago, already has 169 members, a quite considerable number when it is remembered that the smallest contribution for which membership can be obtained is $5,000 (20,000 marks), and the annual dues are $250. The members of the society come from all parts of Germany and even Germans residing in foreign countries belong to it. I have already reported the establishment by the society of the Kaiser Wilhelm institute for chemistry at Dahlem. In addition the society has bought a biological institute in Rovigno, which was founded by a German. Next a great institute for the investigation of development and heredity is to be founded. As additional fields of biologic research, to which the society purposes extending its activities, may be mentioned experimental therapy, the study of the brain, and microbiology. In addition it has favored radium investigation by grants to individual investigators in their research. Of investigations which belong to the field of the historical sciences, the archæologic are especially to be advanced.

Assumption of First-Aid Service by the City

At yesterday's meeting of the city council, the proposal of the city executive (*Magistrat*) that the city shall assume the entire first-aid service April 1, 1913, was adopted. For the management of the first-aid work and for the establishment of the principles on which the municipalizing shall take place, a special board is to be appointed. For perfecting the organization a committee selected by the council is to advise, and it is to be hoped it will be successful in removing the differences which exist between physicians and the accident stations.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Feb. 10, 1912.

Personal News

Among the teaching staff of the University of Vienna several important changes will take place shortly. Thus the otologist Hammerschlag and the famous rhinologist Hajek will be appointed professors in a few weeks, while Dr. Bondy will be made privat docent in otology. Docent Kahler, the assistant of Chiari, has been offered the clinic of Killian in Freiburg, who in his turn has been appointed to Berlin. Dr. Kahler, the son of the once famous physician, has done remarkable work on broncho- and tracheoscopy and deserves the high distinction of succeeding a man of Killian's reputation.

Increased Prices of Drugs in Austria

Since the list of remedies contained in the Austrian Pharmacopeia is official, compiled by the Ministry of the Interior, the same body also issues the price-list for the drugs and remedies, at least as far as charges for the prescriptions are concerned. The public has recently had the unpleasant surprise to learn that nearly all alkaloids will now be from 80 to 100 per cent. dearer, especially codein, morphin and atropin. For menthol, chloroform and alcohol 40 per cent. more will be charged, for ipecac 60 per cent., and even phenol, rhubarb and milk sugar are higher. The manipulations in dispensing a prescription are also charged for, so taken along with the increased fees for the physician—nearly everywhere adopted—disease will be more expensive than ever before.

Marriages

Harold Edwards Hersh, M.D., Palmerton, Pa., to Miss Nell Fulweiler of Germantown, Philadelphia, at Palmerton, February 15.

Michael Webster Stofer, M.D., New Franklin, Pa., to Miss Emma S. Wood of Guyencourt, Del., at Philadelphia, February 10.

Charles B. Callard, M.D., Boise, Ida., to Miss Ellen Smith of Bloomington, Neb., at Pocatello, Ida., February 13.

William T. Moynan, M.D., to Miss Alice Gardiner, both of New York City, at Greenwich, Conn., February 14.

Henry E. Washburn, M.D., Clinton, Ind., to Miss Anna Dyer of Indianapolis, at St. Louis, February 12.

Gustav H. Woltereck, M.D., Baltimore, to Miss Helen Edith Black, at Ridley Park, Pa., February 14.

Kurt Hermann Thoma, M.D., Freiburg, Baden, to Miss Louise Bird of Newton, Mass., February 13.

Walther Eugene Rahte, M.D., to Miss Helen Rosalie Evans, both of Philadelphia, February 14.

David D. Scannell, M.D., to Miss Elizabeth A. Macdonald, both of Boston, February 14.

Deaths

Henry C. Ghent, M.D. Jefferson Medical College, 1852; Medical College of Virginia, Richmond, 1863; Kentucky School of Medicine, Louisville, 1883; fourth vice-president of the American Medical Association in 1884-1885; president of the Texas State Medical Association in 1884-1885; president of the Central Texas State Medical Association, from 1886 to 1889; president of Bell County Medical Society, in 1883; surgeon in the Confederate service throughout the Civil War; a member of the state legislature in 1872; a pioneer resident of Bell County; died at his home in Belton, February 13, from pneumonia, aged 80.

John Fletcher Powell, M.D. University of Maryland, Baltimore, 1853; formerly demonstrator and professor of anatomy in Washington University Medical School, Baltimore; acting assistant surgeon U. S. Army and city jail physician of Baltimore during the Civil War; for fifty-five years a member of the Medical and Chirurgical Faculty of Maryland; died at his home in Baltimore, February 15, from senile debility, aged 81.

Minnie Clifton Archer, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1894; a member of the American Medical Association and a prominent specialist on diseases of the eye, ear, nose and throat of Houston, Tex.; died at her home, February 8, from pneumonia. The Paris County Medical Society at its meeting, February 9, adopted resolutions of respect and regret regarding Dr. Archer, and then adjourned.

Regay Leslie Baker, M.D. Kentucky School of Medicine, Louisville, 1893; Jefferson Medical College, 1894; a member of the American Medical Association; coroner of Peoria County, Ill., from 1904 to 1908; died at his home in Peoria, February 14, from the effects of a gunshot wound of the head self-inflicted, it is believed, with suicidal intent, while temporarily insane, aged 40.

Peter Windt Brakeley, M.D. University of Pennsylvania, Philadelphia, 1869; sometime president of the township of Dunellen, N. J., and mayor of the borough; for several terms president of the board of health and board of education; once coroner of Middlesex County, and postmaster of Dunellen under President Roosevelt; died at his home, February 12, aged 68.

Gustave Ettmueller, M.D. University of Leipzig, Germany, 1867; a member of the Missouri State Medical Association; physician of Cole County; formerly secretary of the board of health, health commissioner and city physician of Jefferson City, and a member of the board of managers of State Hospital No. 1, Fulton; died at his home, February 11, aged 70.

Ralph Melville Mead, M.D. Long Island College Hospital, Brooklyn, N. Y., 1882; a member of the Medical Society of the State of New York; for six years attending physician to Seney Hospital and visiting physician to St. Joseph's Institute for Deaf Mutes, Brooklyn; died at his home in that city, February 16, from cerebral hemorrhage, aged 54.

Edgar Thomas Newsome, M.D. Harvard Medical School, 1897; once superintendent of the Cope Sanitarium, Nashua, N. H., but who later gave up practice to become manager and treasurer of the Asbestos Metal Protective Company, Beaver Falls, Pa.; died in the New Brighton General Hospital, Beaver Falls, February 6, from typhoid, aged 37.

Benjamin Pearson, M.D. Jefferson Medical College, 1881; for fifty years a practitioner and at one time health officer of Slippery Rock, Pa.; one of the founders and for twenty-one years a trustee of the Slippery Rock State Normal School; consulting physician to the Mercer State Hospital; died at his home, February 12, aged 73.

William Alexander Clementson, M.D. Jefferson Medical College, 1894; a member of the American Medical Association and one of the most prominent practitioners of the Turtle Creek Valley; a specialist on diseases of the nose and throat; died at his home in Swissdale, Pa., February 16, from pneumonia, aged 39.

Anna Hutchinson Searing, M.D. University of Michigan, Ann Arbor, 1872, and one of the first women graduates from the institution; until 1895 a practitioner of Rochester, N. Y., and since that time a resident of California; died at the home of her nephew at Chula Vista, February 3, from senile debility, aged 82.

Carl C. Leeper, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1880; a member of the American Medical Association and a practitioner of Braymer, Mo.; died in the South Side Hospital, Kansas City, Mo., February 21, from diabetic gangrene, aged 55.

Thomas Graham McConkey, M.D. University of Pennsylvania, Philadelphia, 1890; formerly visiting physician to the San Francisco City and County Hospital, and professor of clinical medicine in the Hahnemann Medical College of the Pacific; died at his home in San Francisco, February 15, aged 52.

George Reinman Herst, M.D. University of Pennsylvania, Philadelphia, 1898; a member of the Medical Society of the State of Pennsylvania; a member and chairman of the civil service commission of Pittsburgh; died in Mercy Hospital in that city, February 16, from septicemia, aged 38.

William W. Kirby, M.D. Tufts Medical School, Boston, 1901; a member of the American Medical Association; for several years examining physician for the fire department of Providence, R. I.; died suddenly in his office in that city, February 12, from cerebral hemorrhage, aged 42.

Edward Henry Murrell, M.D. University of Pennsylvania, Philadelphia, 1869; a member of the Medical Society of the State of Pennsylvania; for many years a practitioner of Lynchburg, Va.; died at his home in West Lynchburg, February 10, from senile debility, aged 86.

John Anton Hoffman, M.D. Miami Medical College, Cincinnati, 1889; of Pesotum, Ill.; a member of the American Medical Association; died in the Julia F. Burnham Hospital, Champaign, Ill., February 12, a week after an operation on an infected gall-bladder, aged 43.

Charles Joseph Finnegan, M.D. Rush Medical College, 1886; in the government service from 1893 to 1902, and later a practitioner of Coupeville and Anacortes, Wash.; died at his home in the latter city, February 12, from bronchial pneumonia and pleurisy, aged 47.

George Latimer, M.D. George Washington University, Washington, D. C., 1849; said to be the oldest alumnus of that institution and one of the oldest practitioners of the District of Columbia; died at his home in Washington, February 11, from senile debility, aged 87.

Franklin Nickerson, M.D. Harvard Medical School, 1863; surgeon in the Navy during the Civil War; a member of the Massachusetts Medical Society and a practitioner of Lowell since 1866; died suddenly at his home, February 14, aged 73.

Cunningham Wilson Darby (license, Clay County, Ala., 1887), a member of the Medical Association of the State of Alabama; for thirty-five years a practitioner of Clay County; died at his home near Goodwater, January 22, aged 60.

George S. Hunter, M.D. Vanderbilt University, Nashville, Tenn., 1882; of Bolton, Miss.; formerly a member of the American Medical Association; died in Jackson, Miss., February 12, from nervous prostration, aged 50.

Julius Levin, M.D. University of Maryland, Baltimore, 1905; formerly of Chicago; was found dead in his apartment in Johnstown, Pa., February 12, from the effects of accidental asphyxiation by carbon monoxid, aged 32.

George W. Barr, M.D. University of Buffalo, N. Y., 1856; surgeon of the Sixty-Fourth New York Volunteer Infantry during the Civil War; died at his home in Titusville, Pa., January 18, from senile debility, aged 79.

Seth Hill, M.D. Yale University, New Haven, Conn., 1866; a member of the Connecticut State Medical Society; of Stepney Depot; died in Bridgeport Hospital, February 5, from cancer of the stomach, aged 74.

Velona Alonzo Marshall, M.D. University of Vermont, Burlington, 1896; a member of the American Medical Association; died at his home in Moriah, N. Y., February 7, from pneumonia, aged 47.

Robert A. Bunch, M.D. Eclectic Medical Institute, Cincinnati, 1881; at one time president of the Indiana Eclectic Medical Society; died at his home in Muncie, Ind., from disease of the kidney, aged 59.

Henry Robert Schubert, M.D. University of Louisville, Ky., 1907; for two terms school commissioner of Cooper County, Mo.; died at his home in Jamestown, February 7, from typhoid fever, aged 42.

Robert Vaughn Salmon, M.D. University of Alabama, Mobile, 1875; a member of the Medical Association of the State of Alabama; died at his home in Dadeville, February 8.

John H. Stevens, M.D. Albany (N. Y.) Medical College, 1857; a pioneer practitioner of Montour, Ia.; died at his home in Rogers, Ark., February 9.

Kirby H. Smith, M.D. Vanderbilt University, Nashville, Tenn., 1891; died at his home in Arcadia, Fla., February 13, aged 45.

The Propaganda for Reform

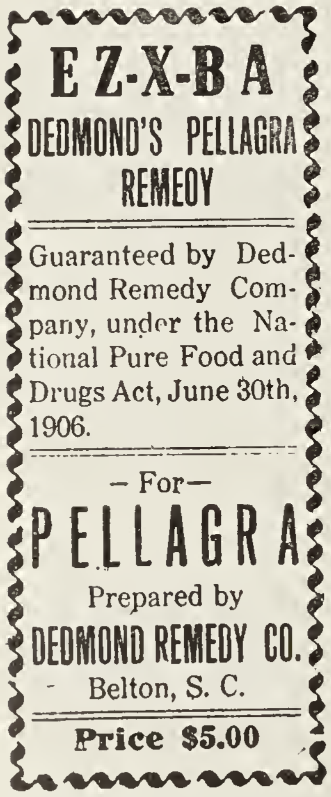
In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

PELLAGRACIDE AND EZ-X-BA

Fraudulent Nostrums Sold as Cures of Pellagra

It seems to be a recognized rule of quacks and nostrum manufacturers that the more hopeless the disease the more worthless and the more expensive should be the treatment or the drug offered to the afflicted. This, of course, is simply reducing human suffering to a commercial basis: the greater the suffering, both physical and mental, the more willing is the unfortunate victim to sacrifice everything on the promise of relief; the more hopeless the disease, the less object has the quack or nostrum manufacturer in going to unnecessary expense; where all drugs are worthless the cheapest will be used. This law has long been recognized in the case of cancer and tuberculosis "cures"; olive oil is considered sufficient for the former and flavored sugar for the latter.

The law of the quack and the nostrum faker is apparently finding application in the case of pellagra, a disease which is recognized as being very prevalent in the United States, especially in the South. The mystery surrounding the causation of this disease and the practical uselessness of most remedies has already attracted both the cranks, who (let us be charitable) believe they have found remedies of value (especially for their pocket books), and the typical nostrum manufacturers.



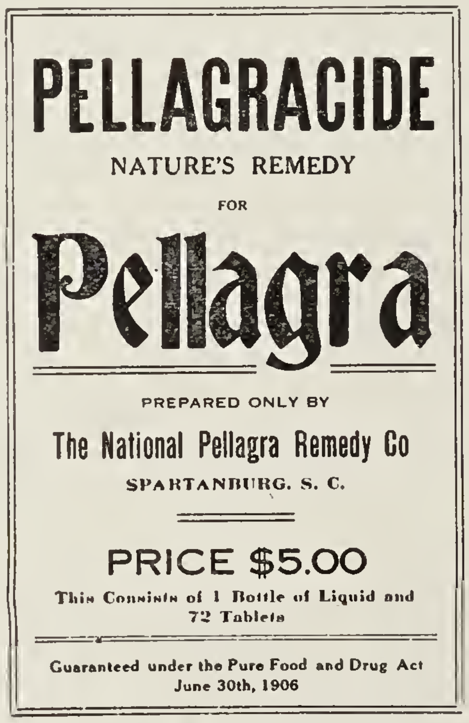
EZ-X-BA
DEDMOND'S PELLAGRA
REMEDY

Guaranteed by Dedmond Remedy Company, under the National Pure Food and Drugs Act, June 30th, 1906.

– For –
PELLAGRA
Prepared by
DEDMOND REMEDY CO.
Belton, S. C.

Price $5.00

Fig. 1.—The label on the envelope containing the EZ-X-BA tablets.



PELLAGRACIDE
NATURE'S REMEDY
FOR
Pellagra

PREPARED ONLY BY
The National Pellagra Remedy Co
SPARTANBURG. S. C.

PRICE $5.00
This Consists of 1 Bottle of Liquid and 72 Tablets

Guaranteed under the Pure Food and Drug Act June 30th, 1906

Fig. 2.—The "Pellagracide" label.

The Journal has received several requests for information concerning some of these pellagra remedies. A typical letter is the following from a member of a state board of health of one of the southern states:

> "I am sending you by express to-day the alleged remedy called EZ-X-BA, put up by the Dedmond Remedy Company as a cure for pellagra. They sell this remedy at $5.00. I am anxious to have an analysis of this stuff so that I may stop, if possible, the swindling of the public by its sale. It has a large sale in the mill villages of the state, a class of people who seem to be the prey of all the charlatans, quacks and swindlers of the country. Please send me report as soon as possible, and, if you can, take notice of same in the columns of The Journal of the American Medical Association."

Samples of this "remedy" consisted of an 8-ounce bottle of a liquid and of an envelope containing in some cases, 75, in others 34, sugar-coated tablets weighing about 2⅓ grains each. The envelopes had the label shown in Figure 1. The label on the bottle had, in addition, the words "Nature's Compound." The circular accompanying the packages contained the following statements:

> "This remedy contains no drugs, no chemicals, or anything that would injure the most delicate person."
>
> "Nausea and nervousness usually follow in five to fifteen days after the treatment has been started, but this is an indication that the remedy is getting in its work."
>
> "We guarantee the remedy, if taken according to directions, to cure pellagra. If, after taking a reasonable amount, you are not cured, we will refund your money."

More recently samples of what, apparently, was the same "remedy," but bearing a different label were received. A reproduction of the label on these bottles is shown in Fig. 2.

Since the U. S. Public Health and Marine-Hospital Service has for some time been conducting a study of pellagra, inquiry was made of the Hygienic Laboratory of this Service as to whether these preparations had been examined; the samples sent to The Journal were also forwarded to the Hygienic Laboratory. Dr. Hunt, professor of pharmacology of this laboratory, writes as follows:

"Our attention had already been called to these alleged remedies for pellagra and an examination of them undertaken in the division of pharmacology. The samples received from The Journal office were also examined; the results were as follows:

EZ-X-BA

The liquid of three of the bottles of EZ-X-BA had the same appearance; it was of a pale, yellowish color, with slight amounts of flaky material. The contents of a fourth bottle differed quite markedly from that of the others in that it was of a much deeper color, due, as was subsequently found, to the fact that it contained more than four times as much iron as the others.

The liquid was found on analysis to consist essentially of an aqueous, slightly acid solution of iron, aluminum, magnesium and calcium sulphates. The results of the analysis, expressed in grams per 100 c.c., showed the following minimum and maximum amounts of dissolved constituents in the different bottles:

	Gm. per 100 c.c.
Ferric oxid, Fe_2O_3	0.069 to 0.313
Aluminium oxid, Al_2O_3	0.903 to 1.079
Magnesium oxid, MgO	0.700 to 0.880
Calcium oxid, CaO	0.030 to 0.075
Sulphur trioxid, SO_3	3.811 to 4.092

The iron was present largely in the ferrous state. There were traces of the alkalies, silica, chlorids, and manganese. Alkaloids, arsenic, mercury, phosphates, plant extractives, etc., were absent. The flaky material consisted of a fungous growth; two forms of bacteria were also present.

The different lots of tablets after removal of the sugar coating had the following composition expressed in per cent. by weight:

	Per Cent. by Weight.
Ferric oxid, Fe_2O_3	5.3 to 6.2
Aluminium oxid, Al_2O_3	12.0 to 16.8
Magnesium oxid, MgO	3.5 to 3.8
Calcium oxid, CaO	5.4 to 9.8
Sulphur trioxid, SO_3	22.4 to 23.9
Starch	12.3
Cane sugar	14.6
Moisture, water of crystallization and hydration, traces of manganese, etc.	18.2

Alkaloids, arsenic, aloin, mercury and chlorids, etc., were absent.

PELLAGRACIDE

The sample of the liquid consisted of about 12 ounces of a straw-colored solution, similar in all respects to EZ-X-BA, suspended flaky material being also present. The analytical results were as follows:

	Gm. per 100 c.c.
Ferric oxid, Fe_2O_3	0.117
Aluminium oxid, Al_2O_3	0.856
Magnesium oxid, MgO	0.531
Calcium oxid, CaO	0.067
Sulphur trioxid, SO_3	3.220
	4.791

The iron was present almost entirely in the ferrous state.

The tablets were contained in a small pasteboard box. The weight per tablet was found to be 0.35 gm. and after removal of the white coating as carefully as possible, the average weight of the interior mass was found to be 0.17 gm.; i. e., about 50 per cent. of the total weight. The analytical results on the powdered tablets (interior part) were:

	Per Cent.
Ferric oxid, Fe_2O_3	5.27
Aluminium oxid, Al_2O_3	12.83
Magnesium oxid, MgO	4.24
Calcium oxid, CaO	5.98
Sulphur trioxid, SO_3	22.86
Sugar, starch, water of hydration, etc., by difference	48.82

The results on both the liquid and tablets show that Pellagracide possesses essentially the same composition as EZ-X-BA. In fact the analytical results fall well within the limits of variation in composition reported above for EZ-X-BA.

SUMMARY

The analyses show that these alleged remedies for pellagra are of variable composition and contain no substances which could be reasonably expected to have any curative value in this disease; on the contrary, they would tend still further to impair the digestion and so aggravate the condition.

A similar preparation could be prepared at a nominal cost from the partially weathered iron-bearing minerals occurring abundantly in the South by digestion with dilute sulphuric acid."

How long will the United States government not only permit its afflicted citizens to be imposed on in this manner but actually aid the nostrum manufacturers by permitting the use of the "Guaranteed under the Food and Drugs Act" in a manner to lead even the intelligent to believe that the government has some control over such "remedies," and to afford such opportunities for the exploiters of nostrums to deceive the public?

Correspondence

The Texas Meningitis Epidemic

To the Editor:—In the Medical News columns (THE JOURNAL, Jan. 27, 1912, p. 287) reference is made to the meningitis epidemic in Texas in terms which have created a slight misapprehension regarding the relation of the Rockefeller Institute for Medical Research to the steps taken to combat that epidemic. While it is true that application for relief was made to the Rockefeller Institute by physicians and health authorities in Texas, the institute merely took the responsibility of seeing that a physician familiar with the serum treatment of meningitis was sent to Texas with the necessary supplies, and that his traveling expenses were paid. It appeared at once that a very competent physician to undertake this mission was Dr. A. Sophian of the Research Laboratories of the New York Department of Health, to whose immediate charge, under an arrangement with the department, the institute had recently given over the routine manufacturing and dispensing of the meningitis serum. Although the institute very gladly made itself responsible for the mission, it is only fitting that the generous cooperation of the department of health in immediately giving Dr. Sophian leave of absence and in supplying a large quantity of serum at cost should be recognized.

JEROME D. GREENE, New York,
General Manager, Rockefeller Institute for Medical Research.

The Management of Normal Labor

To the Editor:—In your comment in THE JOURNAL, February 10, on this subject, you say that the author may have had in mind the country practitioner—I only hope not. The fact must be admitted that it fits some country practitioners, and that the technic in the questionable method is identical, if not far in advance of the procedure which some follow. The application of petrolatum to the perineum would be about as effectual as skunk-grease, which our neighborhood grannies consider to contain so much virtue.

There is no excuse for the country practitioner not giving his patients the benefit of the latest and most approved methods, thereby preventing much of the trouble referred to by Dr. Frank H. Jackson, in THE JOURNAL, February 10, p. 429. I am a general practitioner in a small village, therefore I beg that due credit and consideration be given those of us who use modern technic and aseptic methods. I take as authority most of THE JOURNAL A. M. A. articles, but never the one on management of normal labor in the issue of January 27.

W. W. SCOTT, M.D., Bolivar, O.

The Army Canteen

To the Editor:—In reply to Dr. W. W. Keen's communications regarding the canteen I wish you would print the following clipping from the *Christian Work and Evangelist:*

"Just as the advocates of the restoration of the canteen in the army posts were making a concerted movement upon the government and were everywhere trying to arouse public opinion, the head commander of the Department of the East, General Frederick Dent Grant, has come out squarely and frankly against it. It has thrown a damper over the whole movement. We cannot help sharing General Grant's opinion that if the army were anxious to stop the visits of soldiers to the dives around the camp, and their purchasing of liquor there, they could do so. And we are not absolutely sure that the dives were not there before the canteen was abolished. And how about abolishing the dives instead of restoring the canteen?"

I am sure that all true temperance sympathizers in the medical profession regret the position Dr. Keen has taken and wish that his great talents might be employed for a worthier purpose.

JOSEPH PESTAL, M.D., Pearce, Ariz.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

METHOD OF PROCEDURE WHEN SUPPLANTED BY CONSULTANT

To the Editor:—I wish to make a point in relation to the position of Dr. B in the case cited in "Method of Procedure When Supplanted by Consultant" (THE JOURNAL, Feb. 3, 1912, p. 364). The answer says that "evidently the aggrieved Dr. A feels that Dr. B, who was left in charge of the patient, 'stole' the case. This may or may not be true." This evidence of Dr. A is more than an ex-parte statement. There is the following proof:

1. Dr. B has supplanted Dr. A, which is accepted.
2. Dr. B has not the candor to explain the case personally to Dr. A and sends him to the patient for information, showing his dishonesty in the matter. These circumstances are strong proof against Dr. B.

Accepting the case under the circumstances, on any excuse whatever, puts B in a compromising position and is an injury to his friend, who confided in him, as well as an injury to professional fellowship. The only honest course for B to take would have been to turn the case back to Dr. A, showing the patient by proper explanation the right, justice and importance to all concerned of continuing with Dr. A, since the evidence shows that he would have such influence, by the confidence exhibited; and to have nothing further to do with it, even were it impossible for him to induce the patient to return to Dr. A. She might have called in the third party, yet in that case he would have been clear of criticism and been true to his friend, to the ethics of medicine, and of common friendship, thus creating a closer tie between his friend and himself, besides a feeling of self-respect and ease of conscience. Nor would it even be well or honest to advise "that the consultant would accept a call at some future time when a physician's services were required." No such intimations should be made by one who wishes to be a true member of the medical profession.

If the patient in the future desires the services of Dr. B she will call him, if she has been so favorably impressed, without his bidding for patronage. To attend even under such circumstances is bad; it is a discourtesy to his friend, besides helping to encourage the tendency among some people of constantly changing physicians, which is exceedingly mischievous. The physician in such a case has the opportunity and should exert his influence in encouraging the habit of having a regular physician; In that way he will be sowing seed that will bring forth a harvest of good. J. J. C.

ANSWER.—We are pleased to note the ethical position of our correspondent. We must repeat, however, that the letter of C. N. D. is the statement of the case by Dr. A, or by his next friend, and so an "ex-parte statement." It is the indictment, rather than the "evidence" required to support the charge. Our answer stated that "as the letter presents the subject, 'the appearance of evil' calls for a statement from B." But B should not be judged until he presents his side. The burden of proof lies with A; the benefit of any doubt belongs to B. We agree with our correspondent that it should not be necessary for the consultant to announce his willingness to attend the patient in some future illness. If the announcement is made, it should be with the purpose of making positive declaration of the determination of the consultant to withdraw from attendance on the case at the time.

To the Editor:—Please favor me with your opinion and advice concerning the following case:

C had been attending a patient for several days and D was called as consultant. Two more consultations were held in the course of about two weeks. The two physicians agreed as to diagnosis and treatment. After the third consultation the patient absolutely refused to allow C to treat her any more, though D advised her to continue with C and told her that he (D) did not want her case. But as she emphatically refused to receive treatment from C, D took the case after C was discharged. Did D do right in this case?

W. L. M.

Answer.—Here, D, the consultant, refused to become the physician in charge until after C had been dismissed. The conditions differ somewhat from those previously cited. After the patient had dismissed C, before taking the case, it would have been wise for D to have a heart-to-heart talk with C that they might mutually understand each other and their relations with the patient. Perhaps this course was followed. The right of the patient to choose her physician must be recognized. D should have C's consent before taking charge of the case. When, under these conditions, D becomes the attendant he is under greater obligation than he was as consultant to protect C's professional reputation from undeserved criticism, and must be especially guarded in conducting the case.

POISONING FROM GODFREY'S CORDIAL

To the Editor:—I was called to see a 10 weeks old baby—who was dead when I arrived—who had been given one-half teaspoonful of "Godfrey's Cordial" at 10:30 a. m. and died at 2 a. m. following. The baby had been given the medicine for a week. As described by the parents, the symptoms were similar to opium poisoning, but the child did not show a profound stupor.

W. B. Sisson, M.D., Kahoka, Mo.

Answer.—The composition of Godfrey's Cordial used to vary greatly and many different formulas have been published. The preparation now appears in the National Formulary as a synonym for Mistura Sassafras et Opii. Under the federal Food and Drugs Act this preparation must—if it enters into interstate commerce—correspond in composition to the National Formulary product, the formula of which is:

Oil of sassafrass	1 c.c.
Tincture of opium (U. S. P.)	35 c.c.
Alcohol	50 c.c.
Potassium carbonate	8 gm.
Molasses	325 c.c.
Water, a sufficient quantity to make	1,000 c.c.

By this, it will be seen that a teaspoonful (4 c.c.) of Godfrey's Cordial contains about 0.12 c.c. (2 minims) of tincture of opium corresponding to about 0.013 gm. (1/5 grain) of opium. Evidently the child referred to received, as a final dose, at least one-tenth of a grain—possibly more—of opium. In October, 1910, a newspaper clipping that came to The Journal office recorded the death of an infant from opium poisoning, the drug having been given in the form of a "soothing syrup." The coroner was written to and the information elicited that the preparation responsible for this death was Godfrey's Cordial.

It is much to be deplored that such a dangerous mixture as this should be designated as a "cordial." To the average individual, the term cordial gives the impression that the article bearing it is not only harmless but beneficial. If this shotgun mixture cannot be omitted from the next issue of the National Formulary, it is to be hoped that its synonym will be changed so as to render it less potent for harm. It is safe to assume that if "Godfrey's Cordial" were known and sold under the name "Godfrey's Opiate," the public would be more chary in using the mixture.

CALORIC METHOD OF INFANT-FEEDING

To the Editor:—Please refer me to any handbook or short work on the caloric method of infant-feeding. Also please give a list of articles published in The Journal during the past three years bearing on this subject.

J. F. Argue, Ottawa, Canada.

Answer.—The following brief works contain the information desired on the caloric method of feeding infants:

Judson and Gittings: Infant-Feeding, J. B. Lippincott Co., Philadelphia, 1902.

Chapin, Henry Dwight: Theory and Practice of Infant Feeding, William Wood & Co., New York, 1909.

Fowler, J. S.: Infant-Feeding, Oxford University Press, New York, 1909.

The following late books covering the whole subject of diseases of children also contain extended chapters on infant-feeding:

Holt, L. Emmet: Diseases of Infancy and Childhood, D. Appleton & Co., New York, 1911.

Fischer, Louis: Diseases of Infancy and Childhood, F. A. Davis Co., Philadelphia, 1911.

Chapin, H. D., and Pisek, G. R.: Diseases of Infancy and Childhood, William Wood & Co., New York, 1911.

Koplik, Henry: Infancy and Childhood, Lea & Febiger, Philadelphia, 1911.

The following papers on this subject have appeared in The Journal A. M. A. and the *American Journal of Diseases of Children:*

Brennemann, J.: Remarks on the Feeding of the Healthy Infant, The Journal A. M. A., July 11, 1908, p. 101.

Allen, T. G.: Criteria and Standards in Infant-Feeding, The Journal A. M. A., Nov. 14, 1908, p. 1687.

Lackner, E.: Heubner's System of Infant-Feeding Expressed in Calories and Energy Units, The Journal A. M. A., Oct. 16, 1909, p. 1267.

Bowditch, H. J.: A Convenient Method for Determining Caloric Values of Formulas Based on Percentage Feeding of Infants, The Journal A. M. A., Oct. 16, 1909, p. 1265.

Hess, J. H.: A Study of the Caloric Needs of Premature Infants, *Am. Jour. Dis. Child.*, November, 1911, p. 302.

Howland, John: The Fundamental Requirements of an Infant's Nutrition, *Am. Jour. Dis. Child.*, July, 1911, p. 49.

The Public Service

Medical Department, U. S. Army

Changes during the week ended Feb. 24, 1912.

Ingalls, R. E., dental surgeon, February 8, returned to Fort Douglas, Utah, from temporary duty at Boise Barracks, Idaho.

Manly, Clarence J., major, February 19, relieved from treatment at Walter Reed General Hospital, D. C., and granted thirty days' leave on surgeon's certificate of disability.

De Laney, M. A., major, February 21, ordered to Philadelphia on official business pertaining to the medical department of the Army.

Medical Corps, U. S. Navy

Changes during the week ended Feb. 17, 1912.

Barber, G. H., medical inspector, commissioned medical inspector from Sept. 17, 1911.

Evans, S. G., surgeon, ordered to the naval medical school, Washington, D. C.

Baker, M. W., surgeon, commissioned surgeon from Nov. 17, 1911.

Eytinge, E. O. J., P. A. surgeon, ordered to the naval station, Guam.

Mink, O. J., P. A. surgeon, orders of January 24 revoked.

Schmidt, L. M., P. A. surgeon, detached from the navy recruiting station, Chicago, and ordered to the naval hospital, Norfolk, Va.

Trible, G. B., P. A. surgeon, detached from the naval hospital, Norfolk, Va., and ordered to the naval hospital, Washington, D. C.

Hathaway, G. S., P. A. surgeon, detached from the *New Orleans* and ordered home to await orders.

Schier, A. R., A. A. surgeon, detached from the marine recruiting station, Kansas City, Mo., and ordered to the marine recruiting station, Memphis, Tenn.

Changes during the week ended Feb. 24, 1912.

Taylor, J. L., P. A. surgeon, ordered home to await orders.

Stibbens, F. H., P. A. surgeon, detached from the *St. Louis* and ordered to the *Intrepid*.

Charlton, C. F., and Davis, R. G., assistant surgeons, commissioned assistant surgeons from Jan. 26, 1912.

Unusual Case of Foreign Body.—Bauman reports, in *New York Medical Journal*, the case of a man working on a wire-drawing machine, which took off four fingers of his right hand in June, 1909. He was taken to a hospital, where the stumps were treated and sutured, healing taking place by primary union. During the last two and one-half years he had been working more or less steadily, using his right hand as best he could. In January, 1912, he complained of a sticking pain in the stumps of one of his fingers, remarking that he had struck that finger a few days previously, since which time it had been painful. On examination a foreign body could be plainly felt, assumed to be a piece of bone chipped off when the finger was struck; but the *x*-ray disclosed a foreign body. Bauman cut down on the stump, under cocain anesthesia, and easily removed what proved to be the tip of a silver probe, half an inch long, left there at the operation two and a half years previously, and, strangely enough, giving the patient no inconvenience during this time.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

Missouri Valley Medical Society, Colfax Springs, Ia., Mar. 21-22.

OBSTETRICAL SOCIETY OF PHILADELPHIA

Meeting held Jan. 4, 1912

The President, DR. EDWARD P. DAVIS, in the Chair

Cornual Pregnancy in the Normal Uterus

DR. EDWARD A. SCHUMANN: Cornual pregnancy is the condition resulting when the impregnated ovum becomes embedded in some portion of the cornua of the normal uterus. The attachment may be entirely on the cornual endometrium or the decidua may extend partially into the endosalpinx, producing a partial interstitial pregnancy. The condition is extremely rare. The diagnosis can be made on the general signs of pregnancy with the presence of a mass in either cornu. The terminations are usually rupture with profuse hemorrhage, or tubal abortion, or rarely the pregnancy may develop into the uterus and become a normal intra-uterine pregnancy. The treatment is dilatation of the cervical canal, and extraction of the fetus and membranes per vaginam or abdominal section with conservative treatment of the cornua and the tube.

DISCUSSION

DR. BARTON COOKE HIRST: I have seen three cases. In two I mistook the condition for ectopic pregnancy. The first case was that of a young woman four months' pregnant, who was seized with the most typical symptoms of ectopic gestation. There was a mass apparently alongside the uterus, which was itself enlarged. Immediate operation was done, and on opening the abdomen the cornu was found to be enormously enlarged, and it was possible to see the outlines of the fetal body through the thinned wall. After some discussion, we decided to take the risk of letting the pregnancy go on, prepared, however, to open the abdomen again if rupture occurred. The woman was kept in the hospital for a longer time than usual after section. She had several attacks of pain, but was delivered at term.

The second case was also one mistaken for ectopic gestation. The woman was seized with typical symptoms of ectopic pregnancy. We opened the abdomen and found that the pregnancy was not entirely ectopic, but distinctly cornual. There was a mass at one cornu about the size of a small apple, apparently connected with the uterine cavity. I put a pad over the abdominal wound without closing it, seized the cervix with a double tenaculum and inserted placental forceps. I managed with some difficulty to extract the mass through the narrow opening in one corner of the uterine cavity. The patient made a good recovery.

The third case appeared to be a cornual pregnancy and the outcome proved this to be correct.

DR. GEORGE ERETY SHOEMAKER: I have seen two cases of pregnancy in the cornu, one of which I reported as occurring in a bicornute uterus. I had opened the abdomen more than a year before for another purpose, and was therefore certain of the bicornute uterus. The pregnancy terminated in about four months in abortion by the vagina. The woman afterward became pregnant and was delivered of a living child from one of the divisions. In another patient the pregnancy occupied the cornu, but was so nicely balanced between the tube proper and the uterine cavity that the uterine tissue ruptured. When I opened the abdomen, supposing that I had an ordinary ruptured ectopic condition, the rupture was found to be in the uterus central to the position of the uterine artery and inside of the origin of the round ligament, showing that the pregnancy was interstitial. It was necessary to resect that portion of the uterus, which was done successfully. The woman became pregnant within three months from the time I operated. She developed very severe paroxysmal pains at about four months, and it was impossible to tell whether rupture was impending or not. After conferring with a number of surgeons, however, I decided to open the abdomen and do hysterectomy, and the patient recovered from that operation. The point is, whether it was wise to do a hysterectomy for the second pregnancy in the resected uterus to avoid rupture. As it turned out, I think it was not necessary, but it was a patient in whom the hysterectomy did not make any special difference.

DR. E. E. MONTGOMERY: Recently Dr. Herman Grad of New York reported a similar case which he calls an apical pregnancy. The pregnancy developed in the cornu of the uterus and with an opening into the uterine cavity, through which the pregnancy was subsequently moved. He also states that Kelly in a similar case after opening the abdomen punctured the membranes by a sound through the uterus, then closed the abdomen, allowing the contents to be expelled through the uterine cavity, and that he had seen six other cases of a similar character. The nearest approach I have had to a cornual pregnancy was in a woman in whose case a diagnosis of ectopic pregnancy was made. On opening the abdomen the pregnancy was found to be in one side of a double uterus; it had existed for three months. The wall was so thin and the woman suffering so much pain and distress that I felt it wise to remove the pregnant sac, which I did. The patient recovered and subsequently gave birth to a child through the portion of the uterus remaining.

DR. JOHN M. BALDY: I have not seen a case of cornual pregnancy, and have always doubted whether the condition really existed, as we understand cornual pregnancy in the normal uterus. The two cases spoken of by Dr. Shoemaker and Dr. Montgomery, in which pregnancy was found in bicornute uteri, do not appeal to me as cases of cornual pregnancy. We all know that there are different degrees of bicornute uteri, and I question whether a number of these cases of so-called cornual pregnancies are not instances of minor degrees of bicornute uteri. If these are true cornual pregnancies and occur in perfectly normal uteri, we should expect them to occur more frequently than reported. I think if some of these uteri could be examined carefully after involution has taken place in the light of the possibility of maldevelopment, this condition would often be found.

DR. COLLIN FOULKROD: In a case coming under my care in the past year the symptoms were those of the rupture of an extra-uterine pregnancy. The woman had passed one period and seemed to be pregnant, when without any vaginal hemorrhage, she developed a severe attack of pain in the region of the right tube, fainted, was anemic and shocked. A vaginal examination revealed a soft mass in and surrounding the right tube. The possibility of tubal gestation was considered. However, she improved rapidly and, refusing operation, traveled to her home some distance from town. She was there immediately taken ill, aborted a fetus, recognizable as such. She was curetted and recovery ensued. This appeared to be a case of cornual gestation. These cases, strictly speaking, are cornual pregnancies in normal uteri, and they usually give little trouble. Therefore, we are led to believe that the cases reported as cornual pregnancies may not have been in normal uteri.

Pseudomyxoma Peritonei: Report of a Case

DR. BARTON COOKE HIRST: The patient was a woman, 25 years of age. She had one child 4 years old, which she had nursed for three years, during which time there was no menstruation. The menses returned at the expiration of three years, when she weaned the baby, but were irregular and disposed to be scanty. Two weeks before I saw her she first noticed a beginning enlargement and complained of abdominal pain. I found shifting dulness in the abdominal cavity, with very great distention and considerable tenderness. There was no rise of temperature, no leukocytosis. I supposed the case would prove to be one of tuberculous peritonitis, but on opening the abdomen I found a typical case of pseudomyxoma peritonei. The free pseudomucin which I was able to gather up weighed 1½ pounds. There was a cyst the size of an orange, with a large opening in it from a rupture. The abdomen was well washed out. The peritoneum and intestines presented a characteristic appearance. The mortality percentage of these cases has been surprisingly great. The tumor and pseudomucin are easy to remove, but the death-rate is very high, not necessarily immediately, but possibly after a number of years. The distention in my case disappeared under treatment in three or four days, and now the patient is making an excellent recovery and about to leave her bed and be discharged from the hospital. As should be done in all cases, we will keep her under observation as long as we can.

DISCUSSION

Dr. Edward A. Schumann: Two years ago I had occasion to collect the cases of pseudomyxoma peritonei in the literature. I found fifty-six cases, with sixteen deaths, a mortality of 31 per cent. This condition is variously termed foreign-body peritonitis, myxomatous degeneration of the peritoneum, pseudomyxoma peritonei and colloid carcinoma. Thus, the extravasated cyst contents may, for a time, remain passive in the abdominal cavity, giving rise to a low-grade peritonitis, due to the irritation of the foreign substances with the gradual overgrowth of connective tissue and the organization of the pseudomucin. Where the cells lining the original cyst wall continued to proliferate in the peritoneal cavity, forming secondary cystomata, the process was termed colloid carcinoma, which, in my opinion, is the true pathology.

Dr. Daniel Longaker: A few years ago I saw a very remarkable example of this condition. It was thought hydramnion was present. The woman was 40 years of age, and had borne a number of children. There was cessation of menstruation, and it was assumed that she was pregnant, supposedly about the ninth month. There was an enormous development which the attending physician and several consultants looked on as hydramnion. I differed in the given opinion. On section it was found that the patient had a universally disseminated colloid condition, which had originated in a ruptured ovarian cyst. We found the remnants of this cyst at the bottom of the mass. Every portion of the peritoneum was invaded up to and including the under surface of the diaphragm. Several bucketfuls were scooped out. This case followed the usual rule of a fatal ending. I think the general impression that the disease is necessarily malignant, leads one to look on it as a desperate one. I remember another case of the same kind. The patient recovered from the operation, but had a prompt recurrence and died a month or two afterward.

Dr. J. M. Baldy: I have seen at least three cases. The third case made a strong impression on me and is very clear in my mind. I was much puzzled about what ought to be done. Operation revealed a small ovarian cyst, ruptured, with an amount of material in the abdomen so enormous that everything was involved. The material was taken away in handfuls and the abdomen washed out. At the time an ovarian cyst was beginning on the opposite side, but as the patient was a single woman it was not removed. Three years afterward she returned for operation for a large ovarian cyst, unruptured, of the same kind. The abdominal cavity was clear and clean of all former débris or adhesions, and the woman is alive to-day. I would be loath, in the light of that experience, to consider all cases carcinomatous. If they are, some of them must be of low type. I would not consider the case necessarily fatal, if I could make a fair removal of the material.

Dr. E. E. Montgomery: I saw a woman who had been tapped a week or ten days previously. The examination convinced me that there was free material within the abdominal cavity, which I concluded was so thick that it would not pass through the trocar at the time the tapping was done. I operated a few days later and removed two gallons of a thick, jelly-like fluid which had evidently escaped from a collapsed ovarian cyst. The entire peritoneal surface was covered with a thick layer of this material which could not be washed off. The abdomen was closed and the patient recovered with little difficulty. I was called to see the same woman a year ago for an abdominal enlargement. I found an irregular enlargement of the abdomen, and on vaginal examination found a proliferated mass which had perforated the posterior fornix of the vagina. A microscopic examination of this tissue showed a cylindrical cell carcinoma.

THE AMERICAN MEDICAL ASSOCIATION'S CONFERENCES ON MEDICAL EDUCATION, MEDICAL LEGISLATION AND PUBLIC HEALTH

Held in Chicago, Feb. 26-27, 1912

The Eighth Annual Conference of the Council on Medical Education of the American Medical Association was held at the Congress Hotel, Chicago, Monday, February 26, followed on Tuesday by the Conference of the Council on Legislation and Public Health.

The Monday session was presided over by Dr. Arthur Dean Bevan of Chicago, whose opening address (in abstract) was as follows:

The Modern Medical School

The modern medical school must be developed as the medical department of the university. Its function will be (a) to turn out well-qualified practitioners of medicine, and (b) to add its quota to the definite knowledge of medical matters.

To fulfil these functions the medical school must have (a) well-qualified students, (b) expert teachers, (c) well-equipped laboratories, and (d) ample clinical material.

I. MEDICAL STUDENTS

Medical students should be required to have had in addition to their preliminary and secondary education (a) one or two years devoted to higher physics, chemistry and biology; (b) should complete four years of medical study, and (c) take a year's internship in a good hospital. The council has long been of the opinion that this should represent the minimum requirement for the medical degree in this country. This would enable the student to graduate at about 25 or 26 years of age, whereas the extreme requirements of few of the medical colleges in this country delay the age of graduation to about 28 or 29 years—an extreme which does not prevail in England, France or Germany, which stand high in educational and scientific matters. Thirty years of age is altogether too late in life for the average medical student to complete his course and adapt himself to the development of a practice. Hence the council deplores the tendency of some university medical schools to extend their entrance requirements to three or more years of collegiate work. The highest extreme at the present time should not be more than two years of university science, and even this requirement should be accepted with the understanding that an attempt should be made in the near future to save a year somewhere in our preliminary or secondary school course. The two-year standard has already been quite widely adopted in this country.

The intern year in a hospital should be made a requirement throughout the country by state medical licensing boards within the next two or three years. That this would be a reasonable requirement is evidenced by the fact that there are now in this country at least 2,500 hospitals having twenty-five or more beds each, or having a total of at least 200,000 beds. There is no doubt that internships in the better portion of these hospitals could be provided for every one of the 4,000 senior medical students now enrolled in the medical colleges in this country.

II. TRAINED TEACHERS

Of great importance in connection with medical education in this country is a system by which specially trained medical teachers and research men in anatomy, physiology, pharmacology and pathology can be secured. At present it is very difficult to secure such teachers.

The chief reason that such work has not attracted high class men is that the medical schools have had no money to pay reasonable salaries. So the means of securing such teachers would be to provide better salaries, if not pensions also—through such agencies as the Carnegie Foundation—thus providing for old age of these teachers and for their families. The medical schools, therefore, could make these places more attractive by providing also an ample number of assistants and better facilities for teaching and research work.

The lack of well-trained medical men has led many of our medical schools to fill positions with men holding the Ph.D., men well trained in their special sciences, but lacking the medical training, and, therefore, lacking the medical point of view. It is probably the lack of the medical point of view which prevents such teachers from fully understanding the work of the clinical departments and correlating their work with those departments. Since there is so much to learn in a very limited space of time, the subjects of the medical course should be selected and taught by those who have received the complete medical training, and who are thereby in position to correlate these subjects with the other branches of the medical course.

CLINICAL TEACHERS

In only a few instances in this country have medical schools placed their clinical professors on a university basis—that is, placed them on definite salaries and limited them in their private practice. The same apparently holds true in Great Britain. The plan adopted by the German universities comes nearest to the ideal. There the clinical professor is chosen because of his scientific ability, receives a fair but moderate salary, and is made to feel that his university and hospital work is of first importance. He usually devotes at least four or five hours each day to his clinical cases, to teaching or to research work. It is recognized as proper and even desirable, however, for him to have some private practice, but it must in no way interfere with his university work. He is recognized as the highest authority in his special field, and his services can be secured by the rich as well as the poor. This in Germany is regarded as highly desirable, since the income from this private practice attracts and holds high-class men in the clinical chairs.

This private practice also keeps the professor in touch with the people and with the medical profession and makes him a more practical teacher. It prevents his forming wrong conclusions and becoming narrow, which might be the case were he confined to his laboratory and hospitals.

Not only, therefore, must the clinical professor be a great physician and trained teacher, but he must be competent to carry on, to direct and to stimulate research work. There is no higher type of medical research than scientific clinical research, and every medical school should provide ample means and ample material toward this end. Some of the best pieces of medical research have been along clinical lines, such as Lister's discovery of antiseptic surgery and Kocher's researches in connection with exophthalmic goiter. By removing a part of the thyroid gland Kocher proved that the symptoms of exophthalmic goiter were due to a hypersecretion of that gland—and won for himself the Nobel prize.

Under the clinical professor should be a number of salaried associates and assistants who would devote their entire time to clinical work, teaching and research. These men should be given living salaries, which need not be especially large, since the training they receive could be regarded as compensation of great value, and it is from those who have shown marked ability in this group that selections should be made of clinical professors.

We should, therefore, advise the trustees of our universities that in the organization of the medical department they must pay larger salaries and make provision for proper pensions in order to secure high-class men as teachers in the laboratory sciences, and these should be the best paid men in the medical faculty; that in the clinical branches the scheme of the German universities is the best model to follow—full university professors at the head of the departments on fair salaries, with the understanding that their university work has the first claim on their time, with the full understanding also that the university should secure for these chairs the leaders in the various specialties, and that, as the best method to attract and hold such men and to keep the university in touch with the profession and the people, a reasonable liberty to do private clinical work should not only be allowed but recognized as desirable.

The organization of the medical departments of our universities cannot safely be left with non-medical trustees or non-medical professors of the scientific department, since the premedical sciences are apt to be emphasized without regard to the medical curriculum as a whole; the laboratory courses are apt to be developed along impractical and undesirable lines, and the needs for the development of the clinical department cannot be fully appreciated. In fact, if these medical matters are left for their adjustment in non-medical hands, there would soon arise a deplorable disagreement between university teachers and medicine, similar to what Professor von Müller says exists in Germany between scientific jurisprudence and the practice of law. The reorganization of medical education in this country, therefore, must be made by the men who are most familiar with the facts and needs of the situation—the medical men themselves.

III. THE TEACHING PLANT

This comprises (a) the laboratories with the necessary equipment and material; (b) the hospitals and dispensaries with the essential equipment and material, and (c) sufficient endowment to carry on the laboratory and clinical work.

1. *The Laboratories.*—Four laboratories, or, better still, four separate buildings are essential: one for anatomy, including embryology and histology; one for physiology, including physiologic chemistry; one for pathology, including bacteriology, and one for pharmacology. To carry on the work of these four laboratories, at a moderate estimate, $40,000 a year would be necessary, and in a large university several times this amount might be required. The most important factor is the man in charge of the department. A strong man with inexpensive building and equipment will accomplish more than a mediocre man with the most elaborate equipment. As to the scheme of organization of, and teaching in, the laboratory departments there seems to be no disagreement.

2. *The Clinical Work.*—These essentials are (a) a modern hospital having for each clinical department a continuous service under the immediate charge of the heads of the department and his assistants; (b) a dispensary, or out-patient service similarly controlled, and (c) for each clinical department, clinical and research laboratories, class-rooms, operating rooms, etc. Comment has already been made in regard to competent clinical professors. These, as in the laboratory courses, constitute the most important factor.

For the university to build and maintain its own teaching hospital may not be the best step in all instances. It would doubtless be the best for all parties concerned if our great municipal hospitals could be conducted as scientific institutions in charge of the teachers and investigators of our strong university medical schools. This would not only enable those hospitals to fulfil a greater function in the development of thoroughly qualified physicians, but it would also be best for the patients, since they would have the benefit of the best methods of treatment under recognized experts. A campaign of education should be carried on to show our municipal authorities that the hospital will be best conducted in the interests of its patients and the community at large, if at the same time it is fulfilling its function as a great center of clinical teaching and research. The fame which is held by the great charity hospital of Vienna could likewise be obtained by the large municipal hospitals of New York, of Chicago and elsewhere. Here in Chicago the Cook County Hospital now has 2,000 charity patients, and with its new building to cost $800,000, to be erected in a short time, will have 3,000 beds. Think of the amount of good that could be accomplished if this great institution was developed along modern lines, in charge of trained teachers with proper facilities for teaching and research. Think how much better care and treatment the patients of the hospital would receive and the greater benefit it would be to the community at large through the better training given to its medical men. This could be done with a full recognition of the hospital's first and most important function—that of giving the patient the best medical attention—by providing that no patient should be used for teaching without his or her consent.

The splendid medical clinic of Friedrich Müller in Munich has been developed in a municipal hospital—and the same is true of most of the German clinics—made possible by an arrangement between the municipal authorities and the university authorities, by which the university, with the consent of the municipal authorities, appoints the head of the medical department to the position of attending physician to the hospital. No patient can be used for teaching if he objects. As a matter of fact, most of the patients are glad to be demonstrated and discussed, and less than 10 per cent. object. Although there are a few hospitals conducted by universities, most of the hospitals used as teaching hospitals in Great Britain and the Continent are municipal, government or semipublic institutions which are affiliated with medical departments. These affiliations are made and continued because the hospital and the medical school find it to their mutual advantage.

We should bring about the same state of affairs in this country, and, in fact, a start has already been made. At Cincinnati the large municipal hospital has been placed in charge of the clinical teachers of the University of Cincinnati; in St. Louis, the Washington University has made a close affiliation with the new Barnes Hospital; in Boston, Harvard has made an affiliation with the Peter Brigham and several other special hospitals; in New York, Columbia University and the Presbyterian Hospital have established similar relations; in Cleveland, Western Reserve University has formed a combination with the Lakeside Hospital; in Chicago, Rush Medical College has had for a number of years the medical control of the Presbyterian Hospital, and recently has made similar contracts and arrangements with the Children's Memorial Hospital, the Home for Destitute Crippled Children and the Hospital for Infectious Diseases.

The best plan is to make a definite contract between the university or medical school and the hospital giving the medical school the right to nominate the members of the attending staff, with the understanding also that, when a man severs his connection with the medical school, by virtue of that act he resigns from his hospital appointment. Further, the medical school should agree to provide for the scientific, medical and surgical care of the patients and control the clinical teaching, with the proviso that no patient who objects shall be used for clinical instruction.

We do not desire to belittle in any way the value of the university-conducted hospital. We feel, however, that in a broad conception of the best interests of the community and of our great charity and educational institutions, the charity hospital needs the services of the clinical teachers of the medical school, and that the medical school needs the hospital in order to carry on its clinical teaching and research work, and that the interests of the entire community are best subserved by such a combination.

In this combination between hospital and medical school the hospital should provide the means for conducting the hospital proper. The medical school should pay the salaries of the attending medical men and provide the necessary facilities for teaching and research. There should be that sort of division of labor, that sort of team work, which will make the combination of mutual benefit, and will result in both parties to the contract regarding each other with mutual admiration and respect.

THE TASK OF THE FUTURE

Therefore, in the reorganization of medical education in this country the medical profession must accomplish three great tasks: 1. It must urge the state licensing board to require that amount of medical training which is necessary before the medical student can safely begin independent practice, and this requirement should be put into effect within the next few years. This could be best accomplished by the concerted action of the state licensing boards and the Association of American Medical Colleges. If these two bodies would agree that in 1914 no college would be recognized as giving a satisfactory course which did not require one year of special training in physics, chemistry and biology, and that in 1916 all state boards would require a year's hospital experience in addition to the regular medical course, that would allow sufficient time for the schools and the students to prepare for these requirements.

2. The second great task is to secure through our universities and from other sources sufficient funds to place the medical schools on a full university basis, and at the same time to reorganize our medical departments on the general lines of the German universities so as to develop the trained teachers which are so much needed. In this reorganization we must secure state aid and private endowment and the support and cooperation of the university officers and trustees.

3. The third great task is to secure the proper affiliation between our great charity hospitals and our medical schools. By a campaign of education we must secure the cooperation of the governing bodies of these hospitals; we must convince them that the best interests of the patients and of the entire community can be best conserved by such a relationship; we must convince them of the great importance of developing the teaching and research functions of the hospital.

In these three tasks we must secure the active cooperation and support of three different classes of men: the state boards, the university authorities and the governing bodies of hospitals. The initiative in these great movements must come from the medical profession itself. We can accomplish these results by an active, aggressive campaign of education.

The Present Status of Medical Education in the United States

Dr. N. P. Colwell, secretary of the Council on Medical Education, Chicago: The third tour of inspection of all the medical colleges in the United States by the Council on Medical Education is now approaching completion, and on this inspection are based the following statements regarding the present status of medical education in this country: There has been a further reduction in the number of medical schools, so that instead of the abnormal oversupply we now have a smaller number of better equipped institutions. The total number of medical schools in this country now is 120.

Very encouraging is the fact that during the last year the amount of money given for medical schools, medical research and for the erection of teaching hospitals has passed all precedent. In fact, so often of late have we read of gifts of millions of dollars that mere thousands or hundreds of thousands have come to be quite commonplace. Incomplete returns from an effort to get exact information show that last year over $14,000,000 were given for medical education, medical research and for the building of teaching hospitals.

Six more colleges have entered on the requirement of a year or more devoted to physics, chemistry and biology, in addition to the four-year high school course, making a total of forty-seven which are now exacting the higher requirement. Twenty-nine of these are now requiring as a minimum for entrance two or more years of work in a college of liberal arts, in addition to a four-year high school education. There are nine state examining boards which have also adopted preliminary requirements in advance of a four-year high school education.

Of the seventy-three medical schools not requiring any college work for admission, only twenty-eight either voluntarily or by compulsion are adhering closely to the fourteen-unit high school course, while approximately forty-five colleges remain which openly declare for lower entrance standards. In many of the latter group anything in the way of a credential is acceptable, and there is no clear-cut, definite minimum preliminary standard. In fact, these colleges as a rule are interested chiefly in large enrolments and in students' fees. They "must obtain students or they cannot exist" is their excuse. These colleges have increased their enrolments of students by accepting those refused admission to more conscientious colleges which have responded to the prevalent demand for higher requirements. Meanwhile, there are several medical colleges which are still being conducted for profit, in that they are paying off debts or erecting new buildings—the property of the doctors who run the college—out of the income from students' fees!

In many instances the responsibility for entrance credentials has been shifted to the principal of some high school, in which case the college has usually been careful to select a principal who will not be too severe in his methods. In one instance a high school principal was discharged and another selected after the first had rejected about two out of every five of the applicants coming to him for examination. Another college, instead of complying with local arrangements for preliminary examinations, imported the superintendent of public instruction from a distant state to examine matriculants.

Of the 120 medical colleges in the United States, seventy-nine claim connection with liberal arts' colleges or universities, or have names indicating university connection or standards. Of this number, twenty-four do not receive any benefit in the way either of direct financial income or of educational improvement from their university connection. Three merely make use of the word "university" in their titles; three are named as "medical departments" of universities which do not exist or which have no liberal arts' departments, and one is a department of a so-called "university" in which the liberal arts' department is scarcely known. There are only thirty-three university medical departments which have a reasonably close, sympathetic and mutually advantageous connection with universities. On the other hand, there are forty-six medical schools having the word "university" in their titles or claiming to be medical departments of universities which are misrepresentations in so far as the university connection is more or less vague or entirely lacking.

MORE MERGERS NEEDED

There are several localities where two or more colleges are competing for clinical privileges in local hospitals, and as a consequence neither secures very abundant advantages. Particularly is this true in Memphis, Atlanta, Dallas, Richmond and Milwaukee. A merger of the institutions in these cities would not only give the one stronger institution the privileges now divided among the separate institutions, but also added privileges could doubtless be obtained, as was the case following the mergers at Indianapolis and at Cincinnati. Great benefits would result if further mergers could be brought about also in St. Louis, Chicago, Washington, Baltimore, Philadelphia, New York and Boston.

MEDICAL RESEARCH

A medical school does not fulfil its entire function as an educational institution or train its students in accordance with the latest and best methods of diagnosis and treatment, unless, through medical research, it also adds its quota to the world's knowledge of medical matters. Nevertheless, we have in this country to-day only thirty medical colleges where active and valuable research is being carried on. In about thirty others some little effort at research is being made by individuals, but the men are handicapped by lack of time, assistants or material, or the college is of too low a standard to receive any benefit from it. In at least fifty-six medical colleges no research work whatever is being carried on.

STATE LICENSE REGULATIONS

The progress made in medical education during the last seven or eight years has shown in marked contrast the great need of improvement in state laws and regulations controlling the licensing of physicians. For example, there are still twelve states having no fixed standard of preliminary education and seventeen which require less than a four-year high school education. In fact, of the twenty-one states which are avowedly on the four-year high school basis, only six or possibly eight have methods of evaluating credentials which guarantee that every physician licensed actually has had the required training. The general failure to enforce preliminary standards is due chiefly to the unquestioning acceptance of the so-called "equivalent certificates." Meanwhile, in the twenty-one states referred to there are twelve or fourteen low-grade medical colleges which could not exist were it not for this failure on the part of state boards to evaluate carefully credentials of preliminary education.

SUPPORT OF THE LICENSING BOARDS

It is becoming more and more important that our state boards should be placed on a different financial basis than at present prevails. Now most boards have to depend entirely on the fees received from applicants. The fee system is faulty, in that efforts by the board to adopt higher standards or better methods of examination tend directly to reduce the number of candidates and to a corresponding degree the income of the board. It is about time, therefore, that for each board a state appropriation should be made, generous enough to provide not only for an able executive officer, but also for examinations that would be thorough, for such legal action as may be necessary for the enforcement of the practice act and for a careful system of records.

ONE STANDARD FOR ADMISSION TO THE PRACTICE OF MEDICINE

Another great problem in this country and one without parallel in any other civilized nation is due to the existence and recognition of medical sects. Pseudo-medical cults have secured a foothold through a skilful avoidance of the real issue. Each has argued for certain privileges as compared with privileges granted to other schools of medicine. The real issue, however, is that medical practice acts are not intended to protect this or that medical sect, but to protect the public against incompetence and fraud. It is, therefore, a question of education and training, and not one of this or that sect or method of treatment. Medical legislation should know no class and provide no special privilege, but should provide that only those who are competent, as measured by a certain definite routine in which all candidates are treated alike, should be permitted to treat human ailments. The practitioner of medicine, no matter what methods of treatment he may advocate, should have a sufficient knowledge of diseases and should have undergone a sufficiently thorough training in the fundamental branches of medicine to enable him to recognize the disease he is attempting to treat—that is he must be able to make a diagnosis; otherwise he should not be considered as qualified to practice medicine. To treat a patient without first obtaining a knowledge of the disorder is pure guess-work and unscientific. In many a case failure to give a required drug may cause the death of the patient.

Some Administrative Phases of Entrance Requirements

Prof. K. D. Swartzel, entrance examiner for the Ohio State Medical Board, Columbus, Ohio: The ideal educational requirement for admission to a medical college is that requirement which invariably secures in every matriculant: 1, general preparation; 2, special preparation, and 3, natural fitness. The examiner, on taking up the work of his office, finds the preliminary requirements fairly well defined and specified either by statute or board resolution, or by both. There should be a gradually increasing minimum requirement, fully keeping pace with the upward march of education in general, and of biologic, chemical and physical science in particular. I also believe that the minimum requirements for admission to a medical college should speedily become uniform throughout the states and ultimately throughout the civilized world. I shall not attempt to answer the question as to what shall be the content of the minimum requirement, but shall devote my time to the problem of its administration. This is indeed a difficult problem, and one on which there is a great diversity of method and I fear some looseness of practice.

By general preparation I mean that part of the preparation which does not have specifically in view the study of medicine. It includes all of the high school course and by far the greater part of the usual college course. By special preparation I mean the prerequisites to the study of medicine, such as the elements of chemistry, physics and biology, which should be general and of college grade. The study of the corresponding courses in high school should not be called special preparation. By natural fitness I mean, among other things, a love for the work of the physician or surgeon and the peculiar intellectual qualifications necessary to success in work. I shall dispose of these in reverse order, and thus finally arrive at the real business of this paper.

1. NATURAL FITNESS

This should be administered by the medical college. The medical college authorities should ruthlessly weed out all students who through their lack of interest show their lack of love for the work or a lack of the appropriate intellectual qualities. Some medical colleges are too tender hearted in this regard. Financial, sentimental or other considerations should be ignored, and if medical colleges do not do this effectively, medical board examinations should be set for all second-year medical students.

2. SPECIAL PREPARATION

This may be divided into two parts: (1) that part which is over and above the minimum requirement; (2) that part which is included in the minimum requirement. The entrance examiner should administer the requirement of special preparation in so far as it is a part of the minimum requirement. Any special requirement which is not a part of the minimum and which is imposed by a medical college should be administered by the college itself so long as it enforces that requirement strictly and as announced in its bulletins. If it does not do this the college as a whole should be considered under suspicion. There is nothing that will so quickly and completely disqualify an educational institution as failure to live up to its published announcements.

3. GENERAL PREPARATION

To pass on the general preparation and that part of the special preparation which is included in the minimum requirement is the business of the entrance examiner. No student should be permitted to see the inside of a medical college without having fully and satisfactorily completed the preliminary requirements, whatever they may be. The medical college officials should in every possible way hold up the hands of the examiner in this particular.

THE EXAMINER

1. Should be an expert in the business, with broad acquaintance and long experience in school and college affairs.
2. He should not be an official of a medical college or in any way under obligations to a medical college.
3. He should not owe his appointment to political considerations of any kind whatsoever.
4. His compensation should not be the fees charged the applicant or in any way dependent on the number of certificates issued.
5. He should be given entire freedom from dictation or interference from any source whatsoever.
6. He should administer reciprocity cases. This is necessary in the interest of uniformity and in the interest of justice to all concerned.

THE EXAMINER'S RECORDS

1. All credentials on which an entrance certificate has been issued should remain permanently in the files in the office of the examiner.
2. These files should be open, under proper restrictions, to the inspection of the world.

THE CREDENTIALS

1. The credentials should be official, i. e., they should be made out and signed by the appropriate present officer of the school from which they come.
2. The credentials should be sent directly from the school officials to the examiner and should not pass through the hands of the applicant.
3. The credentials should in general be on certificate blanks sent out by the examiner, so that there can be no doubt that they are to remain the property of the examiner's office.
4. The credentials should specify fully and in detail all the information desired or that may be desired.

THE BLANKS

1. A census blank to be filled out, dated and signed by the applicant. It should serve as a formal application for a certificate and should show name in full, date of birth, place of birth, permanent address, present mailing address and each school attended, with dates and time of attendance, date of graduation and degrees.

2. A college graduation blank to be sent together with a stamped return envelope directly to the registrar of any approved college indicated on the census blank and to be returned directly to the examiner. It should show the full name of the applicant, the name and location of the college, the degree, the year in which conferred, the signature of the registrar and the date of issue.

3. Other blanks similar in nature and purpose to the above two, but suited to the official certification of each other attainment that has been approved as invariably exceeding or equaling the minimum preliminary entrance requirement.

4. A blank high school certificate to be sent together with a stamped return envelope, directly to any principal of the high school, normal school or academy specified on the census blank. This high school certificate should show full name of applicant, name and location of school, time of attendance, with dates and full information concerning each subject studied, including text-book, subject-matter, number of weeks, number of recitations per week, net length of each recitation and scholarship attained. It should also certify to the fact of graduation or failure to graduate, and should be signed by the proper official. This blank should take the place of the original high school certificate which belongs to the applicant. A diploma has absolutely no place in this scheme.

5. The entrance certificate, by whatsoever name, should contain the full name of the successful candidate and show briefly the nature of the credentials on which the certificate was issued.

THE EVALUATION

1. Do not consider unofficial credentials.

2. Base no final estimate or promise on credentials not received directly from the school officials.

3. Schools not fully accredited should be required to furnish the fullest possible transcript of the student's record.

4. In the case of a school not fully accredited await the fullest possible authoritative information and spare no effort in obtaining it.

5. In the case of the schools of another state, refer all credentials, for rating and approval, to the most trusted authorities of that state. Do not regard their approval, however, as a sufficient cause for granting a certificate, but only as a necessary factor in determining the merits of the case. One may occasionally even demand that the applicant secure an entrance certificate in the state from which his credentials come, refusing to give them any consideration whatsoever until this is done. There are reasons why this should always be done between states having equal minimum requirements. The higher rating of credentials by one state than that accorded by the home state is demoralizing to standards and should be stopped.

6. In the case of credits by examinations set by the examiner of another state: do not ask any other state to accept your examinees and do not accept the examinees of any other state. I shall not enumerate the reasons for this, since they are fairly obvious. These reasons do not apply to the examinations set by so permanent and efficient a board as the New York Regents.

7. Remember that as a class reciprocity cases more than any others are open to suspicion as to good faith, character of credentials, moral character and natural fitness. It would greatly improve conditions were a definite period of practice a prerequisite to reciprocity.

8. With foreign credits go slowly and do not be over-credulous.

9. Do not accept as credentials general statements from any source. It is only in the writing of the applicant's obituary, should he die during the operation, that letters from friends of the applicant, politicians and state officials should be taken at full face value.

10. In all cases make haste slowly—do not be coerced or beguiled into haste. If the credentials are good to-day they will be good to-morrow. This precaution will save many a regret. Beware of the applicant who "must return home by the next train" and wants a certificate at once, or the applicant who writes "Please send my entrance certificate by return mail," and repeats the injunction in a postscript.

11. Profit by experience and the experience of others and strive to improve in technic and in ability to read between the lines.

12. Do not use a variable or vacillating standard in evaluation or one with too great flexibility.

13. Remember that "The wise man is not he who never makes a mistake, but he who never makes the same mistake twice," and I might add he who makes but few mistakes all told.

THE DANGER POINTS

1. School officials may prove to be unreliable in many ways. Of these carelessness is the most common. I have seen three copies of the record of one applicant, no one item in which was the same on all three certificates. I have now in my possession two certificates signed by the same high school superintendent, purporting to be a transcript of the record of the same boy. One shows credit for not over two full years of work and the other for over six full years! Connivance with the student does occur, and certificates or records are sometimes slightly altered at the request of the student. Absolute dishonesty is not common, but I have met one such case. Misrepresentation of the standing of a school through local pride or personal interest is more common. The rating given a school by its officials is not to be taken too seriously.

2. The applicant may and occasionally does alter or add to a certificate. He may and occasionally does even forge a certificate. Neither of these things can occur when credentials come directly from the school officials at the request of the examiner. I have been convinced of the necessity of this precaution by the considerable number of forged and altered credentials this practice has discovered.

THE ESSENTIALS

1. A census blank.
2. Official credentials.
3. Credentials directly from the school official.
4. Accurate information concerning school.
5. Permanent filing of:
   (a) Census blank.
   (b) Official credentials.
6. Brief statement on entrance certificate.

SOME RECOMMENDATIONS

1. Conferences between state examiners.
2. Steps looking toward uniformity of practice throughout the states.
3. Steps looking toward uniformity in minimum requirements throughout the states.
4. A central office and officer to whom final appeals may be made for information and advice; this officer to inspect the records of each state entrance examiner, on request or at stated intervals, thus insuring permanent, complete and business-like records.

(To be continued)

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Connecticut: Regular, City Hall, New Haven, March 12-15. Sec., Dr. Charles A. Tuttle; Homeopathic, Grace Hospital, New Haven, March 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Grace, New Haven, March 12. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

Maine: City Council Rooms, Portland, March 12-13. Sec., Dr. Frank W. Searle, 776 Congress Street.

Massachusetts: State House, Boston, March 12-14. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Wyoming: Riverton, March 13-15. Sec., Dr. Albert B. Tonkin.

Resigns Deanship of Harvard Medical School

Dr. Henry A. Christian has resigned as dean of Harvard Medical School, to take effect Sept. 1, 1912, and as physician-in-chief of the Carney Hospital, to take effect June 1, 1912. He will retain his position as Hersey professor of the theory and practice of physic in Harvard University. These changes were made by Dr. Christian in order that he might accept the position as physician-in-chief of the Peter Bent Brigham Hospital which will be opened about Nov. 1, 1912. Dr. Christian has been granted a leave of absence beginning April 30, to go abroad to study foreign clinics and methods of work.

Kentucky December Report

Dr. J. N. McCormack, secretary of the Kentucky State Board of Health, reports the written examination held at Louisville, December 19-21, 1911. The number of subjects examined in was 10; percentage required to pass, 70 and not less than 60 in any one branch. The total number of candidates examined was 31, of whom 21 passed, including 2 osteopaths, and 10 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Chicago College of Medicine and Surgery	(1909)	83
Kentucky School of Medicine	(1907)	92
University of Louisville	(1910) 74, 76, 78; (1911)	73, 74, 75, 77, 78, 79, 81.
Louisville National Medical College	(1910) 72; (1911)	70
Hospital College of Medicine, Louisville	(1902)	75
Johns Hopkins University	(1909)	87
Harvard Medical School	(1909)	87
Woman's Medical College of Pennsylvania	(1909)	86
Meharry Medical College	(1909)	78
FAILED		
University of Louisville	(1909) 55, 60; (1911)	63, 64
Louisville National Medical College	(1911)	51, 65
Louisville and Hospital Medical College	(1908)	67
Kentucky University	(1905)	67
American Eclectic Medical College, Cincinnati	(1894)	26
Tennessee Medical College	(1909)	58

Book Notices

The Practice of Medicine. By Frederick Taylor, M.D., F.R.C.P., Consulting Physician to Guy's Hospital. Ninth Edition. Cloth. Price, $6 net. Pp. 1121, with illustrations. New York: Macmillan Co., 1911.

Many additions have been made to this book and many topics are described for the first time in this edition, such as meralgia paresthetica, pneumococcal meningitis, myotonia atrophica, amyotonia congenita, enterospasm, Hirschsprung's disease, intermittent claudication, congenital family cholemia, peritoneal adhesions, lymphatism, bacilluria and pneumaturia.

Both pellagra and beriberi are included among the infections. Reference is made to the effect of certain preparations of rice as a cause of beriberi, but the recent experiments and latest information in regard to it are not fully set forth or estimated at their full value. The occurrence of pellagra in this country is not mentioned.

Under anterior poliomyelitis the scantest reference is made to the recent investigations by Flexner into the nature of this disease and its mode of dissemination.

One must remember, however, that it takes much time to revise a book like this and naturally some of the most recent additions to our knowledge must be left out.

Handbook of Medical Treatment. A Guide to Therapeutics for Students and Practitioners, with an Appendix on Diet. By James Burnet, M.A., M.D., M.R.C.P., Fellow of the Royal Society of Medicine. Cloth. Price, $1.50 net. Pp. 168. New York: William Wood & Co., 1911.

An unusual and a good feature in a book presumably devoted to medical treatment is the space given to the subject of diet. It is to be regretted, however, that the author has not devoted more time to the consideration of diet from the scientific point of view, rather than to permit himself to recommend so many proprietary meat juices, foods, etc. The drugs that are mentioned, however, are mainly pharmacopeial (British), fewer preparations being recommended than is usual by a British author. Aside from the criticism as to proprietary foods, we find the book is one to be commended as a helpful guide in the treatment of non-surgical diseases.

Die Registrierung des Herzchalles. Graphische Studien von Dr. Heinrich Gerhartz, Assistent der Kgl. Universitäts-Poliklinik für Innere Kranke zu Berlin. Paper. Price, 8 marks. Pp. 158, with 195 illustrations. Berlin: Julius Springer, 1911.

This monograph is an authoritative discussion of the graphic registration of the heart tones. A review of the efforts of others in this line is followed by an account of the author's own methods. The physical principles involved are fully considered and the various instruments described, with help from diagram and illustration. Then follows a discussion of the graphic representation of the normal heart tones and later the endocardial murmurs, those of mitral regurgitation and mitral stenosis being dwelt on with especial detail. The possible errors in technic and in the interpretation of the tracings are pointed out. A very complete bibliography, and excellent work by the printer and illustrator make the brochure an invaluable one to the student of this special feature of cardiac physiology and pathology.

Medical Economics

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Seventh Month—Second Weekly Meeting

Changes in Uterus and Appendages During Pregnancy

Uterus: Weight, capacity, diameters, form and consistence, situation. Cervix; direction, softening, effacement. Muscular wall; number and size of fibers, elastic tissue. Mucous membranes, decidua. Arteries, veins, lymphatics.

Ligaments.

Ovaries: Position, cessation of ovulation, corpus luteum.

Tubes: Change in position.

Vagina: Color, blood-vessels, secretion. Pelvic floor. Vulva. Pelvic articulations.

Changes in Other Organs and Structures

Abdominal Walls: Distention, striæ, linea alba.

Breasts: Enlargement, Montgomery glands, secretion, roseola.

Heart:[1] Displacement, size, pulse-rate. Blood; amount, leukocytes, alkalinity.

Thyroid: Size, changes in nephritis, in albuminuria.

Kidney: Urine, quantity, toxicity, salts and other elements. Albuminuria; frequency in pregnancy, labor and puerperium. Kidney of pregnancy, differs from nephritis.

Bladder. Stomach and bowels. Mental and nervous changes.

Diagnosis of Pregnancy[2]

Positive Signs: 1. Fetal heart-beat; occurrence, rate, location. Differentiate from funic souffle, from uterine souffle. 2. Movements of fetus; active and passive. 3. Outlines of fetus by palpation.

Probable Signs: 1. Abdominal enlargement. 2. Changes in shape and consistence of uterus. 3. Changes in cervix. 4. Intermittent uterine contraction.

Presumptive Signs and Symptoms: 1. Cessation of menses. 2. Changes in breasts. 3. Nausea and vomiting. 4. Quickening. 5. Discoloration of vaginal and vulvar mucous membranes. 6. Pigmentation of skin and striæ. 7. Urinary disturbances. 8. Abnormal appetite, emotional changes.

Medicolegal

Sufficient Proof by Physician of Claim Against Estate

(In re Runions (N. Y.), 130 N. Y. S. 1039)

The Surrogate's Court, St. Lawrence County, New York, allows against an estate of a decedent a physician's claim for $243.50 for services rendered and medicines furnished to the decedent, which claim the administrator of the estate entirely rejected. The court says that the rendering of the services was abundantly proved by the claimant's book of accounts, if such book was properly received in evidence. The book was produced by the claimant and identified by him as his book of accounts. He testified that he made the entries in it, and that he so made them at the time the transactions referred to occurred, and that he kept no clerk. He then proved by others that some of the services charged for were rendered, that some of the medicines charged for were delivered, that the amounts charged were reasonable, and that he kept correct books, the latter fact being shown by the testimony of several persons who had settled with him from the book during the period covered by the account in question, that their accounts on the books were shown to them, and that they found them correct. The main objection urged by counsel for the administrator was that the book was incompetent as evidence against the estate of the decedent under the statute, citing a case in which the only evidence that the claimant kept correct books was his own testimony, given under objection and exception—that is, a case in which the plaintiff merely produced his own record of his dealings with the decedent and then swore that the record was correct.

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[1] Progressive Medicine, September, 1905.

[2] Johnson: The Journal A. M. A., Feb. 20, 1904, p. 499.

But in the present case the correctness of the claimant's book of account was proved by the testimony of third persons. The book itself was not then incompetent evidence merely by reason of the fact that the entries in it were made by the claimant himself. Any other rule would render it impossible in the majority of cases to establish a claim against an estate, where the claim consists of many items of goods sold and services rendered. Because no good reason was shown for the entire rejection of this claim by the administrator, and, while each step in the proof of the claim was resisted by him, no evidence whatever was offered to show that the bill was not in every respect correct and reasonable, the court thinks that an allowance should be made to the claimant of $25 costs in addition to his disbursements.

Death from Dilatation of Heart After Exercise

(Hastings vs. Travelers' Insurance Co. (U. S.), 190 Fed. R. 258)

The United States Circuit Court, in Washington, holds that where a man 54 years of age and of normal stature lifted himself up and down two or three times in a chair, possibly two or three times in one chair and two or three times in another chair very soon afterwards, his death brought about in that way was not caused by "external, violent and accidental means," within the terms of an accident insurance policy. The court says that a post-mortem examination was held the following day by a capable physician, who discovered that prior to his death the insured had an enlarged heart and hardened valves; but that the immediate cause of his death was his physical exertion, which produced a dilatation of the heart.

This case should have been submitted to the jury if there had been any room to find that there was any miscalculation, anything unforeseen, or unintended in the events leading up to the death of the insured. In other words, if there had been anything in his act which was unforeseen, unexpected or miscalculated, then it would have been a question for the jury as to whether that accidental element caused the death. But it was admitted that the act of the insured in lifting himself by his hands and letting himself down was precisely the movement that he was intending to perform and desirous of performing. There was no slipping of the hands or of the body or of the chair. So far from there being any element of chance or miscalculation or the unexpected, the movement was accomplished precisely as contemplated. The only mistake the insured made was in miscalculating the strength of his heart. There was no possible liability.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Texas State Journal of Medicine, Fort Worth

February, VII, No. 10, pp. 265-292

1 *Prophylactic Value of Instruction of Children in Elements of Physiology of Sex. C. A. Pfender, Washington, D. C.
2 *Education in Its Relation to Public Health. F. Paschal, San Antonio.
3 Diagnosis and Treatment of Diphtheria. J. C. Anderson, Plainview.

1. **Instruction of Children in Physiology of Sex.**—It is Pfender's belief that the instruction of the coming generations in sexual matters during childhood will prove the only effective means of even partially coping with the question of the prevention of the breeding of further physical and mental degenerates. He says that the time has come when we can no longer afford to take a negative stand on this issue. We must, he says, acknowledge, willingly or reluctantly, as the case may be, that the greatest problems of the day are the child problems. The past has had entirely too much advocation of woman's rights and far too little thought for the child. Sanitarians, social hygienists, pedagogues and leaders among the medical profession have of late, however, manifested an intense interest in the betterment of existing conditions of society, and the general practitioner and the family physician in particular, need to be fully aroused to their duty of directing and supervising the methods of prevention suggested for their relief.

As yet the number of reformers is very small, for they comprise the proverbial "drop in the bucket" among the vast mass of humanity still unaware of such movement and whose cooperation is necessary if these efforts are to be crowned with success. Child education should begin in the home. It is only through the intelligent education of the present generation that the future fathers and mothers will obtain the training that will enable them to correctly transmit needed knowledge to their children. Moral education, of course, should and does largely precede all other forms of instruction. The earliest impressions of childhood are shaped by environment, either good or evil, and it requires no superintelligent mind to grasp the importance of insuring the proper direction of such impressions during the formative stage of mental development.

2. **Education and Public Health.**—Paschal regards it as eminently proper for every state medical association to have a bureau on education from which well written articles could be contributed to the secular press. Unfortunately, he says, our profession is in some respects a peculiar one. It is, to a large extent, a jealous profession and many believe that a colleague who is prominent in public affairs is likely so for selfish purposes; and if an article, though it be of vast importance in an educational way, appears in the secular press with the name of the author attached, the great good it may do is overlooked and the author is severely criticized and censured. It is true, that adverse criticism might be, under certain conditions, right; but on the other hand, where a physician is honest and has attained the respect and confidence of his fellow practitioners and the community at large, there should be no feeling against him; on the contrary, he should be recommended and encouraged to continue his good work. Organized as the profession is, with a medical society in almost every county in the state, and in almost every county in the United States, there should be no difficulty in reaching and teaching the humblest on the causes and prevention of disease. This can be done by each county society selecting some of its best men to address meetings composed of the class not likely to be reached through the secular press. Meetings could be held in different quarters at different times and while it is not to be expected that the people would turn out *en masse*, still, by dividing towns and districts into small precincts and keeping at it, there would be little difficulty in ultimately getting their attention; then by lectures devoid of all technicalities and in words that could be easily understood by all, the necessary information could easily be imparted.

Bulletin of Manila Medical Society

December, III, No. 12, pp. 197-212

4 Case of Patent Ductus Arteriosus Botalli. A. G. Sison, Manila.

California State Journal of Medicine, San Francisco

February, X, No. 2, pp. 47-84

5 Medical Organizations and Conservation of Public Health. W. J. Barlow, Los Angeles.
6 Automobile Fractures. W. H. Winterberg, San Francisco.
7 *Lipoids of Normal, Nephritic and Diabetic Serum; Preliminary Report. C. Quinan, San Francisco.
8 Interscapular Thoracic Amputation. H. A. L. Ryfkogel, San Francisco.
9 Responsibility of General Practitioner to Child with Speech Defect. H. Horn, San Francisco.

7. **Lipoids of Normal Nephritic and Diabetic Serum.**—The main objects sought by Quinan are to outline what is believed to be a new method for the quantitative determination of these obscure substances, and to submit the data obtained in the study of three different groups of cases, comprising in all thirty individuals. He found that in chronic nephritis the group of globulins thrown down by carbon dioxid is markedly increased. This globulin always contains lipoids and yields them to organic solvents. In normal serum the lipoid value ranges from 0.85 to 1.15 per cent. In chronic parenchymatous nephritis the total lipoids are increased and the serum may contain 2.60 per cent. For a detailed description of the method the original should be consulted.

Canadian Medical Association Journal, Toronto

January, II, No. 1, pp. 1-88

10 Undergraduate Training and Requirements for License to Practice. A. McPhedran, Toronto.
11 Bacillus Lepra in Nasal Mucous Membrane. F. A. de Verteuil and F. L. de Verteuil.
12 Pseudomuscular Hypertrophy. M. G. Burris, Halifax.
13 Observations from Boer-Land. R. E. McConnell, Transvaal.
14 Semmelweiss and Holmes. J. E. MacDermot.

Journal of Biological Chemistry, Baltimore

February, XI, No. 1, pp. 1-95

15 Studies in Nutrition: Utilization of Proteins of Cotton Seed. L. B. Mendel and M. S. Fine, New Haven, Conn.
16 Idem: Utilization of Proteins of Extractive-Free Meat Powder and Origin of Fecal Nitrogen. L. B. Mendel and M. S. Fine, New Haven, Conn.
17 Chemistry of Dog's Spleen. H. J. Corper, Chicago.
18 Errors in Quantitative Determination of Cholesterol by Ritter's Method: Influence of Autolysis on Cholesterol. H. J. Corper, Chicago.
19 Hemagglutinating and Precipitating Properties of Bean. E. C. Schneider, Colorado Springs, Colo.
20 Recovery of Alcohol from Animal Tissues. P. J. Hanzlig, Cleveland.
21 Researches on Purins: 2-Oxypurin and 2-Oxy-8-Methylpurin. C. O. Jones.
22 Researches on Purins: 2-Oxyl-1-Methylpurin. C. O. Jones.
23 *Use of Phosphotungstic Acid as Clarifying Agent in Urine Analysis. C. E. May, Bloomington, Ind.
24 *Purin-Hexose Compound. J. A. Mandel and E. K. Dunham, New York.
25 Protein Metabolism from Standpoint of Blood and Tissue Analysis. O. Folin and W. Denis, Boston.

23. **Phosphotungstic Acid as Clarifying Agent.**—In May's method a given amount (50 c.c.) of urine was acidified with a few drops of concentrated hydrochloric acid and placed in a 150 c.c. graduated flask. At room temperature, the urine was treated with 50 c.c. of a 2 per cent. phosphotungstic acid solution. The mixture was diluted to the mark and filtered. Of the filtrate, 100 c.c. were measured into a 200 c.c. graduated flask, made neutral or barely alkaline with barium hydroxid solution, diluted to the mark, filtered and used directly. No correction is made for the volume occupied by the phosphotungstate-protein precipitate and the barium phosphotungstate precipitate. The method has usually been applied to urines containing a small amount of protein. Large bulky precipitates were not encountered. Usually 50 c.c. of the reagent precipitated the protein, uric acid and creatinin completely, and the small excess of reagent did not yield a voluminous precipitate with barium hydroxid solution. This method was used on the defecation of urines containing about 8 per cent. of glucose and a good trace of protein. Using the polariscope on the undefecated urine, not eliminating the protein on account of the small amount present, he got only fairly sharp readings, even by using short columns of the liquid for polarization. By the method as outlined he got sharp readings and also higher readings owing to the removal of the lævo-rotating protein that cut down the dextro-rotation of the mixture. The small amount of protein had a very appreciable effect on the actual percentage of sugar found and on the removal of the protein, the glucose reading reached more nearly what corresponded to the actual glucose content of the urine.

24. **Purin-Hexose Compound.**—From an extract of a commercial preparation of yeast, a crystallin substance was obtained by the authors which is a compound of adenin and a hexose. The amount of material isolated has not been sufficient for a complete identification of the sugar.

Journal-Lancet, Minneapolis, Minn.

February 1, XXXII, No. 3, pp. 57-84

26 Deformities of Neck. R. H. Sayre, New York.
27 Some Lessons from Life and Labors of Helmholtz. C. A. Wood, Chicago.
28 Some Mistakes Made in Practice of Obstetrics. F. E. Leavitt, St. Paul.

West Virginia Medical Journal, Wheeling

February, VI, No. 8, pp. 257-290

29 Treatment of Tuberculosis. J. N. Alley, Fort Lapwai, Ida.
30 Popular Delusions as Affecting Physician. G. D. Lind, Greenwood.
31 Cure of Enlarged Prostate and Urethral Stricture by Electrotherapy. R. H. Pepper, Huntington.
32 Tonsillectomy a Hospital Operation. L. C. Covington, Charleston.
33 Atropin in Ocular Diseases. H. R. Johnson, Fairmont.
34 *Case of Ruptured Liver. C. E. Grimm, Elizabeth, N. J.
35 Treatment of Croupous Pneumonia. G. W. Norris, Philadelphia

34. **Ruptured Liver.**—Grimm's patient, a carpenter, was struck with a heavy board in the upper abdomen. Severe pain and marked tenderness were experienced in the right upper quadrant of the abdomen. Dyspnea, thirst and faintness were also prominent subjective symptoms. He did not lose consciousness, however. He arrived at the hospital at 3:50 p. m. The face was pale and pinched and the skin cold and clammy. His pulse was 120, but of good volume. Respiration 28 and temperature 99.8. On inspection, the breathing was found to be of the costal type. No evidence of skin injury was visible. Marked tenderness and rigidity were elicited in the right upper quadrant of the abdomen. Dulness in the flanks was obtainable on percussion. A diagnosis of intra-abdominal hemorrhage, probably due to ruptured liver, was made, and the patient was hurriedly prepared for laparotomy. A tear 3 inches long and 2 inches deep was observed in the anterior portion of the right lobe of the liver. The greater part of the hemorrhage was apparently coming from the rent. The tear was closed with four fairly deep chromic catgut sutures. A small tear in the fissure for the gallbladder was packed tightly with plain gauze. A tear 3 inches long and 1 inch deep on the under surface of the right lobe was closed with three chromic catgut sutures. The other abdominal viscera were then examined and found to be intact. The patient made an uneventful recovery, getting out of bed on the twenty-eighth day and was discharged cured on the forty-fourth day.

Journal of Abnormal Psychology, Boston

February, VI, No. 6, pp. 401-475

36 Delusion Formation. D. Fraser, Glasgow.
37 Case of So-Called Alcoholic Amnesia Following Prolonged Stupor, Terminating in Recovery After Reeducation. A. C. Buckley, Philadelphia.
38 Case of Hallucinosis Induced by Repression. C. P. Oberndorf, New York.
39 Possibilities of Modified Psycho-Analysis. E. W. Taylor, Boston.

Denver Medical Times and Utah Medical Journal, Denver

February, XXXI, No. 8, pp. 301-348

40 *Fleming's Skin Stitch. H. G. Wetherill, Denver.
41 Case of Spontaneous Umbilical Hemorrhage in 2 Weeks' Old Baby. H. C. Dodge, Steamboat Springs, Colo.
42 Mastoid Infection of Lateral Sinus. G. W. Miel, Denver.
43 New Instrument to Aid in Bone-Plating. B. O. Adams, Pueblo, Colo.
44 Value of Omentum. F. C. Buchtel, Denver.
45 Selection of Surgical Needles. C. E. Tennant, Denver.
46 New Fashion of Surgeon, from Family Physician's Standpoint. L. E. Rupert, Florence, Colo.
47 Pott's Fracture. L. W. Ely, Denver.
48 Why Use the Roentgen Ray? G. H. Stover, Denver.

40. **Fleming's Skin Stitch.**—This stitch, Wetherill says, aims to accomplish with ordinary suture material what is so well done with Michell's and other metal skin clips; i. e., approximate raw surface to raw surface, avoid infolding of the epithelial margins and allow the epithelial lines to meet on an exact plane when the stitches are removed. This is accomplished as follows: The cut edges of the skin are evenly brought together by stretching the wound with small tenaculum forceps, catching it at either end. The stitches, preferably of silk worm gut, are put in from a half to three-quarters of an inch from the edge of the incision and from three-quarters to one and a quarter inches apart, depending on the tension necessary to bring the edges together. Then the particular feature of Dr. Fleming's stitch is employed. As each stitch is picked up to be tied, the skin margins are caught with mouse-toothed forceps and carefully and evenly approximated raw edge to raw edge, precisely as is done in applying Michell's clips. As the first knot on the stitch is tightened, the forceps depress the skin margins in such a way as to leave a longitudinal ridge underneath the stitches. All of the stitches are tied in this manner, the ridge being thus prolonged from one end of the incision to the other. The stitches may be removed from the seventh to the tenth day and after the redness and slight swelling have disappeared, the wound is found to be smooth and sightly and, unless the patient happens to be one of those unfortunates predisposed to keloid or hypertrophic growth in the scar tissue, the ultimate result will be quite satisfactory.

A nice apposition of the edges of the incision, such as is accomplished by Fleming's skin stitch, helps to prevent it.

Buffalo Medical Journal

February, LXVII, No. 7, pp. 365-420

49 Normal and Pathologic Physiology of Hypophysis. J. L. Miller, Chicago.
50 Timing of Heart Murmurs. E. H. Long, Buffalo.

Mississippi Medical Monthly, Vicksburg

February, XVI, No. 10, pp. 189-208

51 Pus Conditions in Abdomen. A. G. Payne, Greenville.
52 Legal Medicine. H. O. Leonard, Doddsville.
53 Hemorrhagic Disease of New Born. S. C. Spencer, Shannon.

American Journal of Surgery, New York

February, XXVI, No. 2, pp. 65-96

54 Abdominal Operations Under Local Anesthesia. A. E. Hertzler, Kansas City, Mo.
55 Local Anesthesia in Traumatic Surgery. S. J. Young, Valparaiso, Ind.
56 Surgical Essentials. F. E. Neef, New York.
57 Infertilitas in Vinculum Matrimonii. Q. W. Hunter, Louisville, Ky.
58 *Method to Facilitate Palpation of Upper Abdomen. H. Neuhof, New York.
59 Uses of Aluminum Acetate in Local Inflammations. H. H. Stansbury, Baltimore.
60 Case of Traumatic Aneurism of Brachial Artery, with Occlusion of Distal End; Successful Endoaneurismorrhaphy (Matas). A. Eustis, New Orleans.

58. **Method to Facilitate Palpation of Upper Abdomen.**—The method employed in the Admitting Department of Mount Sinai Hospital for the past year is described by Neuhof as follows: An ordinary flat rubber bandage (the Martin bandage) is attached to the examining table on one side of the patient and is drawn snugly across the patient's abdomen immediately above the iliac crests. The bandage is then attached to (or slipped through the slit generally present on) the table on the other side of the patient. The bandage is now carried backwards and forwards across the abdomen two or three times, care being taken that each layer is superimposed on the previous layer, is unwrinkled, and fits snugly. A rather deep groove should be made in the abdominal wall by the elastic bandage. If the bandage induces discomfort or pain it has been too firmly applied and should be loosened. The method is contraindicated in the presence of any acute intra-abdominal condition. Another way in which the elastic bandage has been employed is in circular turns about the waist immediately above the iliac bones. If the patient remains in the recumbent posture for about five minutes with the bandage applied, the upper recti will in most instances be found sufficiently relaxed for satisfactory epigastric palpation. Examination is generally made with the bandage in position, but if it interferes, the bandage may be removed since the upper abdominal wall remains relaxed for several minutes after its removal. Neuhof has found that epigastric tumors are then more superficially situated than at examinations made previous to the application of the band. The reason for this seems to be that the band divides the abdomen in half and that inspiration pushes the masses downward and forward instead of directly downward as in the unconstricted abdomen.

Maryland Medical Journal, Baltimore

February, LV, No. 2, pp. 27-52

61 Shock. A. McGlannan, Baltimore.
62 Deafness; Its Cause and Newest Treatment. H. E. Cook, New York.

New Orleans Medical and Surgical Journal

February, LXIV, No. 8, pp. 569-638

63 *Case of Fecal Obstruction of Small Intestine. W. D. Roussel and E. Williams, Patterson, La.
64 Tuberculosis in Childhood from Clinical Standpoint. S. G. Wilson, New Orleans.
65 Case of Idiopathic Purpura Hemorrhagica. W. Tusson, New Orleans.
66 *New Method of Enterectomy. O. W. Bethea, New Orleans.

63. **Fecal Obstruction.**—In this case the authors removed an enterolith from the small bowel, 1½ inches in diameter and 2 inches long. One of its extremities was irregularly rounded in shape, the other being smooth and flattened, with sharp edges. This flattened extremity was directed toward the distal end of the bowel, and led to the belief that another stone had been present on that side, but search for this was negative, as far as the cecum. It was thought possible that the stone might have been formed in the gall-bladder, since, on quick examination, it resembled a large gall-stone in many points, especially in its flattened end; but the gall-bladder was found normal. The wound in the bowel was sutured and the gut returned to the cavity, which was drained. The patient died twenty-four hours after the operation. Autopsy showed the abdominal cavity clean; there was no other obstruction at any point. The kidneys presented the picture of an acute glomerulonephritis. The point at which the stone lay was 4½ feet from the ileocecal junction. A small stercoral ulcer was found 6 inches from the incision in the gut, at which place the mass had evidently been lodged firmly for some time before moving on.

66. **New Method of Enterectomy.**—In Bethea's method excision of the part to be removed is effected in the usual manner. An additional section from ½ inch to 1 inch in length is incised. This additional section is suspended on the handle of suitable instruments and a longitudinal incision made through the peritoneum at a point opposite the mesentery. The peritoneum is grasped with thumb forceps at the margins of the incision and the peritoneum with some subperitoneal tissue peeled down and the musculo-mucous tube lifted out. The ends of the intestine are united with continuous suture through all coats. One peritoneal flap is raised to cover one side of the wound and the margin stitched with continuous suture. The other flap is then raised and sutured in the same manner, but is made slightly to overlap the first flap, where the two meet in the median line.

Journal of Iowa State Medical Society, Clinton

February 15, I, No. 8, pp. 397-460

67 Necrosis of Maxillæ. L. W. Dean, Iowa City, Iowa.
68 Modern Treatment of Aneurysm. L. Schooler, Des Moines, Iowa.
69 Division of Responsibility in Referred Cases. J. W. Kime, Fort Dodge, Iowa.
70 Old and New in Medicine. R. L. Cleaves, Cherokee, Iowa.
71 Hydrotherapy in Treatment of Mental and Nervous Diseases. C. F. Applegate, Mount Pleasant, Iowa.
72 Value of Psychotherapy. E. E. Harris, Grinnell, Iowa.
73 Trachomatous Ulcers of Cornea. F. W. Dean, Council Bluffs, Iowa.
74 Obstetric Hygiene. C. W. Baker, Stanwood, Iowa.
75 Fractures of Patella. A. P. Donohoe, Davenport, Iowa.

American Journal of Diseases of Children, Chicago

February, III, No. 2, pp. 69-131

76 *Polygraph as Aid in Diagnosis of Cardiac Conditions in Children. G. R. Pisek and T. H. Coffen, New York.
77 *Physical Evidence of Thymus. C. Basch and A. Rohn, Prague.
78 *Study of Pyrogenic Action of Lactose. F. W. Schultz, Minneapolis.
79 Management of Squint in Children. C. W. Le Fever, Philadelphia.

76. **Diagnosis of Cardiac Conditions.**—The instrument used by Pisek and Coffen was their modification of the Erlanger sphygmograph with Hirschfelder attachment. This apparatus allows a simultaneous tracing to be made (1) of the pulse—known as the sphygmogram; (2) of the heart—cardiogram; (3) of the venous pulse—phlebogram. These three tracings, when studied in relation to each other, become much more valuable than when taken alone, even with the finest instrument. Tracings satisfactory for diagnosis were obtained. The polygraph offers a means of accurate diagnosis which is not afforded by ordinary methods of examination, and should be used in addition to these—it will not replace them. The information obtained from polygraphic tracings is of value for prognosis and treatment. Digitalis heart-block should be suspected where the pulse becomes irregular under the use of this drug. Respiratory arhythmia was found in the series of cases studied with surprising frequency. This is said to be physiologic, but the authors fear that it may frequently be misleading, and that the physician may suspect serious cardiac weakness. This was illustrated in cases of scarlet fever, diphtheria and measles studied by them. The "irregular hearts" were shown to have marked respiratory arhythmia. They have yet to find extra systoles or auricular fibrillation in children. The use of the polygraph will not stultify physi-

al findings; on the contrary, more careful examinations will be made, for its use enhances their value and interprets observations which have thus far been unexplained.

77. **Physical Evidence of Thymus.**—In order to determine whether it is possible to obtain a clear shadow of the thymus in a Roentgen photograph, Basch and Rohn prepared photographs of a young dog having a relatively large thymus, before and after extirpation, by means of instantaneous and time exposures, and a lead screen. In order to mark the exact location of the extirpation they sewed up the sternal cut with silver thread; nevertheless they were unable to find in the photographs any marks which could be definitely declared to be thymus shadows. Next they took instantaneous pictures of an anatomic preparation of the sternum of a young dog, one exposure with thymus attached and another of the sternum alone; they could neither find any sign of a thymus shadow, nor see that the clear picture of the sternum was at all obscured by the underlying thymus. Also, the thoracic photograph of two young children of the ages of 2 and 6 months gave negative results in respect to thymus shadows. The taking of further pictures induced them to regard the question of the clearness of the thymus shadow as still unsettled, and to speak very reservedly of their ability to give an instantaneous and unmistakable conclusion of the size of the thymus.

The authors then resorted to auscultation-percussion. In order to make it possible for one person to do this auscultation and percussion, and to make the technic as exact and uniform as possible, Basch constructed an instrument which duplicates the mechanism of the percussing finger but is lighter and can be easily used with one hand. It touches only about a quarter of a centimeter of surface, and can easily be moved across these small areas laterally as well as longitudinally. The half shut-off stethoscope is held over the midsternum with the other hand, and the percussion note heard by the one who makes it. The use of this new instrument shows that it is possible to obtain a more definite and exact outline of the anterior thoracic organs than by earlier methods such as the finger. In contrast to the triangular area of dulness over the thymus pictured by Blumenreich, the authors found, by direct and by auscultatory percussion, an area somewhat larger than that which has been before demonstrated.

Besides this, they have used a method to outline the lateral areas of the thymus, described by Bianchi and A. Smith, the so-called friction method. By this method they examined in the out-patient clinic of the hospital a number of children aged 6 to 18 months and later up to 3 and 4 years. Beyond the fifth year no sure thymus dulness could be demonstrated. They conclude that the greatest anatomic development and the most important biologic epoch could be looked for between the second six months and the third year of life. Systematic examination of 140 cases show that the size of the thymus varies according to the age of the child and its nutritive condition, and to certain pathologic conditions. Normally the area of thymus dulness in children shows a rhomboid form, which extends from the jugular down to the second or third rib, and whose lateral borders are confined to the sternal and parasternal lines. By exact drawings of the clinical findings on a diagram of the anterior thorax they can be correctly compared with the autopsy results.

78. **Pyrogenic Action of Lactose.**—The results of Schultz's experiments show that lactose if given intravenously, subcutaneously or orally, possesses no distinct pyrogenic effect no matter in what concentration or amount it is given. It does possess a definite though not pronounced influence on the temperature if it is given subcutaneously or orally in an animal with a diseased intestinal tract in combination with a medium containing a sodium salt, such as physiologic or Ringer's salt solution. Schultz says that these results though definite are hardly so to the extent expected when one considers the pronounced effect produced clinically by the administration of lactose in similar conditions, and are far from explaining the pathogenesis of the fever occurring in alimentary intoxication.

Colorado Medicine, Denver

February, IX, No. 2, pp. 33-64

80 Chronic Appendicitis with Symptoms Resembling Gastric Ulcer. F. W. Bancroft, Denver.
81 Treatment of Neuralgia. H. T. Pershing, Denver.
82 Few Anatomic and Surgical Considerations of Tonsil. J. J. Pattee, Pueblo.
83 Case of Cerebrospinal Meningitis Treated with Antimeningitic Serum. A. J. Simpson, Denver.
84 Use of Antiformin in Detection of Tubercle Bacilli. M. Collins, Denver.

Cleveland Medical Journal

January, XI, No. 1, pp. 1-80

85 Differential Diagnosis of Conditions Causing Increased Intracranial Pressure. C. D. Camp, Ann Arbor, Mich.
86 Social and Economic Value of Medical Charities. J. F. Jackson, Cleveland.
87 *Hemorrhagic Infarction of Adrenals; Report of Case. A. W. M. Ellis, Cleveland.
88 Plan for Regulation of Contract Medical Practice. J. J. R. Macleod, Cleveland.
89 Chronic Deforming Arthritis Developing During Course of Tuberculous Infection of Ankle. G. I. Bauman, Cleveland.
90 Action of Caffein on Mammalian Circulation. J. D. Pilcher, Cleveland.

87. **Adrenal Infarction.**—Ellis reports a case of hemorrhagic infarction of the adrenals which, he says, occurred as the result of thrombosis of the adrenal veins. He emphasizes the fact that the condition is more common than is generally supposed and is worthy of consideration as something more than a mere pathologic curiosity. Thrombosis of the adrenal vein is probably the commonest cause of extensive adrenal hemorrhage in the adult. The diagnosis, while difficult, is possible and the condition should always be considered in patients with acute prostration with low blood-pressure. The etiology of the thrombosis is unknown. The symptomatology of the condition appears to be identical with that of hemorrhage into the adrenals from any cause, and may be summed up in the single expression, "adrenal insufficiency." The two outstanding symptoms for which one must be on the watch are marked asthenia and a low blood-pressure, pressures of 90, 80 or even 70 millimeters of mercury sometimes occurring. Bronzing of the skin and pigmentation of the mucous membranes, the essential signs of Addison's disease, are almost always lacking, the lesion being too acute for such a process to take place. The case reported by Ellis showed definite pigmentation, but the patient was extremely dirty and the pigmentation that of vagabondage rather than adrenal in origin.

Boston Medical and Surgical Journal

February 15, CLXVI, No. 7, pp. 235-274

91 Different Approaches to Hip-Joint, with Special Reference to Operations for Curved Trochanteric Osteotomy and for Arthrodesis. E. G. Brackett, Boston.
92 Prevention of Infant Mortality by Breast-Feeding. W. H. Davis, Boston.

Lancet-Clinic, Cincinnati

February 10, CVII, No. 6, pp. 143-176

93 Inguinal Hernia. C. T. Souther, Cincinnati.
94 Placenta Prævia; Symptoms and Diagnosis. W. D. Porter, Cincinnati.
95 Treatment of Placenta Prævia. E. G. Zinke, Cincinnati.
96 Improved Inhaler. H. G. Graham, Elmdale, Kan.

Journal of Cutaneous Diseases, New York

February, XXX, No. 2, pp. 53-118

97 *Eosinophilia in Scabies and in Various Diseases of Skin. J. F. Schamberg and A. Strickler, Philadelphia.
98 *Micrococcus with Unusual Characteristics as Factor in Resistant Dermatosis Resembling Acne Vulgaris. H. R. Varney and L. T. Clark, Detroit.
99 Three Unusual Forms of Cutaneous Tuberculosis. H. Fox, New York.
100 Multiple Areas of Pigmentation of Eight Years' Duration. F. C. Knowles, Philadelphia.

97. **Eosinophilia in Scabies.** The diseases of the skin in which an increase of eosinophils can be demonstrated with a fair degree of constancy, according to the authors, are dermatitis herpetiformis, bullous dermatitis, pemphigus (including pemphigus vulgaris, pemphigus foliaceus and pemphigus vegetans), and scabies. The average eosinophilia in scabies is considerably less than in the bullous diseases. In mycosis fungoides, eosinophila of a rather high grade is found in about 45 per cent. of the cases. In a single case each of xanthoma diabeticorum and dermatitis coccidioides there was a marked eosinophilia. It is interesting to note that while chronic and extensive cases of eczema may now and then give rise to a high eosinophilia, yet the average of twenty-nine

cases of eczema, including a number of widespread eruptions, was 4.75 per cent. The authors haxe examined the blood of several extensive cases of eczema and have found a very low eosinophil content. In psoriasis, two series of twenty-five and twelve cases, respectively, gave counts of 4 and 3 per cent. It would appear, therefore, that the dictum of Canon that eosinophilia is largely proportionate to the extent, intensity and chronicity of the skin involvement rather than to any special character of the dermatosis, requires modification. It is interesting to observe in some of the reported cases of bullous eruptions, that there is a high eosinophilia about the time of a fresh outbreak, while during quiescence of the process, the eosinophils may be normal in number. Eosinophilia is common in bronchitic asthma and in various animal parasitic invasions of the intestinal tract.

98. **A New Skin Micrococcus.**—A micrococcus considerably unlike *Staphylococcus pyogenes albus* was found by Varney and Clark to cause lesions in the skin which are like those of acne, but differ in their clinical history and treatment. This micrococcus differs in morphology and in some cultural characteristics from the strains of *S. pyogenes albus* studied. Antisera produced by the micrococcus agglutinate the cultures of their origin in higher dilutions than do sera from strains of *S. pyogenes albus*. Cross agglutination tests show the agglutinins of these sera to be specific to cultures of the class of their origin. Furthermore, the acne-like lesions in which this organism was found, persist long after the acne age and while utterly resistant to the usual acne therapy, they have been cured by vaccines made from the organism.

The five cases from which this micrococcus was isolated possessed some clinical features which were common to all. They were uniformly of unusually long duration, all existing over eight years and one twenty-four years; all were beyond the age of the acne vulgaris patient. The areas involved are those most susceptible to acne vulgaris, commonly extending on the back, face and arms, unaccompanied by comedones. The lesions begin deep in the skin structure, are very slow in development, markedly sensitive on pressure, unusually firm, with the ordinary coloring of a localized skin infection. There is no tendency to rupture, the contents of the lesion being exceedingly small in amount and the destruction of the true skin is so slight that there is no pitting in the old area of the lesion.

The disease in all five cases has been most rebellious to all forms of treatment, except stock suspensions of the micrococcus described. In two of the cases a series of Roentgen-ray exposures were administered, with recurrence in both of the areas which had been thoroughly treated; this being quite an uncommon outcome from radiotherapeutic treatment in the average acne vulgaris patient. Four of the patients received inoculations of combined staphylococcus and acne bacillus suspensions, with only slight transitory improvement.

Ohio State Medical Journal, Columbus

February, VIII, No. 2, pp. 55-108

101 Practical Eugenics in Indiana. J. N. Hurty, Indianapolis.
102 Goiter Heart. A. Crotti, Columbus.
103 Hyper- and Hypothyroidism in Childhood. C. F. Tenney, Toledo.
104 Tumors of Bladder. C. M. Harpster, Toledo.
105 Frequency of Urination. A. W. Nelson, Cincinnati.
106 Case of Gangrene of Lower Extremity. A. S. McKitrick, Kenton.
107 Relation of Gastric and Duodenal Ulcer to Cancer. C. G. Souder, Toledo.
108 Drug Fiends. M. K. Isham, Columbus.

American Journal of Obstetrics and Diseases of Women and Children, New York

February, LXV, No. 410, pp. 197-392

109 *Cesarean Section and Its Alternatives in Suspect and Septic Cases. R. Peterson, Ann Arbor, Mich.
110 *Interpretation of Uterine Curettings. R. T. Frank, New York.
111 Decidua Formation in Omentum in Secondary Abdominal Pregnancy. G. W. Outerbridge, Philadelphia.
112 Transposition of Uterus and Bladder in Treatment of Extensive Cystocele and Uterine Prolapse. T. J. Watkins, Chicago.
113 *Case of Large Bilateral Bartholin Cysts. S. Wiener, New York.
114 *Epilepsy and Pregnancy. G. B. Miller, Washington, D. C.
115 *Schools for Midwives. S. J. Baker, New York.
116 Treatment of Prolapsus Uteri by Vaginofixation. E. P. Lothrop, Buffalo.
117 *Prevention of Shock. J. H. Carstens, Detroit.
118 *Anatomic Operation for Cure of Cystocele. G. R. White, Savannah, Ga
119 Influence of Gonococcus in Puerperium. J. E. King, Buffalo.
120 Intrathoracic Tuberculosis in Infancy and Childhood, Based on Study of 125 Cases. L. C. Ager, Brooklyn.
121 Diagnostic Significance of Rigidity of Neck Muscles in Children. L. Kerr, Brooklyn.
122 Why Our Obstetricians Should Either Extend Their Line of Endeavors or Confer Earlier with Pedotrophist. W. B. Hoag, New York.
123 Vesical Calculus in Boy Aged 5 Years. A. D. Smith, Brooklyn.

109. **Cesarean Section and Its Alternatives.**—Peterson emphasizes the fact that abdominal Cesarean section is always exceedingly dangerous in the presence of sepsis; that at times it is absolutely unjustifiable, craniotomy on the living or dead child being the preferable procedure.

110. **Interpretation of Uterine Curettings.**—In order to inaugurate a reform, Frank says, the clinician will have to insist, in the first place, that the pathologist, who, as a rule, takes but a perfunctory interest in uterine curettings (aside from the possibility of carcinoma, chorio-epithelioma or other tumors) take cognizance of our more recent knowledge; in the second place, he will be obliged to check in himself the pernicious and deep-rooted tendency to ascribe a great number of heterogeneous pelvic symptoms to inflammation of the endometrium.

113. **Large Bilateral Bartholin Cysts.**—Wiener's case presents a number of interesting features, the fact (1) that the cysts were bilateral; (2) their size, 118 and 125 cm., perhaps the largest on record; (3) the marked distortion and stenosis of the introitus, and (4) the rapid growth during pregnancy. This last feature is explained by the occurrence of hemorrhages due to the local congestion incident to pregnancy and the trauma of attempts at coitus.

114. **Epilepsy and Pregnancy.**—In women with epilepsy in whom pregnancy apparently causes the convulsions to become more frequent or more severe, Miller says one should always consider the necessity of terminating the pregnancy. In cases of pregnancy in epileptic women, one should watch with extreme care for indications of toxemia or the premonitory signs of eclampsia and should put an end to pregnancy at the appearance of symptoms of much less gravity than would indicate this procedure in women who are not the subjects of disease. He cites one case.

115. Abstracted in The Journal, Nov. 25, 1911, p. 1787.

117. Abstracted in The Journal, Oct. 7, 1911, p. 1313.

118. **Anatomic Operation for Cystocele.**—From a study of the anatomy of the bladder, White says it is evident that the anterior vaginal wall supports the bladder, and when a cystocele occurs it is due to this structure breaking away from the attachment to the ischiadic spines and the white line, and to remedy the condition according to anatomic principles it is necessary to restore the attachment between the lateral sulci of the vagina and the white line of the pelvic fasci. The easiest and simplest way to accomplish this is to incise the peritoneum at the side of the bladder, push the bladder aside until the white line comes into view, and then by the aid of an assistant's finger in the vagina, suture the anterior lateral side of the vagina to the white line of the pelvic fascia, and close the peritoneum; but he says an operation of this kind is seldom indicated.

The incision is made in the anterior lateral fornix of the vagina as near as can be judged along the lateral edge of the bladder and extends from the level of the cervix to near the level of the internal meatus of the urethra. The bladder is separated from the vagina to a slight extent and blunt dissection is carried out toward the side of the pelvis until the finger can be placed on the uncovered ischiadic spine which is the chief landmark in the operation. Hemorrhage is controlled by sponge pressure. The sutures are all passed back of the white line by means of a Deschamps handled needle. The first one is placed just anterior to the spine and the ends drawn out through the wound. Traction on this suture brings the white line into prominence and a second and a third suture are passed back of it about half an inch apart, being always careful to clamp the ends and prevent the sutures from becoming mixed and twisted. Each end of the three or four sutures is threaded on a curved needle. One end of the suture goes through the lateral edge of the vaginal incision, he other through the median edge, taking a firm hold of the vagina, when these sutures are tied singly and the lateral fornix of the vagina is drawn up into contact with the white line. The other side is done in a similar manner and when all the sutures are tied the anterior vaginal wall stretches across from one ischiadic spine to the other. The normal shelf-like condition is reestablished, and the vagina is found to fill in the space between the pubic bones without tension.

Medical Record, New York

February 17, LXXXI, No. 2154, pp. 301-350

124 *Pathology of Chill Affecting Localized Areas of Skin. W. H. Thomson, New York.
125 General Medical Education: the Only Rational Preventive Medicine. A. L. Soresi, New York.
126 Degeneration of Posterior Columns of Spinal Cord in Non-Tabetic Individual. A. Gordon, Philadelphia.
127 Treatment of Sciatica by Perineural Infiltration. W. M. Leszynsky, New York.
128 Adenoids in School Children and Their Effect on General System. G. B. Taylor, Cameron, Tex.
129 Treatment of Simple Catarrh of Respiratory Passages with Bacterial Vaccines. A. P. Hitchens, Glenolden, Pa.

124. **Pathology of Chill Affecting Localized Areas of Skin.**—The principle which Thomson elucidates is that the integrity of the tissues of the body depends on the constant circulation through them of arterial and not of venous blood. Whatever interferes with the circulation of arterial blood, though it be but a short interference, nevertheless produces serious damage to the tissues. The vasomotor nerves, Thomson says, are but rarely acted on by a general stimulus. Instead, such stimuli are definitely local and yet subject to certain special laws. The first law is illustrated by the intimate association of the vasomotor nerves supplying symmetrical organs in pairs. A second law is the intimate association between the vasomotor nerves of any area of the skin and those of the internal parts underneath that area.

This is an important law, as it affords the explanation of a great many clinical facts. Thus, external applications, according to their nature, can produce marked stimulant or else sedative impressions on the circulation of the parts underneath that area. This explains why poultices may so relieve pain and inflammatory irritation when applied to the skin, but likewise this law is operative where it is important to stimulate the circulation in the stage of venous stasis. Thus, after the subsidence of the acute stage of inflammation, we have a powerful stimulant to the internal circulation by dry cupping, which is especially useful in the bronchitis of adults. Likewise the application of a blister is actively stimulant to the internal circulation, but should not be applied in the first stage of the inflammation. Every internal inflammation causes a marked hyperesthesia of the skin over the inflamed organ, which leads to any irritation of it being reflected inward to the aggravation of the inflammation.

Another important law is that through the vasomotor system special associations occur between certain widely separated parts of the body. So girls can have recourse to a very dangerous suppression of the menses by putting their feet into cold water. It is surprising how long this injurious impression is retained by the pelvic nerves, so as to cause long-continued amenorrhea.

The vasomotor nerves of the feet form another association which is of much importance, and that is with the circulation of the pharynx and the larynx. Every one knows that getting his feet wet may quickly produce a sore throat, if not an attack of hoarseness, extending finally into bronchitis.

Still another important association is between the nerves arising at the nape of the neck and the whole arterial circulation of the head and face—in fact, we may say that at the nape of the neck is the chief executive office which presides over the whole circulation above the diaphragm, including, of course, the circulation of the mucous membranes. The most extensive inflammation of mucous membranes may result from a prolonged exposure, though the rest of the body may be warmly clad. Nasal catarrh, or, in fact, catarrh of the whole respiratory tract, may soon follow from thus catching cold.

A fact of the highest moment connected with catching cold is that by the local damage to an internal part the way is opened for infecting microorganisms of the most varied kind to enter the system. Many of these infecting agents may be found throughout life, occupying the mouth and throat, but doing no harm so long as the epithelium lining of the mucous membrane is intact, such as the case with the pneumococcus, and a whole host of similar and powerful infecting agents.

The various conditions mentioned afford many indications for treatment. Thus chronic nasal catarrhs point to a weakened susceptibility to the vasomotor centers at the nape of the neck. Now nothing so restores the tone of these weakened centers as cold properly applied. Thus a cold bath or shower bath invigorates the circulation, provided always that the reaction from the impression of cold is complete, but if no, or equally imperfect reaction occurs, the patient is worse off than ever; hence chronic nasal catarrhs are best treated by sudden and very brief douching of the back of the neck with cold water, to be followed by active dry friction to assist or to promote the restoration of the circulation in the parts. During the douche the hair should be carefully protected from the water, for wet hair would only prolong the injurious effect of chill. Meanwhile, the nose itself may be treated with insufflation of a fine powder composed of two drams of subcarbonate of bismuth with six grains of thymol iodid. Any area of chronic inflammation, Thomson says, should have the corresponding cutaneous surface carefully protected. This explains the beneficial results following applications of large belladonna plasters, which should cover the whole area of the skin over the heart, but these facts are equally applicable in all chronic inflammatory conditions, whether of the lungs or of the pleura. Chest protectors on that account are reasonable. Thomson prefers the application of cotton batting to any other such measure. Similarly every patient with chronic diarrhea should have his abdomen covered by some equivalent protection. In chronic, long-standing bronchitis, Thomson has the patients wear both shirts and drawers made with perforated chamois skin, worn just over a light undergarment.

Journal of Michigan State Medical Society, Battle Creek

February, XI, No. 2, pp. 73-150

130 Frontal Lobe Abscess. R. T. Vaughan and A. E. Halstead, Chicago.
131 New Instrument for Suprapubic Cystotomy. A. McLean, Detroit.
132 Cardiospasm. W. H. Enders, Jackson.
133 Pernicious Anemia. B. R. Corbus, Grand Rapids.
134 Cesarean Section the Second Time in Two Cases. J. H. Carstens, Detroit.
135 Principles for Cure and Treatment of Hernias. H. E. Randall, Flint.
136 General Considerations of Kidney Surgery. G. C. Hafford, Albion.
137 Kidney Tuberculosis. F. W. Robbins, Detroit.
138 Surgery of Displacements of Kidneys and Colon. H. W. Longyear, Detroit.
139 Lues, Past and Present. N. De Haas, Fremont.

Western Medical Review, Omaha, Neb.

February, XVII, No. 2, pp. 57-106

140 Modern View of Meningitis. H. M. McClanahan, Omaha, Neb.
141 Rupture of Liver. D. T. Quigley, North Platte, Neb.
142 Prostatic Abscess. A. C. Stokes, Omaha, Neb.
143 Recent Experimental Work in Carcinoma. D. C. Hilton, Lincoln, Neb.
144 Chronic Interstitial Nephritis. W. E. Stewart, Stratton, Neb.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 3, I, No. 2666, pp. 225-284

1 Investigations of Motor Functions of Alimentary Canal by Means of Roentgen-Rays. A. F. Hertz.
2 *Importance of Pelvic Deposits in Diagnosis of Abdominal Cancer. G. G. Turner.
3 Further Examples Illustrating Cases of Chronic Toxemias at Vittel. H. J. Johnston-Lavis.
4 *Iodin as Sole Dressing for Operation Wounds. R Alcock
5 *New Material (Duralumin) for Surgical Appliances. E. M Little.
6 Value of Anchored Dressings in Surgery. J. L. Thomas.
7 Erythema and Death Following Intestinal Catarrh. P. B Unwin and A. Eddowes.
8 *Penetrating Power of Some Ointment Excipients. F. Gardiner.
9 Hydrocephalus as Sequel to Shock. A. K. Armstrong.

2. **Diagnosis of Abdominal Cancer.**—Turner particularly emphasizes that in cases of malignant disease in the upper abdomen and especially with stomach cancer, while there may be no signs of dissemination to be made out on ordinary abdominal examination and no ascites, there may be quite a considerable deposit in the pelvis, easily recognizable on rectal examination and without any symptoms to point to its presence. He cites several cases in point. The masses are to be felt in the rectovesical pouch or pouch of Douglas, on the anterior wall of the bowel, within 3 or 4 inches of the anus. They may be single or multiple, and are either detected as a definite fixed nodule or nodules or as an infiltration. As a rule, they feel about the size of a hazel nut, but they may be much larger. In Turner's cases the presence of the deposits has not given rise to any symptoms whatever, and they have only been discovered in the course of routine examination. Cases, however, have been recorded in which the growth apparently originated in the rectum.

4. **Iodin as Sole Dressing for Operation Wounds.**—Iodin as the sole dressing to be applied to the operation wound from the date of the operation to the discharge of the case, is a new departure. Alcock's paper is based on the successful results of thirty-one cases treated by such a method, which, shorn of details, may be summed up as the treatment of the operation area by tincture of iodin, applied at intervals for the first few days, the incision being left exposed to the air, and only covered by the patient's night clothes. Alcock's aim in the treatment of a wound is to let it be hermetically sealed against the entrance of outside organisms by its own dried secreted serum, and then to render this sterile to growth of the bacteria, if they should escape from the infected sweat glands. If a wound is observed two days after operation, it is often seen to have raised and slightly inflamed edges, but with an iodin dressing the wound is seen to be flat with the surface and no surrounding swelling or redness. In the first series of cases, the custom was to lay a sterilized towel loosely on the wound after it had been painted, and before being sent out of the theater, but now that has been discarded as unnecessary, and the patient's clean clothes are simply pulled into position. In the first six cases the iodin was painted once a day on the wound for six days; but in a case of inguinal hernia there was a slight iodin rash, and so now it is only painted on for the first three days and again on the removal of the stitches on the ninth day.

The method is said to be applicable only to those cases in which the wound can be completely closed up, and can in no case be used where a drain of any kind is necessary. In all operations in which support is afterward necessary, it cannot be used, as in amputations, excisions, etc. In abdominal operations the method has been perfectly successful, but if the abdomen has been opened, either by the gridiron incision or the incision in the course of the rectus, the wound has been stitched up in separate layers, and any strain of the muscles only tends to approximate the fibers and sheaths. In some forms of umbilical and ventral hernia, where there is no muscular support, some kind of binder, such as a sterilized towel, might be necessary until all danger of vomiting had passed, when the part would be freshly painted with iodin. In inguinal hernia no kind of support is needed. All the cases treated by this method have given excellent results, not even a stitch abscess having been observed.

5. **New Material for Surgical Appliances.**—This metal is an alloy of aluminum, slightly heavier than that element. It has a specific gravity of 2.8, while aluminum is 2.7 and steel 8, so that it is rather more than one-third the weight of steel. Its strength is about the same as that of mild steel of the same bulk. Like brass it can be made stiffer by hammering, and it is supplied in varying degrees of hardness, according to the purposes for which it is required. It is said to be practically non-corrodible, being scarcely affected by prolonged exposure to a concentrated solution of sodium chlorid, ammonium sulphate in 10 per cent. solution, ammonia, sulphuric or nitric acids, sulphuretted hydrogen solution or sea water. Caustic alkalis, however, attack it quickly. Duralumin takes a high polish, which is scarcely dulled by prolonged exposure to the air. It cannot be brazed, but it can be soldered; as soldering has an annealing effect on it, it is not often advisable to use solder. Nor can it be tempered like steel, but the hardening effect of hammering or rolling takes the place of tempering to some extent. Little has had various orthopedic appliances and splints made from this metal and is well satisfied with it.

8. **Penetrating Power of Some Ointment Excipients.**—So far the results from Gardiner's experiments show the superiority of olive oil and cedar oil among liquid excipients, the first being the better; goose grease is first among the more solid fats, and benzoated lard comes next. Glycerite of starch with cold cream, glycerite of starch with hydrous lanolin are the best of the combinations.

Lancet, London

January 27, I, No. 4, pp.211-274

10 Mental Processes in Sanity and Insanity. T. C. Shaw.
11 Percentage of Ether Vapor Administered in So-Called "Open Ether" Methods. Sir F. Hewitt and W. L. Symes.
12 *Alcohol Injection of Gasserian Ganglion for Trigeminal Neuralgia. W. Harris.
13 Surgical Treatment of Sterility in Women. F. J. McCann.
14 Bacillus Diphtheriæ. I. C. Tengely.
15 Ulcerating Granuloma of Pudena, as Found in Government Lock Hospitals, Western Australia. D. Steel.
16 Glaucoma. L. Hill.
17 Case of Rhinitis Caseosa. H. W. Wilson.
18 Will Sickness be Increased Under Insurance Act? F. Milton.

February 3, I, No. 5, pp. 275-342

19 Medicolegal Relationships of General Paralysis of Insane. Sir G. H. Savage.
20 *Heart-Block and Nodal Rhythm in Acute Infections. J. Cowan, G. B. Fleming and A. M. Kennedy.
21 *Salvarsan in Syphilis. A. Foerster.
22 Syphilitic Aortitis with Valvular Incompetency. A. Morison.
23 Clinical Significance of Roentgen-Ray and Radium Measurements. S. Russ.
24 *Membranous Rhinitis: Its Relation to Diphtheria and Its Treatment by Autogenous Vaccine. D. Forbes and H. P. Newsholme.
25 School Closure in Measles. A. B. Raffle.
26 *Operation for Hemorrhoids and Chronic Constipation. C. A. Bucklin.
27 Origin and Wholesomeness of Saline Waters in London Basin. J. C. Thresh.

12. **Treatment of Trigeminal Neuralgia.**—During the last three and a half years Harris has seen ninety cases of intractable trigeminal neuralgia, eighty-six of which he has treated with alcohol injection; sixty-five were females and twenty-five were males. In only three cases was no relief obtained, owing to the nerve not being found; one of these had previously been operated on unsuccessfully for gasserectomy, and the scar tissue was so dense that it was impossible to manipulate the needle. In three others slight definite improvement resulted, and in the remaining eighty cases complete relief was obtained for intervals varying from as little as two months and four months in two cases to two and a half years and more. For the majority, Harris says twelve months' complete relief of pain may be looked on as a minimum, if two to three years and more may be expected when the depth of the anesthesia indicates that the nerve has been properly destroyed by the alcohol.

Failures in cases of genuine trigeminal neuralgia, he says, are due to errors in technic, owing to which the nerve is neither struck nor injected with the drug. Strong alcohol injected into any nerve trunk destroys the nerve fibers almost instantaneously; it is, indeed, a chemical resection of the nerve, and total loss of function of the nerve will ensue until regeneration occurs. It is to prevent this regeneration of nerve fibers that Harris has adopted a modified technic in order to destroy the nerve cells in the Gasserian ganglion, and thus to render impossible the down-growth of new nerve fibrils to replace those destroyed by the alcohol. He carries the injection of strong alcohol through the foramen ovale into the gasserian ganglion itself, in order that, by destroying the nerve cells in the ganglion, regeneration of nerve fibers along the degenerated nerve trunks shall be prevented, and thus to substitute permanent cure of the pain for the temporary relief of a few months to a few years, which was hitherto obtainable. In this way it appears to Harris possible to obtain all the advantages of the Krause-Hartley operation without its attendant deformity and dangers, or even the necessity of a general anesthetic.

20. **Heart-Block and Nodal Rhythm in Acute Infections.**—In a case of diphtheria, with full heart-block, the *a-v* bundle and node were found by the authors to be involved in an acute

inflammatory process, and similar lesions were present in the *a-v* bundle in a case of malignant endocarditis in which conductivity was defective. In three cases of acute endocarditis, with nodal rhythm, the *a-v* node was acutely inflamed, the bundle being only and but slightly affected in one instance.

21. **Salvarsan in Syphilis.**—The following maxims by Foerster place the therapeutic status of salvarsan squarely before us: 1. Salvarsan is of special value where rapidity of action or concentration of treatment is desirable, e. g., for the removal of certain infective lesions, for patients whose conditions of life render a regular treatment impossible. 2. It is widely applicable, as its toxicity is small. Cardiac disease, syphilis of the nervous system and concomitant grave maladies are its chief contra-indications. 3. The intravenous method is the only recommendable one. 4. Repeated medium doses are preferable to a few large ones. 5. Its use is indicated where mercury has failed. 6. In very early cases an attempt at aborting the disease by excising the chancre and administering salvarsan is advisable. 7. In florid secondary syphilis combined salvarsan and mercury treatment should also be submitted to this combined treatment. 8. The severe tertiary cases should also be submitted to this combined treatment. 9. In mild tertiary cases salvarsan recommends itself by the rapidity of the removal of the lesions, and by the long duration of the subsequent latency. 10. Truly malignant cases are as hopeless under salvarsan treatment as otherwise. 11. In late latent cases and in parasyphilis the administration of salvarsan presents no utlity.

24. **Membranous Rhinitis.**—The connection between membranous rhinitis and diphtheria in the school outbreak reported by Forbes and Newsholme was so intimate as to make it almost certain that there was a causal relation between them. He regards it as a point of practical importance that the comparatively frequent occurrence and great infectivity of membranous rhinitis should be recognized widely. Missed cases of the disease would readily account for a not inconsiderable proportion of school diphtheria. An autogenous vaccine seemed to be of definite value in removing membrane, getting rid of nasal discharge, and hence greatly reducing the infectivity of membranous rhinitis. But the vaccine did not appear to be capable of completing the work of elimination after the membrane had gone, i. e., after the vascular and lymphatic channels by which antibodies can reach the bacilli had been removed.

26. **Operation for Hemorrhoids and Chronic Constipation.**—Bucklin's procedure consists in extensive stretching of the sphincter with a bivalve speculum, and then hard stumps resulting from previous hemorrhoids are removed with the forceps and a knife. Other forms of this disease are treated with the forceps and a No. 1 catgut ligature, after which the hemorrhoids are cut off outside of the ligature; or when the swellings are too numerous they may be treated with hypodermic injections of 30 per cent. phenol in alcohol. The slits made in the mucous membrane by operating are better closed by stitches of No. 1 catgut for the purpose of avoiding complications. The patient should be confined in bed for five days after the operation. A bandage has not been found necessary in cases that have been operated. The bowels should be locked up by giving a dose of 1 grain of opium morning and evening. The giving of opium, Bucklin says, should be commenced as soon as the patient is able to take the medicine after the operation. On the evening of the fifth day the opium should be discontinued and the patient should take a similar dose of the same cathartic medicine as was used at the commencement of this treatment. On the sixth day the patient can be discharged entirely free from any danger of the hemorrhoids returning. When the trouble is chronic constipation, it will rapidly disappear. These results are attributed to the reduced action produced in the sphincters by their extensive stretching.

Indian Medical Gazette, Calcutta

January, XLVII, No. 1, pp. 1-48

28 Appointment to Service Examinations. D. G. Crawford.
29 Abor Arrow Poison. F. N. Windsor.
30 Teaching of Anatomy. H. Lack.
31 *Air in Bladder Among Women. C. C. Barry.
32 Fractures Treated by Operations. A. M. Leake.
33 Improved Methods of Using Tonsil Guillotine. A. H. Proctor.
34 Value of Antistreptococcus Serum (Polyvalent) in Erysipelas. N. S. Simpson.

31. **Air in Bladder Among Women.**—In the last five years Barry has come across four cases of automatic distention of the bladder with atmospheric air in women. Three of these cases occurred among European ladies, and one, the fourth case, was a native hospital patient. In two cases, while this symptom lasted, there was acute pain of a colicky nature whenever the bladder got greatly distended with air; in one there was considerable inconvenience, while in the fourth (native) case the condition gave rise to very little trouble, but the symptoms lasted but a short time. In each patient the temperature remained normal, and the urine also showed no signs of such contamination as would be sure to arise should any, however small, opening exist between the bladder and the intestine. The air, too, which was expelled from the bladder was absolutely odorless, and except for the pain arising from the acute distention of this viscus, no serious symptom was present, and in the intervals the patient felt quite well.

In all patients one condition was constant, and that was that their muscular systems had lost tone and the visible muscles were flaccid, with little contractile power. It is probable, therefore, that the muscular tissues of the bladder walls were in a like flaccid condition, and Barry believes the air was aspirated into the bladder by the abdominal respiratory movements in a somewhat analogous manner to that in which the rectum or vagina can be ballooned by elevating the pelvis and allowing free admission of air. The treatment, Barry believes, to be indicated is to attend to any condition of the pelvic organs, such as is likely to impair the contractility of the bladder (i. e., in the first case chronic endometritis and subinvolution of the uterus), and at the same time to administer such drugs as ergot and strychnin that will improve the patient's general condition and remedy the loss of muscular tone.

Journal of Laryngology, Rhinology and Otology, London

February, XXVII, No. 2, pp. 73-128

35 Teaching of Otology and Laryngology in Denmark. P. T. Hald.
36 *Idiopathic Spasm of Esophagus as Common Diagnostic Error. W. Hill.
37 *Submucous Resection of Nasal Septum: Analysis of 130 Cases. D. McKenzie.
38 Simplified Insufflator for Use in Treatment of Diseases of Throat, Nose and Ear. J. Horne.

36. **Idiopathic Spasm of Esophagus.**—Hill claims that functional dysphagia is usually due to pharyngeal paresis, rarely to pharyngeal spasm; there may occasionally be concomitant paresis of the gullet; in other words, weak peristaltic action, but pure primary spasm of the esophagus, whether functional or organic, is in his opinion and experience "often heard of but never seen." Instead of idiopathic spasm of the gullet being usually the first explanation thought of in a case in which food sticks within the thorax, he says it ought to be the last. If the difficulty in swallowing is truly functional, it is probably due to either pharyngeal paresis, or to want of coordination of the muscular movements of deglutition, but if the difficulty is really located purely in the esophagus, the presumption is that organic lesion will be found if sought for. In a large proportion of cases in which Hill has subsequently found either acute or subacute esophagitis, cicatricial stricture, peri-esophageal abscess and carcinoma, he has ascertained that the condition has been confidently diagnosed in the first instance as spasm by one or more medical men.

37. **Submucous Resection of Nasal Septum.**—McKenzie calls attention to the fact that this operation necessarily impairs the strength of the skeleton of the nose, and that a blow, even a slight blow, on it may flatten the organ beyond recognition and beyond remedy. For this reason boxing, football, wrestling, etc., should be avoided by people who have had the septal resection performed unless they wear some kind of noseguard. That there have been cases in which the operation has been followed by spontaneous flattening of the end of the nose is also true.

Clinical Journal, London

January 17, XXXIX, No. 15, pp. 225-240

39 Nature of Hysteria. W. H. B. Stoddart.
40 Diagnosis and Treatment of Intranasal Suppuration. J. Donelan.
41 Deaths of English Kings. J. Rae.

January 24, XXXIX, No. 16, pp. 241-256

42 Early Operation in Inflammation of Appendix. W. H. Battle.
43 Clinical Demonstration of Cases of Skin Disease. J. M. H. Macleod.
44 Deaths of English Kings. J. Rae.

January 31, XXXIX, No. 17, pp. 257-272

45 Diagnosis of Pleuritic Effusion. F. Taylor.
46 Hemorrhoids. A. Baldwin.

Medical Press and Circular, London

January 17, XCIII, No. 3793, pp. 53-76

47 Parasyphilitic Disease in Infancy. R. Koenigstein.
48 Delayed Traumatic Spondylitis. P. Rostaine.
49 Six Cases of Pneumothorax. J. O. Symes.
50 Vaccine Treatment: with Special Reference to Pyorrhea Alveolaris. E. Glynn.

January 24, XCIII, No. 3794, pp. 77-102

51 Anterior Poliomyelitis and Polioencephalomyelitis. T. K. Monro.
52 Case of Myoma Undergoing Sarcomatous Degeneration. Sir W. Smyly.
53 *Case in Which a Papyraceous Fetus Was Expelled Before a Living Twin. Sir W. Smyly.
54 Epidemic Poliomyelitis. A. Marc.
55 Vaccine Treatment: with Special Reference to Pyorrhea Alveolaris. E. Glynn.
56 Anterior Poliomyelitis and Polioencephalomyelitis. T. K. Monro.

January 31, XCIII, No. 3795, pp. 103-128

57 *Should Febrile Tuberculosis Be Treated with Tuberculin? L. Renon.
58 *Simultaneous Treatment of Twenty-Seven Cases of Burns. J. F. Alexander.
59 Nutritive Effects of Beef Extract. W. H. Thompson, W. Caldwell and T. A. Wallace.

53. **Papyraceous Fetus Expelled Before Living Twin.**—About eight years ago Smyly attended a lady in her first confinement: she was in perfect health and so was her husband. The labor was in every way normal and he made no vaginal examination. Her convalescence was afebrile and apparently complete. However, as years passed by, and no more children arrived, she became anxious, and consulted Smyly again in 1906. Beyond the sterility she complained of nothing. Her menstruation was rather profuse and lasted six to seven days, and she had some pain with it, but this she assured Smyly had always been her normal condition. On examination he found nothing but a little discharge of mucus from the os. He diagnosed endometritis and treated it in the usual way, curetting and applying various caustics to the endometrium, but without effect.

In April, 1910, she at last became pregnant, but aborted at the seventh week. August 15, just seven calendar months from the last menstrual period, and without any warning, a small papyraceous fetus came away. A doctor was sent for, and after waiting a considerable time and there being no sign of the placenta following, he sent for another doctor, who saw her on the afternoon of the following day. Under the circumstances there was considerable doubt as to the best course to pursue. To remove the placenta would have destroyed a second child, which was still alive in the uterus, but had scarcely reached a viable condition, while, on the other hand, to leave the placenta of the first child involved a considerable risk of septic poisoning to the mother. However, considering the mother's intense anxiety to save the second child they determined to adopt the second alternative and so drew down the small funis and divided it as high up in the cervix as possible.

On the third day the temperature began to rise, and the following day the patient had a considerable amount of fever. The patient having been anesthetized, Smyly found the head presenting in the first position. The cervix was long and dilated, and below the head there was a firm ring, which he believes to have been the contraction ring, and through which he could with considerable difficulty pass two fingers. He then performed bipolar version, which was exceptionally difficult, as there seemed to be very little liquor amnii, and extracted the child very slowly, owing to the resistance of the ring. It was, however, delivered dead after a considerable time without injury to the maternal tissues. The placenta and membranes of this child followed in about half an hour. They appeared perfectly normal and fresh, but there was no sign of the other placenta or cord. Smyly found the placenta of the first child firmly adherent in the neighborhood of the right cornu, and finally succeeded in detaching and removing it.

57. **Febrile Tuberculosis and Tuberculin.**—With a good tuberculin and proper care, seconded by some experience of the tuberculin treatment and incessant surveillance, Renon says the treatment of slightly febrile cases of tuberculosis (37.4 to 37.8 C.) may be undertaken without undue risk; but in general practice, to treat really febrile cases of the disease with tuberculin, without the requisite experience, is to expose the patients to serious dangers and possibly to create insurmountable obstacles to a successful treatment.

58. **Treatment of Burns.**—All of Alexander's patients were injured while trying to escape from the second floor of a burning building, and nearly every one of them presented burns of the face, arms and breast. There were no cases of asphyxia nor of edema of the glottis. Four of the patients developed ulceration of the duodenum. The hemorrhage in all of the four cases was severe. While all received the usual treatment, Alexander attributes the recovery of every one of the patients complicated by duodenal ulcers to the continual and rigid supervision of the diet, all being strictly limited to liquids. Seven cases of burns of the first, second and third degree were treated by the boric-acid solution bath. Picric-acid solution was employed in five cases, including burns of the first, second and third degree. Carron oil was used in five cases presenting the second and third degree lesions. Ichthyol ointment with a lanolin base was resorted to in five cases of the third degree. Forty-eight grains of ichthyol were added to 2 drams of olive oil and incorporated with enough lanolin to make 3 ounces. The boric-acid solution baths were given for two to six hours, and repeated at two to six hours intervals. The cases in which picric acid solution was used were dressed with loose gauze from the ordinary roll, this being saturated with the picric-acid solution and then covered with oiled paper. The gauze was kept continually moist and the dressing was renewed every second or third day. The ichthyol ointment was applied to the lesions, covered with gauze and then with oiled paper. In every case all lesions were thoroughly cleansed with water and soap before any dressing was applied.

In burns of the first degree, Alexander says, the picric-acid solution gave results far superior to those of any other dressings, and in cases of the second degree the effect was perfectly satisfactory. He regards the "bug-a-boo" of toxicity from this agent with little concern, the areas on which it was applied being so extensive that there was ample opportunity for absorption. Some of the patients voided darkened urine, but Alexander was always able to clear this up promptly and to insure speedy elimination by the administration of daily doses of Epsom salts. The boric-acid solution baths gave the best results in burns of the second degree and the ichthyol formula in burns of the third degree.

Annales de l'Institut Pasteur, Paris

January, XXVI, No. 1, pp. 1-79

60 Experimental Research on the Pneumococcus. II. (Conservation de la virulence des pneumocoques humains pour la souris.) C. Truche and L. Cotoni.
61 Extraction of Zymase by Simple Maceration. A. Lebedeff.
62 Action of Light on Diastases. I. (Action des différentes radiations.) H. Agulhon.
63 Experimental Aspergillosis. (Germination in vivo des spores d'A. niger et d'A. fumigatus.) B. Sauton.
64 Hemolysis in Spleen and Liver. (La destruction intrasplénique et intrahépatique de corpuscles rouges du sang dans les conditions normales et pathologiques.) I. I. Lintvarev. (To be continued.)

Archives des Maladies du Cœur, etc., Paris

January, V, No. 1, pp. 1-80

65 Bradycardia with Jaundice. (De la physiologie pathologique du pouls lent ictérique—Bradycardie totale s'accélérant par l'atropine.) C. Lian and L. L. Caen.
66 Arhythmia Induced by Manipulation of Abnormally Located Heart. (Arythmie provoquée chez l'homme par l'excitation manuelle du cœur, à travers la paroi abdominale, chez un sujet à cœur ectopié.) D. Danielopolu.
67 The Red Corpuscles Containing Granules and the Stippled Cells. (A propos des hématies granuleuses—granulo-réticulo-filamenteuses—et des hématies ponctuées.) R. Hertz.

Bulletin de l'Académie de Médecine, Paris

January 16, LXXXVI, No. 3, pp. 23-48

68 Carrel's Cultivation of Tissues in Vitro. (La vie alternante des tissus en dehors de l'organisme d'après les nouvelles expériences de M. Alexis Carrel.) S. Pozzi.
69 *Mesenteric Thrombosis or Embolism. (Infarctus de l'intestin grêle par oblitération artérielle ou veineuse.) E. Boinet.

69. **Mesenteric Embolism.**—Boinet reviews the diagnosis and prognosis of hemorrhagic infarction of the intestine, white infarction from shutting off of the blood and the limited and curable form of infarction from obliteration of smaller branches of the mesenteric or intestinal vessels. He refers to the article in THE JOURNAL, July 9, 1904, page 110, based on 214 cases of mesenteric embolism or thrombosis, and states that since that date large numbers of cases have been published. The diagnosis is aided by some cardiovascular affection favoring embolism, blood in the stools not explainable otherwise, subnormal temperature, violent paroxysmal pain and a tumefaction in the mesentery. When the bowel is occluded, the succession of diarrhea and ileus is instructive. An exploratory laparotomy may aid in differentiation; three survived in the eight cases he cites. Eleven of twenty-four patients recovered after enterectomy; that is, 45.8 per cent. Boinet reports a case of hemorrhagic infarction of the small intestine from mesenteric embolism in the course of an aortitis, with death the fourth day from acute peritonitis. He also reports a case of gangrene from obliteration of the superior mesenteric vessels; profuse diarrhea was the main symptom. Curable infarction, and particularly limited mesenteric and intestinal embolism, deserve special study. Boinet has encountered a number of such cases in debilitated men with pneumonia or bronchitis brought to the hospital from the municipal lodging-house. The edema and small infarcts of the intestine are rarely diagnosed in these cases, as they are liable to subside spontaneously, but they are probably the source of sclerous stricture of the intestine, and probably have some connection with the attacks of pain in the syndrome of intestinal arteriosclerosis.

Bulletins de la Société de Pédiatrie, Paris

December, XIII, No. 9, pp. 421-478

70 *Intestinal Invagination. (Rapport sur deux observations d'invagination intestinale par le Dr. P. Grisel.) L. Ombrédanne.
71 Desiccated Milk in Infant Feeding. (Poudre de lait ou lait sec dans l'alimentation des enfants.) E. C. Aviragnet, Bloch-Michel and Dorlencourt.
72 *Diffuse Edematous Scleroderma Benefited by Thyroid Treatment. E. Apert and Leblanc.
73 Craniotabes and Syphilis. J. Roux.
74 *Latent Hypertrophy of the Thymus. (Les hypertrophies thymiques latentes et les "petits signes" de l'hypertrophie du thymus.) L. D'Oelsnitz.
75 Roentgenoscopy of Hypertrophy of the Thymus. (Les caractères de l'image radioscopique dans l'hypertrophie du thymus.) L. D'Oelsnitz and Paschetta.

70. **Intestinal Invagination.**—Grisel reports two cases in an infant and boy of 12 and, with Ombrédanne, discusses the differential points for locating the invagination. In the boy the invagination became spontaneously reduced. Invagination in the ileocecal region causes thick and bloody mucous stools, while with ileocolic invagination there is a flood of bloody thin stool; the small intestine invaginated in the cecum and colon, and strangulated by the ileocecal valve discharges quantities of bloody lymph. Invagination of the ileum causes stools of nearly pure blood, but moderate in amount, soon becoming fetid from the rapid gangrene of the invaginated segment.

72. **Sclerema Following Suppuration of Lymph-Nodes in the Neck.**—The neck and cheeks of the boy of 14 looked normal, but felt like wood to the touch. When he comes in out of the cold his brow and cheeks feel like those of a cadaver on ice. He is unable to open his lips more than 2 cm. and to smile is impossible; mastication is extremely difficult, although the tongue and throat are apparently normal. Aside from this rigid condition of the teguments the child is healthy. The condition developed after the spontaneous subsidence of lymphadenitis in the neck. Thyroid treatment has been commenced and the condition is improving under it. The term "generalized edematous scleroderma" is scarcely applicable, as there is no edema, but a hard infiltration causing a hidebound condition.

74. **Signs of Hypertrophy of the Thymus.**—The minor signs of latent hypertrophy are said to be the puffy and pale aspect, the cyanotic complexion, persisting or intermittent, or merely a bluish tint around the mouth. The veins are more prominent than usual, dilated on the side of the skull, the eyes are a little staring or protruding. Such children are sluggish; the fontanelles are sometimes taut—this hypertension of the fontanelle in the absence of meningeal reaction seems to be a sign of considerable value. Like the other signs it indicates some disturbance in the return circulation. Respiration may be labored. There may be a suggestion of stridor, accentuated as the child reclines. The reaction was the reverse of this in one child with a large thymus, the stridor coming on as the child sat up. These different minor signs are fleeting and variable. The diagnosis is sustained by the unusual extent and intensity of the dulness over the manubrium toward the left and the Roentgen-ray findings. D'Oelsnitz gives a number of points useful in roentgenoscopy, first eliminating mediastinal lymphadenitis. The shadow of the normal thymus is no wider than the shadow of the sternum and vertebræ; any increase in the shadow toward the left should suggest an enlarged thymus, confirmed by the sharp outline. In thirteen infants a few days old, examined with the rays, an abnormal thymus shadow was found in two. In three cases he has sought to modify the thymus by Roentgen exposures; the results are satisfactory to date.

Journal de Médecine de Bordeaux

January 21, XLII, No. 3, pp. 33-48

76 *Removal of Rectal Cancer by the Natural Route with Retention of Anus. (Extirpation du rectum par les voies naturelles avec conservation du sphincter.) A. Venot.

76. **Resection of Rectum with Retention of Sphincter.**—Venot lauds the results of Villard's operation for rectal cancer and reports a case. It is astonishing, he remarks, the extent to which the tumor can be mobilized and drawn out through the dilated anus. He paints all the protruding portion with iodin and then incises the rectum around below the tumor, and throws a ligature around the central stump, which is pulled farther out and detached from its connection at the front and sides, not at the rear. Then the rectum is severed above the tumor and this end of the cancer segment is clamped tight. This segment is then tilted forward and separated at the rear from above downward. By this technic the bleeding is easily controlled, and there are not many instruments in the way, while there is no danger of blindly cutting the inferior mesenteric and superior hemorrhoid arteries.

Lyon Médical, Lyons

January 21, CXVIII, No. 3, pp. 117-160

77 *Induced Pneumothorax for Unilateral Tuberculosis. (Evolution d'un pneumothorax artificiel; type normal.) Balvay and Arcelin.

77. **Induced Pneumothorax.**—In the case described, with four plates showing the successive findings under roentgenoscopic control, the lesions were on one side only and fibrocaseous. They had shown no improvement during eighteen months of general measures, and the patient's health as a whole was relatively good, with no symptoms of general intoxication. She was a woman of 27. About 2,200 c.c. of nitrogen was injected at four sittings with four-day intervals. The pleura being normal, there was no pain nor discomfort. The injection was repeated about every three weeks afterward, and the patient resumed her work as a telegraph operator, apparently in perfect health, six months after the pneumothorax was first applied. This case is cited as the typical indications and routine technic, and the results that may be anticipated in these conditions.

Obstétrique, Paris

December, IV, N. S., No. 12, pp. 1113-1285

78 Mechanical Modifications During Pregnancy of Abdominal and Thoracic Organs. (Modifications apportées par la grossesse à la statique des organes abdominaux et thoraciques.) G. Raulot-Lapointe and J. Thomas.
79 *Pathogenesis and Treatment of Puerperal Eclampsia. P. Bar and Commandeur.

79. **Puerperal Eclampsia.**—Bar and Commandeur conclude their review of the last fifteen years' research on eclampsia with the statement that treatment still can be only symptomatic, with the main reliance on prophylaxis. The progress realized to date has been mainly surgical. In the medical treatment the renaissance of venesection is the main feature of the last few years. Saline infusion is considered by some as possibly dangerous on account of being hypertensive; sugar solution does not have this disadvantage. Vaginal cesarean section in the cases with rigid cervix is the best means to evacuate the uterus at once, but it is a serious operation on account of the complications of the operation that may follow, including injury of the bladder and hemorrhage after delivery. Decapsulation of the kidneys with or without nephrotomy, in spite of its high mortality, still deserves a place in the treatment of postpartum eclampsia when there is persisting anuria and serious disturbance in the secretion of urine.

Presse Médicale, Paris

January 20, XX, No. 6, pp. 57-68

80 Medical Treatment of Tuberculosis of the Kidney. (Le rôle du médecin dans le traitement de la tuberculose rénale.) J. Castaigne.
81 Albuminuria. (Albuminuries leucopathiques.) E. Feuillié.
82 Treatment of Hyperchlorhydria. (Traitement médicamenteux de l'hyperchlorhydrie. Les alcalins, le bismuth et les graisses.) A. Martinet.

January 24, No. 7, pp. 69-76

83 Constitutional Inferiority. (Notions générales sur les prédispositions et les immunités morbides.) C. Achard.

January 27, No. 8, pp. 77-92

84 Minute Doses of Digitalis in Weakness of Left Heart. (Le traitement préventif de l'asystolie par les doses minimes de digitale.) A. Mayor.
85 Induced Pneumothorax in Chronic Pulmonary Tuberculosis. (Mécanisme de l'action curative du pneumothorax artificiel dans la tuberculose pulmonaire chronique.) M. Molle.
86 Diuresis and Elimination of Chlorids Under Hydrotherapy. (Recherches sur la diurèse comparée de l'eau et des chlorures chez l'homme sain sous l'influence des bains carbogazeux naturels à température indifférente de Royat.) A. Mougeot.

Semaine Médicale, Paris

January 24, XXXII, No. 4, pp. 37-48

87 Emotional Influences on Disturbances in Speech. (Du rôle de l'émotion en pathologie verbale: bégaiement, blésité.) Chervin.

January 31, No. 5, pp. 48-60

88 Treatment of Retention of Secundines with Delivery at Term. (La thérapeutique de la rétention des débris ovulaires après l'accouchement à terme.) R. de Bovis.
89 *Modifications of the Blood in Roentgenologists. (Les modifications du sang chez les radiologues.) J. Lhermitte.

89. **Changes in the Blood in Roentgenologists.**—Lhermitte cites a total of eleven roentgenologists whose blood has been examined by Aubertin with the discovery of mononucleosis in five. Comparing these with the ten examined by Jagic and Schwarz, it is evident, he says, that the professional handling of the Roentgen rays entails abnormal functioning to a certain extent on the part of the blood-producing apparatus. Although roentgenologists generally appear in flourishing health, these anomalies in the blood demand attention and impose prudence. Aubertin did not find the modifications in the blood of the individuals he examined of the same type as Jagic encountered, namely a leukopenia and lymphocytosis, but the changes in all the abnormal cases indicated a tendency to morbid conditions on the part of the blood.

Archiv für Gynaekologie, Berlin

XCV, No. 3, pp. 551-751. Last indexed February 10, p. 445

90 Bacteriologic Research on Parturients. (Saprämie oder Bakteriämie.) O. Burckhardt. (Zur Kenntnis der Saprämie und Bakteriämie bei fieberhaften Aborten.) H. Freidrich.
91 *Glandular Hyperplasia of Uterine Mucosa in Relation to Uterine Hemorrhage. (Die glanduläre Hyperplasie der Uterusschleimhaut, ihre Beziehungen zu den Uterusblutungen.) G. Schickele and R. Keller.
92 *Factors Responsible for Uterine Hemorrhage. (Ueber die sogenannte chronische Metritis und die kleincystische Degeneration der Ovarien; ihre Beziehungen zu den Uterusblutungen.) G. Schickele and R. Keller.
93 History of Salpingitis. (Zur Histologie entzündlicher Tubenerkrankungen mit bes. Berücksichtigung der gonorrhoischen.) H. Ploeger.
94 The Uterine Mucosa. (Die Schleimhaut der Gebärmutter.) P. C. T. van der Hoeven.
95 Diagnostic Importance of Injection of Stain for Chromocystoscopy in Gynecology. (Die diagnostische Verwertung der Chromocystoskopie beim Weibe.) F. Müller.
96 Biologic Research on Maternal and Umbilical Blood. (Biologische Studien über mütterliches und Nabelschnurblut.) E. v. Graff and J. von Zubrzycki.

91. **Glandular Hyperplasia of Uterine Mucosa in Relation to Uterine Hemorrhage.**—Schickele and Keller have studied the histology, with special reference to endometritis, metritis and uterine hemorrhage, of material from 430 operative cases. They conclude from their research that there is a hyperplasia and hypertrophy of the uterine glands which is a pathologic condition and is independent of the menstrual changes in the uterine mucosa; also that the condition is rarely caused by inflammation. They advise dropping the term "glandular endometritis" and, instead, to speak of a hyperplastic and hypertrophic endometrium. There seemed to be no etiologic relation between these glandular changes and hemorrhage from the uterus; the changes were sometimes accompanied by hemorrhage and in other cases there was severe bleeding without these changes. Most significant were their observations in regard to the effect of curettage, which up to the present time has been used so extensively for this so-called glandular endometritis. Out of 175 cases in which curetting was done, they can report on about 111. In thirty-eight cases there has been no severe hemorrhage since the curetting; of these thirty-eight patients only six had hypertrophy or hyperplasia of the glands in the uterine mucous membrane, independent of menstruation. The sixty-one cases with a negative result include nine with hyperplastic or hypertrophic glands independent of menstruation. In thirteen cases vaginal hysterectomy had to be done for recurring hemorrhages. The failure of curetting to cure in so many cases confirms the lack of connection between the hyperplasia and hypertrophy of the glands and the hemorrhages.

92. **Chronic Metritis and Small Cystic Degenerated Ovaries in Relation to Hemorrhage of the Uterus.**—Schickele and Keller studied sections of the body of the uterus, hoping thereby to find an explanation for hemorrhage of the uterus (not dependent on myoma or carcinoma) but without any definite results. In thirty cases sections were taken from the wall close to the mucous membrane, close to the peritoneum and from the middle of the uterus. In some cases the muscle layer was very thick, in others the connective tissue, and sometimes there was a widening of the bloodvessels, but the functions of the uterus did not seem to depend on the muscle tissue content of the walls. The study of seven ovaries in which there was cystic degeneration was equally unsatisfactory. They suggest that possibly a physiologic explanation may be found in the functioning of the ovaries, and they urge further study of the ovaries along the same lines as the adrenals and their secretion have been studied.

Archiv für klinische Chirurgie, Berlin

XCVII, No. 1, pp. 1-248. Last indexed February 24

97 Experimental Transplantation of Epiphyseal Cartilage. (Die homoplastische Transplantation des Intermediärknorpels im Thierexperiment.) E. Rehn and Wakabayashi.
98 Regeneration of Bone Marrow in Transplanted Joints. (Zur Regeneration des Knochenmarks bei der homoplastischen Gelenktransplantation im Thierexperiment.) E. Rehn.
99 The Spread of the Inflammation in Ascending Pyelonephritis. (Untersuchungen über die Ausbreitung des entzündlichen Processes im Nierenparenchym bei der aufsteigenden Pyelonephritis.) A. Müller.
100 Incision, Suture, Etc., in Gall-Stone Operations. (Ueber den Bauchdeckenschnitt, die Bauchnaht und die Tamponade bei Gallensteinoperationen.) H. Kehr.
101 *Treatment of Tuberculosis of the Knee. (Zur Behandlung der Tuberculose des Kniegelenks.) J. B. Seldowitsch.
102 Aseptic Form of So-Called Acute Hemorrhagic Pancreatitis. P. Babitzki.
103 Retroperitoneal Ganglioneuroma. (Neuroma verum gangliosum myelinicum nervi sympathici.) S. Sato.
104 Simple Chronic Inflammatory Stricture of the Intestine. (Ueber die einfache chronische entzündliche Strictur des Darmes.) S. Goto.
105 Syphilitic Processes in Ileocecum. (Beitrag zur erworbenen Syphilis der Ileocoecalgegend.) S. Goto.
106 Lymphomatous Changes in the Thyroid. (Struma lymphomatosa.) H. Hashimoto.

101. **Treatment of Tuberculosis of the Knee.**—Seldowitsch compares his results with those of other surgeons. In all he has seen 182 cases of tuberculosis of the knee, nearly all in women, and has operated in sixty-eight. He did a resection in fifty-seven cases, an arthrotomy in nine cases and a primary amputation in two. The outcome was successful in 61.05 per cent., although in thirty-three of the fifty-seven resected cases contracture and subluxation had already devel-

oped. In opening the joint he uses the half-moon incision, cuts the lateral ligament if necessary, and chisels away the affected portions of the joint. The patella may be used to bridge over the resected surface. Formerly he used to wash out the joint with a hot salt and iodoform solution; now he merely sutures the skin, leaving small tampons at the sides. In bandaging, the knee is flexed a little. The longer the bandage is left on, the better is the result; five or six weeks if possible. The first time the bandage is changed, the sutures and tampons are removed. In two or two and one-half months the patients are able to go about on crutches. For the class of patients that come to the St. Petersburg hospital—women who have worked hard and must return to work—it is best to use some operative procedure. He thinks that in people over 40 or 50 years old, a resection is usually contra-indicated; such patients stand an amputation better. The ideal treatment for bone and joint tuberculosis, when possible, is the conservative; that is, at a special sanatorium, but it is necessary for the patient to remain there a long time.

Berliner klinische Wochenschrift

January 22, XLIX, No. 4, pp. 145-192

107 Experimental Research on Nephritis. C. Hirsch and W. Maschke.
108 Urethan in Pediatrics. (Verwendbarkeit des Urethans in der Kinderheilkunde.) F. Bertling.
109 Two Cases of Polycythemia. L. Kuttner.
110 Hypophysis Tumor. (Zur Kasuistik der Hypophysentumoren.) L. Kuttner.
111 Diagnostic Inoculation of Rabbits with Syphilitic Blood or Serum. (Gelungene Verimpfung von Blut, Blutserum und Sperma syphilitischer Menschen in die Hoden von Kaninchen.) P. Uhlenhuth and P. Mulzer.
112 Reinfection with Syphilis. (Beitrag zur Reinfectio syphilitica.) Schueller.
113 Differential Diagnosis of Pseudocholera Germs. (Differentialdiagnose der choleraähnlichen Vibrionen.) Baerthlein.
114 *Indications for Decapsulation of the Kidney. (Ueber Indikationen zur Decapsulation der Niere.) Lehmann.
115 Limits of Operability of Gastric Cancer. (Ueber die Grenzen der Operabilität des Magencarcinoms.) Federmann.
116 Industrial Affections of the Eye. (Krankheiten und Verletzungen des Sehorgans im Erwerbsleben.) O. Schnaudigel.
117 Official Disinfection. (Noch eine kurze Bemerkung über unser öffentliches Desinfektionsverfahren.) J. Ritter.
118 *Methyl Alcohol Poisonings in Hungary During 1909. (Ueber die Methylalkoholvergiftungen in Ungarn im Jahre 1909.) L. Levy.

114. **Indications for Decapsulation of the Kidney.**—Lehmann reports three cases of chronic nephritis in which great benefit was derived from decapsulation, although the nephritic process itself did not seem permanently influenced. The general health, however, was much improved. He regards it as a life-saving measure in most forms of oliguria or anuria, especially with uremia in the course of acute nephritis; in this case it may have a favorable influence on the nephritis itself. It is indicated for uremia with chronic nephritis only when the trouble is an acute exacerbation of the chronic disease and the kidneys are still functionally capable. He cites instances of the various types.

118. **Methyl Alcohol Poisoning in Hungary.**—In the spring of 1909 a number of fatalities following wakes and weddings attracted the attention of the authorities, and the source was traced to methyl alcohol in the liquor drunk. After seventy deaths in a brief period in different parts of Hungary, the use of methyl alcohol in drinks, drugs and perfumes was prohibited. The official chemist (Felletar) found the methyl alcohol in the blood or urine in cadavers months after burial; as late as six months in one case.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

December 21, XIV, Nos. 21-22, pp. 801-880. Last indexed Oct. 28, 1911, p. 1496

119 *Treatment of Facial and Spinal Accessory Paralysis. (Behandlung der Facialis- und Accessoriuslähmung.) O. Rothschild. Commenced in No. 14.
120 *Operative Treatment of Puerperal Infection. E. Venus. Commenced in No. 13.

December 28, No. 23, pp. 881-928

121 *Serous Meningitis. K. Weiss.
122 *Spontaneous Rupture of the Spleen During or as a Consequence of Typhoid. (Die Spontanrupturen der Milz im Verlauf und Gefolge des Typhus abdominalis.) E. Melchior. Commenced in No. 21.

119. **Treatment of Facial and Spinal Accessory Paralysis.**—Rothschild gives a collective summary of 188 works on this subject, remarking that operative treatment of facial and trapezius paralysis is still too recent for its value to be definitely determined as yet. He gives an illustration of the various methods of anastomosis, ascending and descending, total or partial, citing instances of each. In twenty-two of the thirty-three total cases he has compiled, the ascending total anastomosis was preferred. He tabulates the details of sixty-eight cases, including ten from American literature, giving the remote results in forty-six cases. In eight cases the outcome was complete restitution; in the majority the results were fair, and in only one instance was the operation an absolute failure. Even the cases with only mediocre results still show a tendency to progressive improvement. Pascale found that after two years the individual coordinate movements were under constantly better control. If there has been no spontaneous improvement in the year after the development of facial paralysis, Rothschild advises to liberate the facial nerve from adhesions or compression, if the trouble originated in middle-ear disease. If this fails, he advocates joining the facial with the hypoglossal nerve, severing the latter and implanting its central end in the side of the facial nerve, wrapping the point in Cargile membrane so that fibers growing out of the central stump of the hypoglossal nerve will not be able to reach the peripheral end. This is the simplest technic to restore the symmetry of the face and motor control of movements of the eye muscles, mastication and salivation. For paralysis of the spinal accessory, the combined muscle plastic operation and the free fascia graft seem to give equally good results, but the ease and simplicity of the latter technic commend it, he thinks, as far superior. He reports in detail a successful case from his own experience, the functional and cosmetic outcome with the free fascia graft being perfect. The patient can raise her arm vertically over her head without effort.

120. **Operative Treatment of Puerperal Infection.**—Venus reviews 521 articles on this subject from recent literature, giving the views of various authors and tabulating the details from various standpoints. He cites the details and outcome of 108 cases of hysterectomy done for puerperal infection, 66 supravaginal amputations, 120 vaginal hysterectomies, 10 partial hysterectomies, and 49 with the route unknown. Hysterectomy was done for puerperal peritonitis in 66 cases with 26 recoveries. The mortality in the 263 cases in which a laparotomy was done was 48.22 per cent. In 121 cases the veins were ligated for puerperal thrombophlebitis. On the basis of the experience thus reviewed he advocates hysterectomy within forty-eight hours for acute streptococcus endometritis with a stormy onset and collapse, especially after a criminal abortion, or with putrefying fetus or extensive injuries during labor, and when acute infection follows manual separation of the placenta. If there is a rigor or other signs of acute pyemia, the veins must be ligated in addition to removing the uterus, ligating both ovarian and middle iliac veins. An abscess in the uterus develops so slowly that success is possible even when the uterus is not removed until four or six weeks after the beginning of the infection. With puerperal peritonitis a laparotomy should be done without delay; rinsing out the abdominal cavity seems to do here more harm than good. With puerperal thrombophlebitis, ligation of the affected veins is indicated within forty-eight hours, excising them if possible with the septic uterus. In the subacute and chronic cases, he says, operate when certain of the diagnosis. The transperitoneal route is preferable, exposing the veins to ascertain the extent of the thrombosis. Slight metastatic disturbances are not a contraindication but serious metastatic involvement of the lungs, kidneys or eyes, testifies that the condition is beyond recovery. The material shows that many patients were saved by the operation who would have been inevitably lost without it. There is no doubt, he declares, that much is to be gained by more active and energetic procedures in severe puerperal infection.

121. **Serous Meningitis.**—Weiss reviews sixty-five articles on serous meningitis that have been published since Quincke's description in 1893 of the internal and external forms of serous meningitis. In some cases intercostal pains and tenderness of the spinous processes were observed with the more

usual symptoms. A striking feature is the great variability in the symptoms. The protracted course speaks against suppurative meningitis and the lack of herpes against the epidemic form. The syndrome may deceptively simulate a brain tumor. The pressure on the brain may be uneven, so that focal symptoms predominate. Goldstein has reported three cases in which the syndrome suggested a hypophysis tumor except the variability of the course, the lack of unmistakable focal symptoms, the changes in the skull, Oppenheim's symptom, the high tension in the cerebrospinal fluid, and especially the lack of symptoms showing perverted hypophysis functioning, in comparison to the symptoms indicating pressure on the brain. Treatment should be the same as for inflammation of any serous membrane. Ibrahim advocates hexamethylenamin, especially for children, Münzer advises ice, purgatives, calomel and iodids. Oppenheim has obtained good results with mercury and iodid. Lumbar puncture is useful both for diagnosis and treatment; Manasse found benefit from withdrawal of only 1.5 c.c. Some regard indiscriminate lumbar puncture as dangerous, Lecène advocates trephining, Beck puncture of the ventricle, as more rational and effectual; decompressive craniotomy is particularly useful when the affection is in the posterior cranial fossa. Babinski warns not to waste time with mercurial treatment, even with a positive Wassermann reaction. In some cases the lumbar puncture seemed to aggravate the condition and trephining became necessary. When it is desired to obtain considerable fluid for the diagnosis, the Bier constricting band has been applied to promote evacuation of the fluid. Curschmann applies ice to the periphery for this same purpose. The pressure in the cerebrospinal fluid is increased by these measures so that it flows out more readily.

122. **Spontaneous Rupture of the Spleen in Typhoid.**—Melchior has found fifty-six articles on this subject but only thirteen authentic cases on record. Signs of intraperitoneal hemorrhage should suggest spontaneous rupture, especially if the spleen is much enlarged, and it should be exposed at once and removed. Getting up too early is dangerous on this account if the spleen is much enlarged, especially if it enlarged very fast.

Correspondenz-Blatt für Schweizer Aerzte, Basel

January 20, XLII, No. 3, pp. 65-112

123 *Neurorecurrences After Salvarsan. (Ueber die Neuro-Recidive nach Salvarsan.) W. Dössekker. Commenced in No. 2.

123. **Neurorecurrences in Syphilis.**—At Jadassohn's clinic at Berne thirteen cases of the so-called neurorecurrences of syphilis after treatment with salvarsan have been observed in the last year. Dössekker is sure that the salvarsan has something to do with them, although they are undoubtedly of a syphilitic nature; their frequency since the introduction of salvarsan cannot be explained away on any other basis. The prognosis of these neurorecurrences seems to be favorable, especially if they are promptly detected and treated. The clinics at which a combined mercury and salvarsan technic is applied seem to have had less of these neurorecurrences than others. He urges all to keep a watch for them as neurorecurrences may develop later without the knowledge of the clinician who administered the salvarsan.

Deutsche medizinische Wochenschrift, Berlin

January 25, XXXVIII, No. 4, pp. 145-200

124 *Indications and Contra-Indications for Mountain Climate. (Ueber die Indikationen und Kontraindikationen des Höhenklimas.) C. Stäubli.
125 *Epidemic Paratyphoid Infections in Army Corps. (Darmkatarrhe und Paratyphusinfektionen im XIII—K. W.—Armeekorps.) H. Bofinger.
126 Symptomatology of New Growths in Distal Portion of Spinal Cord. (Zur Symptomatologie der Neubildungen am Conus und der Cauda equina.) L. Jacobsohn.
127 *Fever After Injection of Salvarsan. G. Stümpke.
128 *Retention of Arsenic after Intravenous Injection of Salvarsan. (Verweildauer des Arsens im tierischen Organismus nach intravenöser Einspritzung von Salvarsan.) H. Ritter.
129 *Pepsin in the Urine. (Klinisches über das Harnpepsin.) H. Strauss.
130 *The Cammidge Reaction and Microscopic Determination of Melting Point. (Cammidge-Reaktion und Schmelzpunktbestimmung unter dem Mikroskop.) H. Weber.
131 The Antitryptic Findings in Serum during Anaphylaxis. (Aenderung des antitryptischen Titers des Serums bei der Anaphylaxie.) S. Rusznyak.

124. **Indications and Contra-Indications for Mountain Climate.**—Stäubli cites among other indications a defective development of the chest, and its musculature, convalescence after pneumonia, pleurisy and empyema, neuroses of all kinds, especially cardiac neuroses, anemic disturbances and persons with constitutionally weak hearts and with moderate weakness of the heart left from severe toxic and infectious processes. Naturally the mountains are absolutely contra-indicated in all heart affections in which the heart is already working with its reserve force. He does not regard age over 55 or 60 as a contra-indication; the atmospheric pressure is felt evenly on the tissues inside the body as well as on the exterior so that all that has to be taken into account is the extra demands made on the arteries by the climbing. He regards it as established that more red corpuscles and more hemoglobin are produced, although not to the extent formerly assumed. He compares it to the whip applied to a sleepy horse; once started up to better functioning the blood-producing apparatus keeps on afterward at a better gait. The mountains had better be avoided when the organism is no longer capable of a reaction, as in pernicious anemia, although he cites some instances of surprising benefit even in this; one patient was a man of 65 with only 23 per cent. hemoglobin and 1,350,000 reds. After four months at St. Moritz the hemoglobin had risen to 57 per cent. and the reds had nearly trebled. In the mountains there seems to be less tendency to the depositing of dead fat while the production of living matter is promoted; consequently a stay in the mountains is an excellent and harmless method of reducing obesity. He has had considerable favorable experience with diabetes, and urges further research on the influence of altitude on diabetes. The favorable action on nervous disturbances is well known, as also the most striking effect of all, that on asthma, especially the type with eosinophilia, which he calls the eosinophil diathesis. He adds that when everything else fails, a stay in the mountains may transform the metabolism and a cure result. He warns that persons on arriving are apt to be enticed to walk and climb beyond their strength at first and become weak and nervous, but a day or so of reclining will bring them out of this "adaptation depression," as he calls it.

125. **Epidemic of Paratyphoid.**—Bofinger reports a barracks epidemic of eighty-six cases of bowel trouble ranging from simple intestinal catarrh to a tedious typhoid-like illness or a long syndrome suggesting articular rheumatism or sepsis. In seventy-four cases paratyphoid bacilli were found in the stools, and in the others bacilli closely resembling them. This epidemic has impelled Bofinger to urge that army posts should have their special slaughterhouse as the best means to avoid paratyphoid and similar infections. Even when the meat is in good condition when the cattle are slaughtered, it may become contaminated before reaching the kitchen. The mere laying of an infected piece on a healthy piece of meat may infect the latter. Sausage casings may harbor the germs when the animals are healthy, and artificial casings are safer.

129. **Pepsin in the Urine from the Standpoint of Diagnosis.**—Strauss has examined the conditions in regard to the pepsin in the urine in twenty-three patients with carcinoma and twenty-two with non-cancerous apepsia. The results of his research demonstrate that too many factors are involved in the output of pepsin in the urine for it to have much specific diagnostic importance.

130. **The Cammidge Reaction.**—Weber describes the mechanism of the Cammidge reaction and states that it is a not to be underestimated sign of abnormal conditions in regard to pancreatic secretion.

Jahrbuch für Kinderheilkunde, Berlin

January, LXXV, No. 1, pp. 1-130

132 Spirometric Research on Children's Respiration. (Spirometrische Untersuchungen zur Pathologie und Pharmacologie der Atmung im Kindesalter.) R. Lederer and H. Vogt.
133 Stenosis and Hypertrophy of the Pylorus in Two Infants (Zwei Fälle von hypertrophischer Pylorusstenose beim Säugling.) T. Tanaka.
134 *Plastic Bronchitis. (Bronchitis plastica.) P. Schneider.
135 Salvarsan in Inherited Syphilis. (Erfahrungen mit Salvarsan bei Lues congenita.) E. Welde.
136 *Epidemiology and Early Diagnosis of Measles. (Zur Epidemiologie und Frühdiagnose der Masern.) P. Rohmer.

134. **Plastic Bronchitis.**—Schneider reports a case in a young boy with necropsy findings and chemical study of the substance secreted by the bronchi, and compares the findings with those in the few similar cases on record.

136. **Measles.**—Rohmer's experience with an epidemic of measles at the Cologne children's clinic demonstrated that healthy carriers kept up the contagion, so that isolation in an institution does not guarantee against infection of other inmates. Other facts observed indicate that the stage of the eruption is contagious to the last traces of the exanthem, but after desquamation begins there is no further contagion. The incubation stage is not free from manifestations; the temperature will often reveal that something is wrong before the catarrhal stage is reached. The average in fifty-five cases, known to be free from fever beforehand, was fever in six days before the eruption in 10 per cent.; five days in 30 per cent., and four days in 37 per cent.; three days in 30 per cent., preceding the appearance of Koplik's spots by from one to three days. The characteristic leukopenia was also evident from one to eight days before the eruption, averaging 4.4 days before the eruption and 3.3 days before the Koplik spots. Infection occurred in two cases five and six days before the eruption, but generally not before the second or third day. In two cases the exanthem did not develop until sixteen days after the contact.

Medizinische Klinik, Berlin

January 14, VIII, No. 2, pp. 47-90

137 *To Prevent Disability After Industrial Accidents. (Anpassung und Gewöhnung an Unfallsfolge.) A. Bum.
138 Dentition Disturbances. (Dentitionskrankheiten.) K. Hoffendahl.
139 Complications with Typhoid. (Komplikation bei Typhus abdominalis.) Schuster.
140 Experiences in Medicolegal Psychology. (Aus der forensisch-psychiatrischen Tagesgeschichte.) S. Placzek. Commenced in No. 1.
141 Stramonium Poisoning. (Stechapfelvergiftung mit anfänglich paralyseähnlichem Bilde.) B. Scherwinsky.
142 Treatment of Fowl Spirillosis. (Experimentelle Untersuchungen über die therapeutische Wirkung verschiedener Quecksilberpräparate bei der Spirochätenkrankheit der Hühner.) W. Kolle, M. Rothermundt and J. Dale.

137. **After the Industrial Accident.**—Bum discusses the remarkable ability displayed by many persons to adapt themselves to conditions after mutilation, but states that since the workmen's compensation legislation was enacted the injured workmen make comparatively little effort to adapt themselves to the new conditions. In treating an industrial accident it should never be forgotten that the hands and a firm balance in standing are the capital of the working man, and that the remote outcome in these respects should be kept constantly in mind in treating industrial injuries. The chief aim is to keep the man still able to pick up and hold firm his tools. The location of the cicatrix may be of prime importance for the man's trade. Especial effort should be made to retain or restore the thumb. Primary suture of tendons may insure good functioning later. He found serious contracture later in 82 per cent. of twenty-three patients whose fractured patella had been treated by suture. In future he intends to suture the patella with the knee bent at an angle of 120 degrees to counteract this tendency. Among other points brought out, he says that walking appliances have proved a disappointment to him and that he has returned to the principle of weight-bearing after the callus has formed, with the foot or other part in good position.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

January, XXXV, No. 1, pp. 1-124

143 Reliability of Obstetric Measurements of the Pelvis. (Der Wert einiger Beckenmasse.) P. C. T. van der Hoeven.
144 Corpus Luteum Precedes Corpus Hemorrhagicum. (Zur Frage der Entstehung des Corpus haemorrhagicum.) H. Hauswaldt.
145 Ultimate Outcome of Abdominal Hysterectomy for Cancer. I. (Ueber Dauerresultate bei der Operation des Uteruskarzinoms nach den abdominalen Methoden.) W. Busse.
146 Operability of Uterine Cancers. (Können wir hoffen, durch Erhöhung des Operationsprozents die absolute Leistung der abdominellen Totalexstirpation des karzinomatösen Uterus zu erhöhen?) B. Krönig.
147 Feeding and Care of New-Born Infants. (Neue Erfahrungen in der Technik der Ernährung sowie zur Physiologie und Pflege des Neugeborenen.) R. T. Jaschke.
148 Sclero-Edema of New-Born Infants. (Beitrag zum Scleroedema neonatorum.) E. Gelser.
149 Technic for Gynecologic Roentgenotherapy. A. Czyborra.

Münchener medizinische Wochenschrift

January 23, LIX, No. 4, pp. 177-232

150 *Epidemic Poliomyelitis with Bulbar Symptoms. (Bulbäre Form der epidemischen Kinderlähmung.) E. Müller.
151 *Treatment of Acid Intoxication. (Kasuistischer Beitrag zur Therapie der Säurevergiftung.) F. Marchand.
152 *The Guaiac Test for Occult Blood. (Zur Technik des Nachweises von okkultem Blut mittels der Guajakreaktion.) H. Zoeppritz.
153 *Contrast Staining of Formed Elements in the Urine. (Verfahren zur polychromen Färbung geformter Harnbestandteile.) A. Schott.
154 *Thrombosis and Internal Secretion. (Zur Aufklärung der Thrombosen nach gynäkologischen Operationen nebst einigen Bemerkungen über die Gerinnungen in der Plazenta und über die Wirkung von Myomextrakten.) G. Schickele.
155 *Injection of Blood or Serum for Hemorrhage and Anemia. (Ueber therapeutische Erfolge bei Blutungen, hämorrhagischer Diathese und perniziöser Anämie durch Injektion von Serum bezw. defibriniertem Blut Gesunder.) M. John.
156 Etiology of Impetigo and Eczematous Conjunctivitis. W. Pick.
157 Bacteriologic Examination of Uterine Secretion. (Zur Technik und Bedeutung der bakteriologischen Untersuchung des Uterussekrets in der Praxis.) M. Traugott.
158 *Fatal Hemiplegia After Injection of Salvarsan with Gumma in Spinal Cord. (Tödliche Hemiplegie nach Salvarsaneinspritzung bei Gumma des Rückenmarkes.) A. Hoffmann.
159 *Treatment of Anthrax. (Zur Behandlung des Milzbrandes.) C. Becker.
160 Serotherapy of Tetanus; Two Cases. (Tetanus traumaticus mit Antitoxin Höchst und Blutserum einer geheilten Tetanuskranken geheilt.) A. Wiedemann.
161 Fatal Anaphylaxis After Injection of Serum. (Serumtod infolge von Anaphylaxie?) J. Dreyfuss.
162 *Treatment of Cicatricial Deformity. (Zur Behandlung der Hautnarben.) O. Thilo.
163 Ten Years of the Medical Tribunal of Honor. (Das erste Jahrzehnt des preussischen Ehrengerichtshofes für Aerzte.) P. Kaestner.

150. **The Medulla Oblongata Form of Epidemic Poliomyelitis.**—Müller has encountered a number of cases in which the syndrome indicated that the poliomyelitis was confined to the medulla oblongata or localized predominantly here; the disease began with merely unilateral facial paralysis and febrile manifestations. He found the facial nerve involved in twenty-one of his 165 cases of recent poliomyelitis, and thinks that this would be found still oftener if sought for more carefully. The facial paralysis may be transient and may have subsided before the examination. Generally there were other bulbar and, finally, spinal symptoms, including paresis of the external ocular muscles, of the hypoglossal and motor trifacial nerve, disturbances in speech and swallowing or unilateral paralysis of the palate. He thinks that death is the result of the spinal extension of disturbances, paralysis of the intercostal muscles, of the accessory muscles of respiration, and then of the diaphragm. Although the prognosis is particularly grave in these descending spinal cases, yet complete recovery is possible as he shows by a recent example. The child was apparently moribund, with right facial paralysis and disturbances in swallowing, total flaccid paralysis of the limbs, paralysis of the abdominal and neck muscles, thrush and bronchitis, but the diaphragm was still working well. Six weeks later the child had entirely recovered except for some weakness. Müller has witnessed a number of instances like this, but only in small children. The typical febrile prodromes with hypersensitiveness and sweats were occasionally noted in the bulbar form. The hyperesthesia is an early and possibly fleeting symptom, but is so characteristic, in connection with the lack of the brain symptoms of meningitis, that Müller has frequently based his diagnosis on it alone, before any paralysis had developed. If the hyperesthesia is circumscribed—which is especially liable in incipient spinal cases—it may lead to an erroneous diagnosis. One child, for example, was brought in with the diagnosis of appendicitis, the early intestinal symptoms of poliomyelitis being accompanied by hyperesthesia in the right lower abdomen. The associated flaccid paresis of the legs had been overlooked both by the family and the hospital physician at first. In another case the child was sent in for "dislocation of the shoulder," when the trouble was acute poliomyelitis with hyperesthesia in the shoulder and incipient paralysis of the shoulder. Other signs of a spinal affection can generally be discovered, loss of tendon reflexes, defective muscle tone in certain areas, and weakness of the muscles of the extremities. In conclusion Müller urges compulsory declaration of all cases of poliomyelitis, epidemic or sporadic.

151. **Treatment of Acid Poisoning.**—The advantages of giving an alkali to neutralize acidosis, which are utilized in diabetic coma, have not been applied in treatment of other acid poisonings, at least to Marchand's knowledge, he says. He reports a case in which a young man was unconscious as the effect of drinking sulphuric acid. The throat and mouth were badly burned but the stomach did not seem to suffer very much as it had happened to be full at the time. The absorbed acid, however, had evidently attracted alkalis from the tissues to neutralize it, and this drain of alkali was manifested clinically in the deep unconsciousness, or so Marchand reasoned. The indication was therefore to supply an alkali, and he injected into a vein about 300 c.c. of a 5 per cent. solution of sodium carbonate. The patient roused immediately and asked for water. The urine voided was strongly alkaline and there was some diarrhea for a time but convalescence was prompt, impeded only by pneumonia from aspiration during the hours of coma. Transient thrombosis developed at the point where the injection had been made in the basilic vein; in future Marchand will make the injection in a peripheral vein as there seems to be a special danger of thrombosis with injection of an alkaline solution. He also describes a case of diabetes in a man of 38 whose mother and sister had died of the same disease. The diabetes had been kept under fair control in his case for ten years when it became aggravated and coma developed. About 300 c.c. of a 5 per cent. solution of sodium carbonate was injected into a vein in two doses at an interval of two and a half hours and the tendency to coma disappeared. There has been no recurrence and the patient was able to return to business, although still passing 15 gm. sugar on a diet of 28 gm. carbohydrates. He died nine months later. This case teaches that the acidity is the main factor in diabetic coma, and that it can be conquered by alkaline treatment notwithstanding the persistence of the oxybutyric acid and acetone.

152. **Sources of Error in Applying the Guaiac and Other Tests for Occult Blood.**—Zoeppritz says that sometimes a positive result may be obtained when a more concentrated extract of the fluid to be examined is taken. It must not be allowed to stand exposed to the air, as oxidizing processes may interfere with the test reaction. An important improvement in the technic is to apply the test to the fluid not in the test-tube but poured on filtering paper; even the slightest trace of a color reaction is thrown into relief by the white background. The fluid to be examined and the acetic acid should be in generous amounts. The top of the test-tubes and the area of the filter paper to be used should not be touched with the fingers, and the filter paper should be carefully tested; some papers and some turpentines give misleading reactions.

153. **Contrast Staining of Formed Elements in the Urine.**—Schott describes the technic in use at the university policlinic at Heidelberg and expatiates on the advantages of staining the elements in the urine. He uses two solutions which are durable and which are merely added to 10 c.c. of the urine to be examined—three drops of Solution I and six or eight drops of Solution II. Solution I is a 5 per cent. solution in distilled water of water-soluble anilin blue; Solution II is a 2½ per cent. solution of eosin in glycerin, with addition of 5 per cent. liquefied phenol. The urine treated with these stains keeps for days or weeks, the sediment retaining its stains although in time they are less distinct. For examination of tube-casts, the urine should be quite fresh as these delicate structures may be digested by the enzymes in the urine even within an hour.

154. **Thrombosis and Internal Secretion.**—Schickele presents arguments to sustain his assertion that static, mechanical factors are involved in the producton of thrombosis, and that there is nothing to date to prove the participation of an internal secretion.

155. **Therapeutic Injection of Serum or Defibrinated Blood for Hemorrhage or Anemia.**—John calls attention to his success in curing six patients with severe typhoid intestinal hemorrhage by injection of defibrinated blood; while he lost another patient who was treated with abundance of gelatin, injected subcutaneously and given by the mouth at the first sign of epistaxis suggesting a hemorrhagic tendency. From a vein in the arm of a healthy person he draws 30, 40 or 50 c.c. of blood directly into a glass vessel containing some glass beads, and then defibrinates by vigorously shaking the vessel. The defibrinated blood is then injected at once into the gluteal muscle or subcutaneously into the leg if the patient cannot change his position. He repeated the injection two or three times at two- or three-day intervals. He has been equally successful with the measure in a case of severe articular rheumatism with a hemorrhagic diathesis, and in a case of pernicious anemia. In the latter case he used serum alone; the patient, a woman of 38, was so improved by two injections that she refused another as she felt entirely well. Her hemoglobin percentage had dropped from 38 to 19, the whites from 7,600 to 4,100 and the reds from 2,200,000 to 600,000 during the month before the serum was injected. Six weeks afterward the hemoglobin had risen to 62 per cent., the reds to 3,500,000. Esch has reported similarly favorable experiences in two cases; he ascribes the benefit from the defibrinated blood or serum to a stimulating influence on the red-bone marrow from the alien blood. When it is difficult to obtain fresh blood, fresh horse serum might be used for the purpose, and John urges the necessity of never leaving this untried in severe uncontrollable hemorrhage. He refers to Ciuffini's research which seems to have demonstrated that heating gelatin to sterilize it deprives it of action on the coagulation process while a 10 per cent. solution of gelatin by the mouth or rectum displays little if any effect on the coagulation of the blood.

158. **Fatal Hemiplegia After Injection of Salvarsan.**—In the case reported the patient had contracted syphilis five years before spinal paraplegia developed. As the spirochetes had probably become resistant to mercury, which had been pushed in the interim, salvarsan was injected, nothing being discovered to suggest that the cardiovascular system was below par. A chill and fever followed the injection and the patient died the ninth day with signs of progressive heart weakness. Necropsy revealed minute changes in the arteries of the brain but there had been nothing to suggest the existence of these changes except possibly the frequent headaches, although this is a frequent symptom in early syphilis. The case warns, Hoffmann adds, of the necessity for special care in giving salvarsan when there is anything to suggest possible syphilitic changes in the vessels of the brain.

159. **Treatment of Anthrax.**—Becker advocates mild measures in treatment of anthrax, bed rest, covering the lesion with an alcohol dressing and keeping up the heart action with alcohol internally. Demarcation of the eschar is hastened by a boric acid salve. Cultivation of the bacillus from the blood is the best means for prognosis. The general condition and the temperature may be deceptive; in some of the fatal cases there was no fever. The prognosis is grave when the bacilli are found in the blood and absolutely unfavorable if they are present in large numbers. He knows of only three cases in the literature and two in his own experience in which the patients survived after the bacilli had been found in the blood; one of these two had been treated with specific serum, one with salvarsan. Once the bacilli are in the blood it is useless to excise the lesion. Of his forty-four patients, all recovered with one exception of those yielding negative bacteriologic findings, while the eleven with positive findings all died. Many of the others presented an extremely grave syndrome, but they were kept under the above conservative treatment. In case of laboratory infection, immediate surgical excision might be wise. He has had but a limited experience with serotherapy but that has been favorable.

162. **Treatment of Cicatricial Deformity.**—Thilo has accomplished much in the relief of cicatricial deformity or disfigurement by a simple course of treatment aiming to soften and loosen up the cicatricial tissue, as he describes in detail. In two cases of contracture of the leg or cicatricial binding down of the arm to the chest, he restored the use of the limbs. In other cases he rendered the scar less conspicuous; the same principles have also proved effectual in treatment of erysip-

elas. Soaking the part in warm water is of no avail; the moist warmth must be applied continuously for weeks, and for this he packs the part with cotton and covers airtight with adhesive plaster. Under this pack the skin keeps constantly moist and warm. The cicatricial tissue is loosened from the bone by traction with strips of adhesive plaster, splints, passive and active movements and systematic massage. The massage is done at first through a tricot covering drawn on over the adhesive plaster dressing, but later on the cicatrix itself lubricated with sweet oil or powdered. The scar is rubbed down and smoothed off by massaging and rubbing with a linen cloth and massaging with sand and oil, avoiding the tender parts at first. He finally uses water instead of oil, and then lets the patient do the rubbing, using diluted glycerin (glycerin one part, water two parts). Before rubbing he has the part soaked for a few minutes in water at 50 F.

Wiener klinische Wochenschrift, Vienna

January 25, XXV, No. 4, pp. 147-190

164 Variable Hemolytic Properties of Streptococci. (Die Hämolyse der Streptokokken als variable Eigenschaft.) A. Vystavel.
165 Potassium Cyanid Poisoning. (Zur Pathologie der Zyankalivergiftung. Ein Beitrag zur Kenntnis der oxydierenden Zellfermente.) H. Raubitschek.
166 *Enlarging Therapeutic Field for Hexamethylenamin. (Ueber neue Anwendungsgebiete des Hexamethylentetramins auf Grund seiner Ausscheidung.) E. Zak. (Zur Anwendung des Hexamethylentetramin in der Dermatologie.) O. Sachs.
167 The Nature of the Wassermann Reaction. (Zum Wesen der Wassermannschen Reaktion.) R. Bauer.
168 Elimination and Retention of Salvarsan. (Die Ausscheidungs und Remanenzverhältnisse des Salvarsans in ihren Beziehungen zur Therapie.) K. Ullmann.

166. **Hexamethylenamin in Pneumonia, Herpes, Etc.**—Zak was impressed with the scanty bacteriologic findings in the rusty sputum of a pneumonia patient who had been given hexamethylenamin in treatment of a suppurative pyelitis. It seemed to show that the drug had been eliminated in the sputum and had practically sterilized it. He therefore administered the drug systematically to his bronchitis patients and then examined the sputum to determine the proportion eliminated in this way. He describes the various tests he applied, his findings confirming the assumption that the drug is eliminated in the saliva and bronchial secretions. This is the more remarkable as Falk's research has established that the majority of drugs given for therapeutic purposes do not pass into the bronchial secretion; methylene blue and traces of antipyrin alone were refound in the sputum. Zak states that heating hexamethylenamin enhances its disinfecting power; at 37 C. a 0.5 per cent. solution has as powerful a sterilizing action as a 2 per cent. solution at 17 C. The presence of albumin does not interfere with its action. Test-tube experiments showed that minute amounts of the drug added to sputum arrested its putrefaction. His experiments further indicated that the drug possibly passes into the eye, but he does not regard his tests as conclusive in this line. Another use for the hexamethylenamin is to arrest fermentation in the stomach content in case of stagnation from stenosis of the pylorus. A patient with a gastric ulcer took 0.5 gm. of the drug twice a day for four days and the eructations and stomach content became odorless. This patient complained, however, of transient burning in the stomach, but whether this was due to the drug or the ulcer it is impossible to say.

Sachs reports that he was able to detect formaldehyd in the blister fluid after administration of hexamethylenamin, from 4 to 6 gm. a day, in ten patients with herpes zoster, five with multiform erythema and in the crusts of two patients with impetigo. This suggests a possible use of the drug in skin diseases.

Zeitschrift für Urologie, Berlin

January, VI, No. 1, pp. 1-96

169 *Operative Treatment of Chronic Nephritis. (Zur Frage der chirurgische Behandlung der chronischen Nephritiden.) B. N. Cholzow.
170 Local Treatment and Balneotherapy in Sexual Neurasthenia. (Die sexuelle Neurasthenie.) M. Porosz.
171 The Prostatic Secretion. (Weitere Beiträge zur Kenntnis der Prostatakörner.) E. Björling.
172 Determination of Amount of Residual Urine, (Zur Bestimmung der Residualharnmenge.) C. Adrian.

169. **The Surgical Treatment of Chronic Nephritis.**—Cholzow discusses the influence of decapsulation and of nephrotomy in chronic nephritis, and reports three cases of his own. Edebohls reported from his experience with 102 cases that thirty-nine of the patients died, ten within two weeks after the operation; of the fifty-three who are alive, more than five years after the operation, eleven are improved, thirty-three entirely cured and six no better. Guiteras, who has done perhaps the most work in this line, reports in 120 cases, 16 per cent. recoveries, 40 per cent. improved; 11 per cent. with a negative result, and 33 per cent. of the patients died after a longer or shorter period. There are two reasons for a favorable influence from decapsulation: (1) the intrarenal pressure is lowered and the circulation improved; (2) the parenchyma of the kidney comes in contact with the perirenal fat and grows to it, with formation of new connective tissue which may be unusually rich in blood vessels, and these anastomose with the vessels in the kidney parenchyma so that there is a better blood supply. Accordingly the improvement or cure of the kidney disease is promoted by this supplementary circulation and irrigation of the kidney. The kidneys from patients who died some time after a decapsulation have shown either a network of new-formed blood-vessels or, and this is the more usual, a solid capsule exceptionally poorly supplied with blood-vessels. Decapsulation should not be applied in edema when there is insufficiency of the heart, nor in a chronic case of long standing without general disturbance. Good results have been reported from decapsulation in hemorrhagic nephritis, and when there has been severe pain. Cholzow did a nephrotomy in his first case and a decapsulation in the other two cases. The results were the same and good. He thinks that a brighter horizon is opening for operative treatment of nephritis. In view of the relative harmlessness of the operation under spinal anesthesia, he believes that it may prove possible to broaden the indications and apply decapsulation not only when there is great increase in the intrarenal pressure, manifested by anuria, hematuria and pain, but also in moderate nephritis with more or less impairment of the general health and pathologic urine. As a rule, the decapsulation should be done on both kidneys, either at the same time or with a few days' interval. Wrapping the decapsulated kidney in omentum ensures ample circulation, but one of his cases shows that traction on the omentum later may cause pain. It might be wise to avert this by slitting the omentum in the first place.

Zentralblatt für Chirurgie, Leipsic

January 27, XXXIX, No. 4, pp. 105-136

173 *Motor Insufficiency of the Stomach of Gonorrheal Origin. (Motorische Insuflizienz des Magens auf der Basis von Perigastritiden gonorrhoischer Provenienz.) I. I. Grekow.

173. **Motor Gastric Insufficiency of Gonorrheal Origin.**—Grekow has encountered a number of cases of perigastritis in which the infection originated in the genital organs, of gonorrheal or other nature. The perigastritis caused adhesions with spasm of the pylorus or hypertrophy, and dilatation of the stomach in consequence. The pylorus may become occluded by adhesions from without or by reflex spastic constriction. In either case the stomach shows evidences of great motor insufficiency with hypertrophy of the pylorus and adhesions in its vicinity, with no palpation findings to suggest gastric ulcer or gall-stones, but a history of gonorrhea at some time and signs of an old diffuse peritonitis in the upper segment of the abdominal cavity. He has encountered a number of such cases, and reports two in girls of 18 and 22; the diagnosis was confirmed by the adhesions between the adnexa and the omentum and adhesions in the upper abdomen, and the absence of morbid findings in the stomach and appendix. In one of the cases reported the patient began to vomit constantly after the gonorrheal genital affection had lasted for some time. The vomiting persisted for a month, with albuminuria, constipation and intense thirst. At the laparotomy the pylorus was found hard and surrounded by fine, flat, soft adhesions binding it down to the hepatoduodenal ligament and gall-bladder and pulling the right end of

the stomach upward and twisting it, with the duodenum. After separating the adhesions with the fingers, the stomach and duodenum righted themselves and the abdomen was sutured without further ado. The vomiting ceased at once and all the pains, but the convalescence was slow as the patient had been so debilitated.

Zentralblatt für Gynäkologie, Leipsic

January 27, XXXVI, No. 4, pp. 100-128

174 *Attempted Abortion in Absence of Pregnancy. (Tentamen abortus provocandi deficiente graviditate.) F. v. Neugebauer.
175 Eclampsia Liver Without Clinical Symptoms. (Eklampsieleber unter dem Bilde der Muskatnussleber bei Fehlen aller klinischen Symptome.) P. Heinrichsdorff.
176 *Extra-Uterine Pregnancy at Term. (Fall von ausgetragener Extra-nterin-Gravidität.) S. Paskiewicz.

174. **Attempted Abortion in Absence of Pregnancy.**—Neugebauer reviews the literature on criminal abortion, remarking that the number of criminal abortions is increasing to such an extent that he does not think that 80 per cent. is too high an estimate of their frequency. He adds that he has never seen a compilation of cases in which the assumed pregnancy did not exist, but he has found about fifteen cases on record in which this was the case. Five of the women died. He cites four cases further in which the abortion was attempted and the pregnancy was extra-uterine. He asks to have data in regard to cases of attempted abortion in the absence of pregnancy sent to him, as he is compiling a large work in which he wishes to incorporate data in this line. His address is F. von Neugebauer, Warsaw, Poland.

176. **Extra-Uterine Pregnancy at Term.**—Paskiewicz reports a case and summarizes a number published in Russian by twenty-three authors in which the pregnancy was in the last half. One living female child was delivered, weighing 3,130 gm., a microcephalus. In his case there were three severe hemorrhages during the course of the pregnancy; the fetal heart sounds were audible when the woman entered the clinic at the eighth month and if the laparotomy had been accepted then the fetus might have been saved. It died soon after and was found macerated at term, the woman dying soon after from peritonitis.

Zentralblatt für innere Medizin, Leipsic

January 27, XXXIII, No. 4, pp. 77-100

177 Grinding Function of the Stomach and Intestines. (Leistet der Verdauungstraktns mechanische Zerkleinerungsarbeit?) Arnold.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 18, XXXIII, No. 8, pp. 73-80

178 *Spinal Anesthesia in Treatment of Epilepsy. (Epilessia e rachianestesia.) G. Giacomelli.

January 23, No. 10, pp. 97-104

179 Typhoid with Unusual Symptoms. (Infezione eberthiana con speciale sintomatologia.) E. Giovannini.

178. **Spinal Anesthesia in Treatment of Epilepsy.**—Giacomelli operated on an epileptic young man for an inguinal hernia under spinal anesthesia, and was surprised to learn that during the two years since the young man has had no seizures, although previously they had recurred at intervals of ten or fifteen days during the preceding nine years. Encouraged by this experience, Giacomelli applied spinal anesthesia systematically in treatment of epileptics and reports great improvement in every instance. He urges others to give this method a trial as his experience in this line is limited, having had only four epileptics in his charge. In the other three cases the epilepsy was on a basis of degeneracy which renders a cure practically impossible. One of the epileptics who had previously been a helpless imbecile, afterward became self-supporting as a petty peddler.

Policlinico, Rome

January 21, XIX, No. 4, pp. 113-148

180 Brachial Paralysis. (Sulle paralisi del plesso brachiale.) C. Piantoni.

January, Medical Section No. 1, pp. 1-48

181 Muscle Grafting in Eyes of Monkeys. (Le teorie sul meccanismo dei movimenti associati di convergenza e di lateralita, studiate in relazione ai risultati, ottenuti da esperimenti con trapianti di muscoli oculari, fatti su scimmie.) A. Marina.
182 The Circulation in Senile Arteriosclerosis. (Studio dell'equilibrio circolatorio nell'aterosclerosi senile.) E. Morandi.
183 *Tuberculous Process in Heart. (Contributo alla casistica della tnbercolosi del cuore.) R. Pellegrini.
184 Spontaneous Rupture of the Heart. (Caso di cardioressi spontanea.) R. Pellegrini.

183. **Tuberculous Lesion of the Heart.**—Pellegrini says that 120 cases are on record but that only fifty-three were examined for bacilli, with positive findings in forty-five. He reports a case in which tubercles were found in the endocardium at necropsy of an infant with miliary tuberculosis. He also reports a tuberculous valvular lesion in a tuberculous man of 50; the tubercle was implanted in the middle of the semilunar valve.

Brazil-Medico, Rio de Janeiro

January 8, XXVI, No. 2, pp. 11-20

185 *Dourine in Brazil. (Sobre a natureza da epizootia dos equidas conhecida no Ceara pelo nome de mofo.) M. Sabola.
186 Local Manifestations of Anaphylaxis in Course of Pastenr Treatment of Rabies. (Manifestaçoes locaes de anaphylaxia no curso da vaccinaçoa anti-rabica.) E. Marques.

185. **Dourine in Brazil.**—Saboia states that he has succeeded in isolating from sick horses a trypanosoma which is apparently the *Trypanosome equiperdum* of dourine. The epizootic has been known for years in certain districts in Brazil and the syndrome resembles in every particular that known as dourine in other countries.

Semana Medica, Buenos Aires

January 4, XIX, No. 1, pp. 1-48

187 Two Cases of Cancer of the Pancreas. J. R. Goyena.
188 The Psychology of Children. (Una obra de psicologia infantil.) J. Ingegnieros.

Ugeskrift for Læger, Copenhagen

January 18, LXXIV, No. 3, pp. 89-120

189 Some Questions in Accident Insurance. (Behandlingsinvaliditet og mangelful Attestndstedelse ved Ulykkesforsikringssager.) I. Collin.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Manual of Practical Physiology. Designed for the Physiological Laboratory Course in the Curriculum of the American Association of Medical Colleges. By John C. Hemmeter, M.D., Ph.D., LL.D., Professor of Physiology in the University of Maryland, Baltimore. Cloth. Price, $2.50 net. Pp. 223, with 55 illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

Pharmaceutical Bacteriology. With Special Reference to Disinfection and Sterilization. By Albert Schneider, M.D., Ph.D., Professor of Pharmacognosy, Histology and Bacteriology, California College of Pharmacy. Cloth. Price, $2 net. Pp. 238, with 86 illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

Health and Medical Inspection of School Children. By Walter S. Cornell, M.D., Director of Medical Inspection of Public Schools, Philadelphia. Cloth. Price, $3. Pp. 614, with 200 illustrations. Philadelphia: F. A. Davis Company, 1912.

Motive-Force and Motivation-Tracks. A Research in Will Psychology. By E. Boyd Barrett, S. J., Doctor of Philosophy, Superior Institute, Louvain. Cloth. Price, $2.50. Pp. 225. New York: Longmans, Green & Co., 1911.

Nineteenth Annual Report on the Births, Marriages, Divorces and Deaths in the State of Maine for 1910. Cloth. Pp. 192. Waterville Sentinel Publishing Company, 1911.

Coal-Tar Colors Used in Food Products. By Bernhard C. Hesse, Ph.D. Paper. United States Department of Agriculture, Bureau of Chemistry, Bulletin No. 147. 1912.

Transactions of the Seventeenth Annual Meeting of the American Laryngological, Rhinological and Otological Society. Cloth. Pp. 558. Published by the Society, 1911.

Proceedings of the Fifth Annual Meeting of the Association of Life Insurance Presidents. Paper. New York: Assn. of Life Insurance Presidents, 1 Madison Avenue, 1911.

Transactions of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics. Tenth Annual Meeting, Volume 8. Paper. 1911.

The Lute of Life. By James Newton Matthews. Edited by Walter Hnrt. Cloth. Price, $1.50. Pp. 348. Cincinnati: Horton & Co., Publishers, 1911.

Bellevue and Allied Hospitals, City of New York. General Description and Annual Report of the Tuberculosis Clinic. Paper. 1910.

Publications of the United States Public Health and Marine-Hospital Service. Paper. 1912.

Year-Book of the Protestant Orphan Asylum of Detroit, Mich. Paper. 1911.

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SPINAL DECOMPRESSION

REPORTS OF SEVEN CASES AND REMARKS ON THE DANGERS OF AND JUSTIFICATION FOR EXPLORATORY OPERATIONS *

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We desire to call attention to the relief of symptoms which followed the removal of the spines and laminæ and the incision of the dura in seven cases of spinal disease.

The improvement in most of the cases was very striking, although in two the changes in symptoms which followed the operation could not be construed as benefits to the patient. In one patient, severe pain of three years' duration was promptly relieved; in another there was almost complete recovery from the symptoms of a lesion at the level of the eighth dorsal segment, an atypical Brown-Séquard syndrome with unilateral sensory loss and spastic motor palsy of both lower limbs (Case 2); in a third disappearance of an unilateral sensory and spastic motor paralysis of one leg (Case 3). In one patient (Case 4) only temporary changes in the symptoms occurred; these were of physiologic interest, but without practical benefit to the patient. In a case of infiltrating tumor of the cauda equina (Case 5) the pain disappeared and the anesthesia grew less; in a case of intramedullary tumor the patient, bedridden before the operation, regained the power of walking without assistance (Case 6); in still another, the anesthesia grew less (Case 7).

We have arranged our cases in three classes: (1) those in which nothing pathologic was found within the dura and in which the operation was followed by the complete disappearance of all the symptoms (Cases 1, 2, 3); (2) cases in which nothing was found at operation, which was followed by temporary marked improvement (Case 4); and (3) cases in which a tumor was found which could not be (Case 5), or could only partially be (Cases 6 and 7), removed.

We are fully aware that in the last two patients (6 and 7) the improvement which followed the primary operation was actually due to the decrease in the intradural pressure after the free removal of spinous processes and laminæ and incision of the dura. These are instances of true spinal decompression, and we have included them in the present paper because, in direct contrast to the other cases, they demonstrate the benefits that may follow a laminectomy when the intradural pressure is markedly increased. But in the five other cases there was no evidence of an increase of intradural pressure. In these five patients the improvement observed — both in symptoms of functional character such as pain, and in organic symptoms such as paralyses, anesthesias, etc.—leaves no room for doubt that surgical exposure of the spinal cord, even in the absence of increased intradural pressure, may effect some change which temporarily or permanently benefits or checks the symptoms of local spinal cord disease.

We are not in a position to offer a physiologic explanation of the phenomenon, although it is probably connected with the circulation in the cord itself. The infrequency of autopsies in these cases throws the burden of explanation on experimental work. In Allen's experiments[1] on spinal injuries in dogs, drainage of the spinal cord seemed the condition necessary for recovery. Before Allen, Horsley had expressed the view that "probably many cases of so-called acute myelitis are really meningeal in origin, and that a laminectomy and free drainage of the subdural space might arrest the whole process and the subsequent fatal injury which the cord sustains in such cases."

It may be that in the cases we now discuss, the operation of laminectomy and incision of the dura effected vital changes in the blood-supply of the cord, or exerted a beneficial influence by the admission of light and air, analogous to the effect of laparotomy in tuberculous peritonitis. In most of our cases the operation went no further than an exploratory laminectomy with opening of the dura, and we have ascribed the resulting changes in the symptoms to the effects of spinal decompression. We have made use of this term "spinal decompression" as a convenient means of expression, realizing fully that in five of our cases the results from the operation were not entirely analogous to the results of cerebral decompression.

Whatever the explanation may be, the facts struck us as worthy of attention, and we began to inquire if such effects had not been recorded before. We soon found, scattered throughout the literature on spinal cord tumor, reports of cases in which relief of symptoms, notably pain, followed operations undertaken for spinal cord tumor, when no tumor was removed. The most suggestive paper on this subject is a clinical lecture by Sir Victor Horsley[2] entitled "Chronic Spinal Meningitis." By this he understands an affection of the spinal meninges with some sclerosis and wasting of the cord, usually, though not always, syphilitic in character. The symptoms are those of a progressive sensorimotor paralysis, practically indistinguishable from the symptoms of spinal cord tumor.

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* Read at the meeting of the New York Neurological Society, Jan. 2, 1912.

[1] Allen: The Journal A. M. A., Sept. 9, 1911, p. 878.

[2] Horsley, Sir Victor: Brit. Med. Jour., 1909, i, 513.

Horsley gives but few cases in detail, although he refers to twenty-one operations, and he calls the condition more frequent than spinal cord tumor. The facts he advances are too few to permit the reader to accept unqualifiedly his diagnosis of chronic meningitis and are entirely inadequate to convince one that they are of syphilitic origin. Nor do we know of any form of meningitis, whether syphilitic or not, which a single irrigation with sublimate solution will cure, when previous antisyphilitic remedies have failed. After a careful reading of Horsley's paper, we are forced to the conclusion that the benefits to the patients observed by him resulted directly from the laminectomy, no matter what the clinical diagnosis may have been.

Horsley does not state the percentage of his cases in which the cerebrospinal fluid was increased. This point is extremely important for the present discussion, as we here maintain that laminectomy may benefit whether there is such an increase or not. The success attendant on draining serous meningitis or arachnoid cysts which cause focal symptoms has been demonstrated by Krause, Spiller, Schlesinger and others. In these cases the operations act through the removal of a "foreign" body. The cases we refer to are especially benefited when there is neither a foreign body to remove nor increased intradural pressure to relieve. What the anatomic character of the lesions in these cases is, we are in no position to define. They are probably not all the same. Some are doubtless meningitic in character; others may be in the nature of localized sclerosis; in one of our cases, the symptoms were directly connected with a localized osteoarthritis of a vertebra.

Whatever the nature of the lesions may be, the time has come for neurologists to recognize that there are a number of subacute intradural conditions that may present symptoms so similar to those of tumor of the spinal cord that they cannot, at present, be distinguished from them, and that these symptoms may be partially or completely relieved by the simple opening of the dural sac.

Under these circumstances, and with this therapeutic potentiality attached to it, exploratory laminectomy acquires a new importance, and as soon as this operation can be shown to be comparatively free from danger it should be recommended with much greater freedom than has been done in the past. In none of our cases, however, was the operation purely exploratory or undertaken with decompression as the sole end in view. In three cases the diagnosis of tumor was made and the tumor was found and could be either not at all or only partially removed; in three others the diagnosis was made, but no tumor was found. In one the operation was undertaken at the patient's urgent request, for the purpose of diagnosis.

Laminectomy must always be classed as a major operation, but much of the gravity associated with it is due to the life-threatening conditions for which it is undertaken. Except for section of the posterior roots for spasticity and pain, the laminæ are removed by the surgeon only for conditions of the most serious character, most of them direct menaces to life. The burden of mortality, therefore, which appears in any statistics of laminectomies should be borne by the disorders for which the operations were undertaken, rather than by the operations themselves.

These facts should be held in mind when the statistics of laminectomy are under consideration. For example, Horsley operated in twenty successive cases without a death; in twenty-six operations reported by F. Krause, eight patients died as an immediate result of the surgical interference (37 per cent.). Harte collected records of ninety-two operations for spinal tumor, among which forty-three patients died (47 per cent.). McCosh claimed that the mortality should not exceed 10 per cent. Other writers have a mortality of from 20 to 50 per cent. One of us (Elsberg), in forty-two spinal operations, of which thirty-four were primary laminectomies, lost five patients (12 per cent.). Of the five patients who died, three were almost moribund at the time of operation. None of these three patients should have been operated on, and with our present knowledge none would have been. In the fourth case, the operation and autopsy revealed an infiltrating glioma of the upper cervical cord and medulla oblongata, a desperate and hopeless condition. The fifth patient had a fracture dislocation in the cervical region with extensive crushing and transverse division of the spinal cord.

If the cases of spinal cord disease or injury in which the surgeon attempts to remedy the irremediable or to operate on patients almost moribund, are left out of account, it will be found that laminectomy in experienced hands is neither a particularly hazardous nor a trying operation. In our experience, if the five cases just cited—all hopeless from the onset—were excluded, we would have done twenty-nine primary laminectomies without fatality, so that we have come to look on laminectomy in a patient in good condition as a fairly safe operation.

CONCLUSIONS

1. The free removal of spinous processes and laminæ with opening of the dura may have a profound effect on the spinal cord in certain pathologic conditions.

2. There are a number of intradural conditions which present symptoms as yet indistinguishable from those of spinal tumor.

3. Even in the absence of increased intradural pressure or a discoverable lesion, the operation of laminectomy and incision of the dura may be of great benefit.

4. For the reasons above stated and on account of its relative safety in experienced hands, exploratory operations should be done more often.

CASE REPORTS

I. NOTHING ABNORMAL WITHIN THE DURA; COMPLETE RELIEF AFTER THE OPERATION

Case 1.[3]—Paraplegia dolorosa of three years' duration. Osteochondritis twelfth dorsal vertebra. Operation. Recovery.

Patient.—M. S., aged 40, single, American, driver, was admitted to the Neurological Institute of New York, service of Dr. Bailey, March 29, 1910. Three years before admission the patient began to have pain in the lower part of the back, coming on in attacks, and which radiated down the legs. During the past year it had become more severe and especially pronounced in the left leg, which also had become weaker, and recently there had been difficulty in walking on account of the pain. At no time had there been disturbance of the bowels or bladder. Erections were frequent and painful.

Examination.—There was marked rigidity of the whole dorsolumbar spine with distinct tenderness to pressure over the lower part of it with point of greatest tenderness over the second lumbar vertebra; also tenderness on deep pressure over both sciatics. The legs showed neither paralysis nor atrophy, though there was great interference with muscular power on account of the pain. The right knee-jerk was lost. The left was diminished.

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[3] Also reported in Jour. Nerv. and Ment. Dis., November, 1911.

There was hypesthesia and hypalgesia from the level of the twelfth dorsal distribution down; no disturbance of thermic sense except perhaps at the upper level of the sensory lines.

Operation.—April 2, 1910. Dr. Elsberg performed a laminectomy, removing the spines and laminæ of the tenth, eleventh and twelfth dorsal and first and second lumbar. The laminæ of the twelfth dorsal were found thickened, abnormally soft and grayish in color. Pathologic report of the bone removed showed a chronic osteochondritis with new bone formation. The dura was slightly congested but was otherwise normal, and the cord appeared normal. The relief from pain by this operation was almost immediate. Within a few days the patient complained of only slight pain and could move the lower limbs freely.

Postoperative History.—April 28, when the patient was discharged from the hospital, there was no longer any pain; the anesthesia had almost entirely disappeared and the patient walked freely. Both knee-jerks were absent at this time, and the right sciatic nerve was still tender to pressure. The patient was reexamined May 18, 1910; he walked erect, without peculiarity of gait, without discomfort, and with only slight soreness in the posterior side of right thigh, "as if he had been beaten there with a stick." This sensation was not present all the time but came irrespective of motion or rest. He still had painful erections. The knee-jerks were still absent.

May 24, 1910, the patient was again examined and both knee-jerks were found to be present and equal.

The last report, of Jan. 2, 1911, was by letter from the patient, who is in California in the horse business; "rides 30 to 40 miles a day on horseback and feels perfectly well."

Case 2.—Suspected tumor of eighth dorsal segment. Laminectomy with negative findings. Complete recovery.

Patient.—Surgical No. 231. George M., aged 40, admitted to the Neurological Institute Nov. 1, 1910, on the service of Dr. Fraenkel, by whose courtesy we report this case. Six months ago the patient began to have pain in the middle of the back and at the same time he noticed that the right lower extremity was becoming weak. The pain in the back remained of moderate severity, but the right lower limb became stiffer and weaker. He had occasional shooting pains in the lower limbs and a sensation of a band around the middle of his body. From the beginning of his symptoms, the patient found that he had lost all sexual power. The symptoms grew gradually worse, and three months ago the left lower extremity began to be weak and stiff; at the same time he noticed that he had considerable difficulty in urination. Feeling in the lower limbs gradually became more and more impaired, he became unsteady, and had great difficulty in walking.

Examination.—Both lower extremities markedly spastic, abdominal and epigastric reflexes diminished. There was marked tenderness on percussion on the eighth dorsal spine. The knee-jerks and ankle-jerks were exaggerated, more on the left side; Babinski on the left side. The left lower extremity was decidedly weaker than the right. There was slight hypesthesia and hypalgesia of the entire left lower limb and back to the level of the fourth lumbar spine; on the right side all three sensations were markedly diminished to the same level. The Wassermann test was negative. As the diagnosis of spinal tumor seemed justified, the patient was transferred to the surgical department.

Operation.—December 1: Laminectomy by Dr. Elsberg. The spines and laminæ of the fifth, sixth, seventh and eighth dorsal vertebræ were removed, and the dura exposed. The dura was incised and the pia-arachnoid beneath found distended with fluid, which escaped when an incision was made, exposing a normal cord. All surfaces of the cord were carefully examined; a probe, passed upward and downward for a considerable distance, failed to meet any resistance, nor were any adhesions found between the membranes. Although the amount of fluid was large, it was not excessive, nor was it possible to demonstrate that it was a localized collection. The findings being practically negative, the wound was closed in the usual manner.

Postoperative History.—For several days after the operation both lower limbs were powerless; thereafter the improvement was very rapid and remarkable. Voluntary power in the lower extremities rapidly returned, the spasticity became steadily less, sensation in the limbs began to improve. Eighteen days after the operation, the patient was up and walking with a cane. Four weeks after the operation, he noticed that his erections and sexual desire had returned, the power in both lower limbs was good; most of the spasticity had disappeared. Excepting for a small area of hypesthesia and hypalgesia on the anterior aspect of the left thigh, sensation was everywhere normal. When he was discharged, February 8, his only complaints were slight "stiff feeling in the lower limbs at times." All sensory disturbances had disappeared. He returned to work, and has remained well up to the present time (one year after the operation).

Case 3.—Suspected tumor of spinal cord. Laminectomy with negative findings. Complete disappearance of all spinal symptoms.

Patient.—Surgical No. 286. Adelpho C., aged 30, was admitted on the service of Dr. Bailey, Oct. 2, 1911. The patient is married and has seven children. About ten years ago he had an attack of severe pain in the back, lasting for eight days. Six years ago the pain returned and was most pronounced on the left side of the back. From that time he had attacks of the same pain every few months, up to three months before admittance to hospital, when the pain became very much worse, and had steadily increased in severity up to date of admittance. The patient stated that his right leg was weaker than the left and the pain in the back and left lower extremity had been very severe for the past two months. He noticed that he had no feeling in the right leg below the knee. The lower extremities gradually became weak and stiff so that he walked with great difficulty.

Examination.—On account of the patient's excruciating pain, which seemed to be limited to the distribution of the first and second lumbar posterior roots on the left side, examination was very difficult. Reflexes of the upper extremities were lively. Left abdominal reflexes present, those on the right side could not be elicited. The knee- and ankle-jerks on the left side were exaggerated; ankle-clonus, Oppenheim, Babinski, on left side. The motor power of the left leg was decidedly less than that of the right. There was a marked hyperesthesia on the twelfth dorsal and first lumbar root areas, most marked on the left side; there was a great diminution in all sensations on the right third and fourth lumbar areas of distribution. Wassermann and *x*-ray were negative.

Operation.—Laminectomy was performed by Dr. Elsberg, Oct. 6, 1911. The laminæ and spinous processes of the ninth, tenth, eleventh and twelfth dorsal, and the first and second lumbar vertebræ were removed in search for the suspected tumor. The pia-arachnoid was distended with fluid which communicated freely with the subarachnoid space above. The findings were entirely negative. Closure of wound in the usual manner.

Postoperative History.—The patient had had slight fever before the operation which persisted after the operation and ran an irregular course. Physical examination of the chest showed that there were suspicious signs of a tuberculous lesion in the left apex. Examination of the sputum was negative. The wound healed by primary union. The pain in the left hip disappeared soon after the operation. There was a steady improvement in all of the other symptoms. By October 28 (twenty-two days after the operation), all of the sensory disturbances had disappeared, and when he left the hospital, on November 4, the pathologic reflexes and the stiffness in the lower limbs were no longer present. Fever, cough and expectoration persisted.

II. NO GROSS LESION WITHIN THE DURA: TEMPORARY MARKED IMPROVEMENT

Case 4.—Exploratory laminectomy, negative findings, temporary marked improvement in symptoms.

Patient.—Medical No. 606. Surgical No. 249. F. L. T., a man aged 26, clerk, was admitted on the service of Dr. Bailey, Sept. 19, 1910. The patient was an athlete and declared that he was perfectly well until about one month before admission. Then he began to be unsteady on his feet, which was soon followed by numbness in the lower limbs. The limbs ached at times. The symptoms gradually progressed. He left the hospital in October, but returned on December 4 with all of the symptoms aggravated. At this time both lower extremities were spastic, with exaggerated knee- and ankle-jerks, clonus and Babinski. He now complained of burning sensations in his lower limbs and there was a diminution in all three sensations up to the level of the twelfth dorsal spine. After a short stay in the hospital he again left, only to return Jan. 8, 1911. The burning sensations in the lower limbs were worse and were accompanied by shooting pain in the left groin, the lower limbs were weak and spastic so that he could hardly drag himself around with help. There was some slight sexual disturbance. The right lower extremity was now weaker than the left; both knee-jerks were exaggerated, the right one more so. Ankle-clonus and Babinski were elicited on both sides, more marked on the right. Abdominal reflexes could not be elicited. There was a marked diminution of all three sensations below the tenth dorsal segment.

Operation.—On the patient's urgent request, no matter how poor the outlook, that he be given a chance by an operation, laminectomy was performed by Dr. Elsberg on January 20. The spinous processes and laminæ of the seventh, eighth, ninth and tenth dorsal vertebræ were removed. Incision of dura and exploration failed to reveal anything pathologic, excepting for the fact that the cord was of irregular consistency. There was no excess of cerebrospinal fluid. Closure of wound in usual manner. Recovery from the operation was without incident, excepting for the pressure of a very distressing hiccup for several days. The wound healed by primary union.

Postoperative History.—One week after the operation, the patient could recognize heat and cold on all parts of both lower limbs, and the hypesthesia and hypalgesia were much less marked. He was able to move his lower limbs much more freely; a great deal of the spasticity had disappeared. Patellar reflexes only slightly exaggerated, no ankle-clonus, no Babinski. Three and a half weeks after the operation there was still some improvement. He could move his lower limbs more freely, but the spasticity was as marked as before the operation, with patellar reflexes again exaggerated; there was bilateral ankle-clonus and Babinski on the right side.

The patient was discharged from the hospital two months later and became steadily worse. We regarded his case as one of multiple sclerosis.

III. INTRADURAL TUMOR FOUND: MARKED IMPROVEMENT AFTER THE PRIMARY LAMINECTOMY

Case 5.—Laminectomy for irremovable lipoma of cauda equina. Improvement.

Patient.—H. H., a woman aged 28, had had trophic ulcers on toes of left foot for a number of years, on account of which three of the toes were amputated between 1905 and 1908. She was admitted into Mount Sinai Hospital in July, 1908, on account of ulcers on the left heel and severe pain with sensory disturbances in both lower limbs, especially the left one.

Examination.—There was complete anesthesia to all sensations over the fifth lumbar and first sacral areas on the left side, and marked diminution of all sensations over the entire extremity. Over the lumbosacral region in the median line, there was a slight swelling. *X*-ray examination showed that there was a defect in the fifth lumbar vertebra.

Operation.—The condition was considered one of spina bifida occulta, and the opening was exposed (Dr. Elsberg) through an incision over the prominence. A process of dura was found to be attached to the soft parts, and when it was opened, several nerve-roots were found to have been adherent to the process of dura. The adhesions were freed and the dura closed. At first, the patient seemed to obtain some relief from the operation. Six months later, however, the pains in the lower limbs returned, ulcers appeared on the left foot, and both knee-jerks disappeared.

When the patient was admitted to the hospital, she complained of severe pain in the left leg over the distribution of the fifth lumbar and first sacral nerves; there was very marked diminution of all sensations over the entire left lower extremity, and diminished sensitiveness to pain and touch in the right leg. At the operation, the spines and laminæ of the twelfth dorsal and first and second lumbar vertebræ were removed. When the dura was opened the roots of the cauda equina were found to be enveloped by a fatty and fibrous growth which could not be removed. Therefore the fifth lumbar root was divided, and the dura left wide open for decompressive purposes.

Postoperative History.—The patient made an uncomplicated recovery from the operation. The pain in the left limb disappeared at once after the operation. Two weeks later, the sensation in the right leg was normal, while in the left limb there only remained a small area of hypalgesia and hypesthesia on the outer aspect of the leg above the ankle.

Case 6.—Intramedullary tumor of dorsal cord. Laminectomy and incision of cord. Marked improvement. Recurrence of symptoms. Removal of tumor masses. No improvement.

Patient.—Medical No. 622. Surgical No. 226. A. H., a woman aged 34, was admitted on the service of Dr. Bailey, Oct. 5, 1910. Previous history was negative. Present trouble began in January, 1910, with sudden pain in right abdominal region; in February she had burning and numb sensations in toes of right foot. These gradually extended up to her thigh and then into the toes and leg of the other side. Walking became increasingly difficult; by June she had to use a cane. The symptoms became gradually aggravated up to the date of her admission into the hospital.

Examination.—When she was admitted, both lower extremities were spastic; she was unable to stand alone. The knee-jerks and ankle-jerks were exaggerated, especially on the right side; bilateral Babinski, slight ankle-clonus on right side. Sensation: There was a band of hyperesthesia about 1 inch wide on a level with the twelfth dorsal spine behind. Immediately below this a band of anesthesia about 3 inches wide, below this hypalgesia, hypesthesia and complete loss of temperature sense. During the following two weeks the motor symptoms became much worse, so that the patient was unable to lift the legs more than a few inches from her bed.

First Operation.—October 19, laminectomy by Dr. Beer. The spines and laminæ of the sixth, seventh and eighth dorsal vertebræ were removed and the dura opened. The exposed part of the cord was much enlarged. Through a small injury to the cord substance, considerable fluid escaped from the cord. The cord was incised for a distance of 3 cm. and considerable blood-clot was extruded from the cord. No distinct tumor mass could be felt. Muscles and skin were sutured in usual manner. On the day following the operation, power in the right lower extremity was distinctly improved. One week later power in the lower limbs was markedly improved and there was some improvement in the sensory disturbances.

Nine days later the second stage was completed. On exposure the tumor mass readily broke away. The spine and laminæ of the ninth dorsal were removed and the dura and cord incised in an effort to remove the entire mass which apparently extended upward. Owing to the exceedingly friable nature of the substance it was impossible to remove it completely. In attempting to remove the upper pole of the mass a large amount of clear fluid suddenly escaped from the cystic cavity in the canal.

Following this operation the patient's motor power rapidly improved, and three and a half months later she could stand alone and was able to walk with light support under one axilla. There was no improvement in the sensory changes which, on the other hand, became slowly worse, particularly on the right side.

Second Operation.—About four months after first operation she began to get worse, and rapidly became bedridden. Another operation was performed. A large mass was found lying between the long spinal muscles, about 2½ inches long by one-half to two-thirds of an inch wide. It was dark green in color; very friable and could be seen to arise from the posterior columns of the cord. As much of the mass as possible was removed.

Postoperative History.—The patient did not improve after this operation, but grew steadily worse, and within a few weeks was completely paraplegic. She finally was taken to a home where she died.

Case 7.—Tumor of cauda equina. Laminectomy; partial removal of tumor. Improvement.

Patient.—Case No. 1401. Surgical No. 268. R. E., a man aged 41, insurance broker, U. S. Chr., was admitted to the hospital service of Dr. Bailey, May 25, 1911. Past and family history negative. For one year he had been troubled with frequent desire to micturate, and three months before admission he became entirely incontinent. For three months he had been gradually losing power to stand alone or to walk. The bowels would not move without an enema, and the rectum was incontinent if he took a cathartic.

Examination.—Head, upper extremities, chest and abdominal viscera were normal. There was flaccid paralysis of both lower limbs, the right greater than left, and marked wasting of limbs, right greater than left. There was a double foot-drop; the patient could not move the toes or ankles; could draw the legs up slightly in bed. The anus was markedly relaxed. The abdominal and epigastric reflexes were active and equal; patellar, absent on both sides; cremasteric absent; Achilles, absent on both sides. There was no Babinski; no clonus. Sensation: There was slight hypesthesia in distribution of first, second, third, fourth and fifth sacral over the posterior surface of the limbs, also in the distribution of the fifth lumbar in the right leg only; marked hypesthesia in area supplied by the third and fourth and part of fifth lumbar in the left leg, and marked hypalgesia in the distribution of the fourth and fifth lumbar and all of the sacral posterior roots on the right and slight hypalgesia over the same areas on the left side. The temperature sense was impaired in the same localities as the pain sense.

Operation.—Laminectomy by Dr. Elsberg. The twelfth dorsal, first, second, third and fourth lumbar. When dura was incised a large reddish-brown, gelatinous-looking tumor was found filling up the entire spinal canal in this region. It extended above and below beyond the limits of the opening made into the canal. The wound was closed in such a manner as to permit of the extrusion of the tumor. The patient was in a very weakened state when taken to the operating-room, and stood the operation very poorly. Owing to his general asthenic condition, it was impossible to perform the secondary operation until more than a month after the primary. The second operation was performed by Dr. Beer. At this time the tumor was found fairly well protruded from the canal, but still extending above and below the limits of the former incisions. With a curet, and by sponging, as much of the soft tumor mass was removed as was possible. Patient stood the operation fairly well.

Postoperative History.—Three weeks later he could move his legs somewhat better than before the operation. He could draw the leg upward decidedly better and could move the toes of both feet and flex and extend the ankle, which could not be done before the operation. There was no change in his bladder condition. No appreciable change in sensory disturbance.

One month later he was removed to the City Hospital, his condition being as above stated. Reports from there up to date do not show any improvement in his condition.

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Disease and Heredity.—In the case of disease, what we do inherit is not any particular disease, but a predisposition, and the inheritance exists in the germ-plasm. As every disease requires its appropriate stimulus, the germ-plasm may be represented as a gun, and the stimulus the finger pulling the trigger. Should the gun be loaded, as soon as the trigger is pulled there is an explosion, and the disease manifests itself. Should the gun not be loaded, the trigger can be pulled repeatedly, but no explosion results.—C. T. Ewart in *Proc. Roy. Soc. of London.*

POSITION AS A FACTOR IN DRAINAGE OF THE PERITONEAL CAVITY *

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For a long time surgeons have held that abscesses should be drained at their most dependent portion. The principle is so firmly established—in fact, so self-evident—that one wonders that it should ever be necessary to enunciate it. But it is, as anyone who teaches clinical surgery will vouch. When, however, one suggests that this principle should be applied in attempted drainage of the abdomen a storm of protest arises, the chief objection with which I have had to contend being that the abdominal cavity cannot be compared with abscess cavities, for here we have "the intra-abdominal pressure" favoring our attempts to drain; just as if the walls of any ordinary abscess exerted no pressure whatever!

It is granted that intra-abdominal pressure favors drainage of the abdomen, let the opening be where it will, but surely that pressure can work to better advantage if it does not have to overcome the influences of gravity.

Another objection, more recently offered, is that one cannot drain the peritoneal cavity at all, since it has been proved experimentally that drainage thereof is impossible. It is true that Yates,[1] in a series of experiments on dogs, found that his drain was completely shut off from the general peritoneal cavity in less than ten hours, and about the same time F. T. Murphy,[2] working with cats, found that rubber tissue wicks drained up to fifty-two hours. It will be seen that the results of these investigators do not quite agree, but even though both had found the cavity entirely shut off in ten hours or less, it must be remembered that they were dealing with normal peritoneal cavities and it seems reasonable to suppose that adhesions will be more quickly formed in such than in those in which fluid is present.

It is quite likely that surgeons will for some time yet continue to *try* to drain the peritoneal cavity (or intraperitoneal abscess if you will) in certain conditions, and it is even possible that a day may come when drainage will no longer be even thought of.

For many years no attention whatever was given to the position of the patient's body in draining the abdomen and no special attention perhaps to that of the incision. Reference is made to the position of the latter by Peaslee,[3] who credits Keith (about 1855) with incision of the vagina and the use of drainage tubes. Since then drainage through the rectum[4] even has been advocated as being always available and reaching a lower point in the peritoneal cavity. It was Clark,[5] who (in 1897) was the first American surgeon to make us think of position as a factor in abdominal drainage. It was at that time the custom to drain after almost all clean abdominal operations to prevent postoperative peritonitis. Muscatello[6] had a short time previously shown that the diaphragmatic peritoneum alone absorbed lymph from the peritoneal cavity, and Wegner[7] had proved that the peritoneum could dispose of great quantities of infectious material, and Clark, to hasten the absorption of postoperative exudate and so avoid the necessity for drainage, advocated raising the pelvis and lowering the head. The position never became popular, quite likely because Clark himself soon after showed the disadvantage of drainage in clean cases.[8]

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* These experiments were performed in the anatomic laboratory of the Washington University Medical School and that of the St. Louis University Medical School in St. Louis, and a preliminary report of the work was made before the St. Louis Surgical Club in May, 1911.

1. Yates: Surg., Gyn. and Obst., 1905, i, 473.
2. Murphy, F. T.: Boston Med. and Surg. Jour., 1905, cliii, 34.
3. Peaslee: Ovarian Tumors, Appleton, New York, 1872, p. 509.
4. Maclaren: The Journal A. M. A., 1910, liv, p. 2105; Pollard: Brit. Med. Jour., July 25, 1908, p. 196.
5. Clark: Johns Hopkins Hosp. Bull., April, 1897.
6. Muscatello: Virchows Arch. f. path. Anat., 1895, cxlii, 327.

Bode,[9] in 1900, reported from the city hospital of Frankfort-on-the-Main successes in treating suppurative diffuse peritonitis by multiple drains with flushing and raising the head of the bed; about the same time Fowler[10] published his results with the method and advocated raising the head of the bed from 12 to 15 inches. Other surgeons, finding their results so much better by use of this method, have gone on raising the patient, till now one sees and hears a great deal about the advantages of "the half-sitting posture" as a routine matter after placing drains. This half-sitting posture or even the sitting posture soon becomes an uncomfortable one to a sick patient and is not without its disadvantages in weak heart and low pressure and even when it is used and drains placed in the pelvis in the usual way the lowest point of the cavity is not drained.

Harbin,[11] in 1905, recommended the ventral decubitus, but its use has not become general; possibly because of the discomfort to the patient.

Since 1900 I have frequently demonstrated to students in anatomy the fact that with the body supine the lowest point in the pelvic cavity is from 4 to 6 inches lower than the upper margin of the symphysis pubis, while with the body vertical (standing or sitting) the lowest point in the pelvic cavity (peritoneal) is from 1½ to 2½ inches below the upper margin of the symphysis pubis; that the lowest points in the abdominal cavity with the body supine and horizontal are in the neighborhood of the mid-points of the external arcuate ligaments and that with the body supine on the table a greater thickness of wall separates the pelvic cavity from the table than separates the abdominal cavity from the table in the neighborhood of the ligamenta arcuata externa.

Coffey[12] showed that, in order to have fluid flow into the pelvis from the hollow on either side of the spine without turning the body on the side, it was necessary to raise the thorax and upper abdomen so that the long axis of the abdominal cavity was at an angle of 60 to 70 degrees with the horizon.

For the past three years I have used the lateral position with the upper part of the body raised to about 30 degrees with a pillow under the body above the iliac crest and drained below and internal to the anterior superior iliac spine in all suppurative conditions in the lower abdomen in which I thought drainage indicated, always turning the patient on the side most involved. I find it more satisfactory.

G. R. Fowler[13] states that Dawbarn poured milk into the peritoneal cavity of a cadaver and was unable even to wash it all out, though he repeatedly flushed the cavity with water. It has been stated[1] that Helvetius, Mikulicz and Delbet poured water into the cavity and never could get it all back. Sänger[14] does say that "Helvetius allowed 500 gm. to flow in, then tubes were inserted and some knocks were given with the hand, on which Helvetius was surprised that no fluid came out." Mikulicz and Delbet are also said[1] to have performed the experiment with similar results, but I have been unable to find their original papers.

EXPERIMENTS

Experiment 1.—As the body lay supine and horizontal 1,000 c.c. of water were poured into each loin of a cadaver from which the viscera had been removed. The fluid was deepest in the region of the eleventh and twelfth ribs. The body was now gradually raised toward the sitting posture. By the time the body was raised to an angle of 40 degrees the pelvic cavity was full and there was still fluid in both loins. The water now began to escape from the pelvis over the symphysis. The body was slowly raised to within 10 to 15 degrees from the vertical—or practically bolt upright. When the water ceased flowing over the symphysis it was found that the pelvic cavity still contained over 500 c.c. of fluid.

Experiment 2.—With the body supine 1,000 c.c. of water were poured into the pelvic cavity. The body was now turned toward the right side. The water flowed from the pelvis over the psoas into the iliac fossa and upward into the flank. If the body were turned just more than half way between pronation and supination all of the water escaped from the pelvis.

Experiment 3.—Experiment 2 was repeated, turning the body toward the left side with similar results.

Experiment 4.—With the body in the right lateral position and the water in the flank as in the last two preceding experiments, the thorax and upper part of abdomen were gradually raised till the long axis of the abdominal cavity was at an angle of 40 to 45 degrees with the horizon. The water gravitated, first filling the space between the right iliacus muscle and the anterior abdominal wall and then flowing over the right psoas into the pelvic cavity.

Experiment 5.—Experiment 4 was repeated with the body in the left lateral position with similar results.

Experiment 6.—Half-inch non-collapsible split rubber tubes were inserted into the cavity at points just below and internal to the anterior superior spines of the ilia, and Experiments 4 and 5 were repeated. All of the water escaped before the body was raised beyond 40 or 45 degrees, the results on the two sides being similar.

Experiment 7.—A male body in which the viscera were still *in situ* was now selected and a small incision made in the median line about 2 inches above the umbilicus, another incision about 2 inches in length was made in the median line just above the symphysis. With the body supine 500 c.c. of water were introduced (by catheter and syringe) into each loin. Some of the water found its way to the pelvic cavity in the undisturbed condition of the body. The thorax and upper abdomen were now elevated and the water soon began to escape through the lower incision. It continued to do so until the body had been raised to within 15 to 20 degrees of the vertical and then none flowed, though the body was raised bolt upright. The collected water did not quite total 500 c.c. and the waste was slight. The pelvic cavity still contained fluid and 34 c.c. were recovered from it by syringe.

Experiment 8.—Water (1,000 c.c.) was introduced as before and half-inch non-collapsible split rubber drainage tubes inserted just below and internal to the anterior superior iliac spines. The body was turned on its right side. While it was being turned some of the water escaped from the lower median incision, and almost as soon as the movement was completed water ran from the tube in the right side. The thorax and upper abdomen were slowly elevated. The water continued to run until the long axis of the abdominal cavity formed an angle of 40 to 45 degrees. About 750 c.c. were collected, probable waste 100 c.c. Not more than 10 or 15 c.c. were collected with syringe and catheter on suction in loins and in pelvis.

Experiment 9.—Experiment 8 was repeated, turning the body on the left side. None was lost through the median incision this time. As before water began to flow from the tube before the body was raised and it continued to do so as the body was raised as before, ceasing by the time the body was raised to 45 degrees. About 600 c.c. were collected, probable waste 40 c.c. With syringe and catheter nearly 250 c.c. were recovered from the right loin ten minutes after the body had been replaced in its original position.

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[7] Wegner: Quoted by Clark: See Note 5.

[8] Clark: Am. Jour. Obst., May, 1897, xxxv, 481.

[9] Bode: Centralbl. f. Chir., 1900, xxvii, p. 33.

[10] Fowler, G. R.: Med. Rec., 1900, lvii, 617.

[11] Harbin: Med. Rec., 1905, lxvii, 776.

[12] Coffey: The Journal A. M. A., March 16, 1907, p. 937.

[13] Fowler, G. R.: Pract. Therap., Hare, 1897, p. 599.

[14] Sänger: Am. Jour. Obst., 1890, xxiii, 1009.

Experiment 10.—In the abdomen of a male body a small incision was made in the median line just above the umbilicus and with syringe and catheter 500 c.c. of water were introduced into each loin. A loop of small bowel was withdrawn and a catheter fastened into its wall. Air was now pumped into the intestine till the abdomen was moderately distended. An incision 1 inch long was made in the median line above the symphysis and the body slowly raised. Water began to escape from the lower incision before the body had been raised more than 20 degrees and continued to do so till from 60 to 70 degrees was reached. About 500 c.c. were recovered, waste 30 or 40 c.c. About 150 c.c. were recovered from the pelvic cavity with syringe and catheter and less than 10 c.c. recovered from the right loin, none from left.

Experiment 11.—500 c.c. of water were introduced as before and the body turned on its right side, just more than midway between pronation and supination. An incision 1 inch long was made just below and internal to the right anterior superior iliac spine. Some water escaped at once. The usual tube was inserted. More water flowed. The body was now slowly raised as before, water continued to flow from the tube until the body was elevated to from 40 to 45 degrees. Barely 735 c.c. were recovered, waste 30 or 40 c.c., and it was impossible to recover any with the syringe.

Experiment 12.—Experiment 11 was repeated, turning the body on the left side. The amount of water recovered from the tube inserted just below and internal to the left anterior superior iliac spine was only slightly more than 500 c.c. and more could not be made to flow out, no matter how high the body was raised. On lessening the distention, about 120 c.c. were recovered from the right loin.

CONCLUSIONS

The experiments showed:

1. The pelvic cavity could not be completely drained of water by raising the supine body even to 90 degrees "bolt upright."
2. The pelvic cavity could be completely emptied of water by turning the horizontally placed body just more than mid-way between pronation and supination.
3. Water found its way from the left loin to exit just below and internal to the right anterior superior iliac spine with body raised to 45 degrees in the right lateral position.
4. With a distended condition of the intestines, although water gravitated less readily, practically the same results were obtained.
5. Although water found its way from the left loin, as above stated, it did not so easily find its way from the right loin to exit just below and internal to the left anterior superior iliac spine; no matter how high the left laterally lying body was raised a quantity remained in the right loin.

I wish to express my thanks to Professor Terry in the Washington University Medical School and to Professors Eycleshymer and Shoemaker in the St. Louis University Medical School for their great kindness and courtesy, and to Dr. H. McClure Young for valuable assistance.

Metropolitan Building.

Health Insurance.—I am in favor of compulsory low-wage insurance, and believe that it will come sooner or later in some form and that it is our duty to keep awake that we be not the loser but be benefited by the arrangement. All of which means complete organization.—J. N. Davis in *Journal of Kansas Medical Society*.

CLINICAL ASPECTS OF SYPHILIS OF THE LIVER *

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An error in diagnosis gave me the incentive for reviewing this subject. I had occasion to observe a patient for a period of one and a half years. He had what I considered to be fairly typical symptoms of gallstones, whereas the operation showed that the clinical picture was due to multiple gummata of the liver. The general literature of this topic gave me the impression that the keenest clinicians frequently failed to suspect the syphilitic process in the liver since it mimics, as Arthur R. Edwards[1] puts it, a great many diseases of the liver and gall-bladder.

HISTORY

Syphilitic jaundice was known as far back as Paracelsus, Matthiolus and François de la Boë Sylvius. French writers, among them Lancereaux,[2] Cornil and Mauriac, have emphasized the relationship between icterus and syphilis. Werlhof (1732), J. Frank (1821), and Yvarres (1854) had a knowledge of fever in lues. Guntz first recorded syphilitic fever by a thermometer. Frerich[3] in 1861, Bäumler[4] in 1872, and Hirschberg and Raichline[5] in 1894 called attention to the fever accompanying syphilis. Bäumler[4] reported seven cases of syphilis, mostly joint cases, all having a hectic type of fever. The names of Lancereaux in France and Virchow in Germany are closely connected with the study of syphilis of the liver, both as an anatomic and as a clinical entity.

During a period of eighteen years thirty cases were diagnosed during the patients' lives at the Johns Hopkins Hospital.[6] Among 2,500 necropsies in the same period there were forty cases of gummata or scars and fifteen syphilitic cirrhoses. An analysis of 5,088 postmortems by Flexner at the Philadelphia Hospital showed forty-two cases with interstitial changes, twenty-two gummata, sixteen cases of perihepatitis, seventy of amyloid degeneration, and thirty-eight of specific scars. The post-mortem records of St. George's Hospital, London, for a period of forty-two years, showed that among 11,629 post-mortems, there were thirty-seven cases of gummata and twenty-seven of syphilitic scars.

PATHOLOGY

The *Spirochæta pallida* is, of course, the primary etiologic factor of the disease. Additional factors put the liver in a state of *locus minoris resistentiæ*, thus favoring a pathologic process in that organ. Gastro-intestinal disorders, especially those in which ptomains are in excess in the intestinal tract, throw more work on the liver, which, as we know, has among other functions, that of destroying ptomains. This is the view entertained by Hirschberg and Raichline. Alcoholism, trauma, malaria, preexisting jaundice, which lessen the resistance of the liver, are predisposing factors. In a case of Pitt, the syphilitic process developed on the site of an old hydatid cyst.

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* Read before the Chicago Medical Society, Oct. 28, 1911.

[1] Edwards, A. R.: Am. Jour. Med. Sc., 1910, cxl, 527.

[2] Lancereaux: Syphilis hépatique, Union Méd., 1889, No. 46.

[3] Frerich, Th.: Klinik der Leberkrankheiten, 1861.

[4] Bäumler: Deutsch. Arch. f. klin. Med., 1872, ix, 397.

[5] Hirschberg and Raichline: Bull. gén. de thérap., June 30, 1895.

[6] Quoted from "A System of Syphilis," D'Arcy Power and J. Keough Murphy, iii.

It is the belief of many that syphilis of the liver is seldom associated with parasyphilitic diseases of the nervous system. A. R. Edwards, however, alludes to two cases in which the persistence of pain, after the subsidence of gummata under specific treatment, was in all probability due to the associated mild tabes.

The majority of the histories I have read show that the clinical manifestations appeared about ten to fifteen years after the initial infection. In very exceptional cases, gummata were found in the livers of fetuses or still-born children.

Pathologic changes in the liver occur either congenitally or during the secondary and tertiary stages of acquired syphilis. Congenital syphilis may assume the type of interstitial hepatitis or the gummatous type. The acquired variety may also be interstitial or gummatous. In the first form, the organ is frequently divided by strands of connective tissue into several lobes, forming what is known as hepar lobatum. A case of syphilis of the liver that came to post-mortem contained sixteen lobes. The organ may be covered by adhesions, mostly diaphragmatic, leading to what is usually described as perihepatitis fibrosa adhesiva. Gummata may be single or multiple, and are situated usually in the periphery of the organ, the region of the suspensory ligament, the edge of the liver and the region of the gall-bladder and the common duct. They are less frequently situated in the depth of the organ. J. L. Allen collected eighty-six cases of gummata of which eleven were single.

A gumma may attain a very large size. A specimen in St. George's Hospital museum (Series IX, 183g) shows a voluminous gumma of the right lobe of the liver, perforating the diaphragm and involving the lower lobe of the right lung.

This brief description of the pathology assists us in the explanation of several of the clinical manifestations. The perihepatitis accounts for the pain, but I found no plausible explanation in the literature for its periodicity, although the perihepatitis is persistent. The presence of gummata in the depth of the organ, on the posterior surface, or any other part which is not readily accessible to the eye or the exploring finger of the surgeon, may escape his notice, thus accounting for those curious cases in which the symptoms continue in spite of the apparently negative anatomic findings.

Gummata situated in the region of the common duct explain the mechanical type of syphilitic jaundice.

The symptoms of syphilis of the liver are both subjective and objective. Pain, fever and, less commonly, jaundice, are the foremost symptoms. The pain may be continuous for a period of days, weeks or months, or it may be periodic. It may be mild, or intensely colicky in character. One day I found my patient rolling on the floor in an attack, and morphin did not lessen its intensity. It is usually local, occasionally referred to the back, exceptionally to the shoulder. Primary nocturnal pain or nocturnal exacerbations of diurnal pain are suggestive of a syphilitic process. Pell considers the localization of pain in the left lobe as pathognomonic.

Fever may occur during secondary or tertiary syphilis in all its forms. It may be continuous or intermittent. It may resemble the typhoid curve, the hectic fever of pulmonary tuberculosis or pyemia and occasionally that of malaria. It is frequently preceded by chills and often associated with sweats. It is rather irregular in its periodicity and atypical in its aspect. There is one case on record which had an irregular fever for eight years. According to Klemperer and a majority of writers, the fever is due to the absorption of toxic elements resulting from broken-down gummata. Bristowe,[7] Rolleston,[8] Lilienthal[9] and others believe that the fever is due to secondary infection of gummata. The sterile blood-cultures in a number of cases speak against this view (Klemperer).

Jaundice is of less frequent occurrence. It may manifest itself in the early secondary stage, or be one of the symptoms of tertiary syphilis. It usually appears five to six weeks after the initial lesion and frequently in conjunction with the cutaneous manifestations. Lancereaux collected twenty-one cases of icterus associated with the secondary stage of syphilis. This relationship was first emphasized by Gübler in 1853. The percentage of jaundice in syphilis is higher in the French records than in the German. In S. Werner's collection of 15,799 cases of syphilis, jaundice was present in only fifty-seven cases or 0.37 per cent., which is a much lower figure than the percentage given in French statistics.

As a whole, jaundice is less frequent than the other symptoms and is of a mild character and short duration. Its cause has been variously interpreted. Gübler considers it as due to an exanthem of the intestines and the mucosa of the bile-tracts, a sort of specific cholangitis; Lancereaux and Cornil as due to pressure from enlarged lymph-nodes on the portal vessels. In a series of fifty-seven cases of syphilitic jaundice there was enlargement of the superficial lymph-nodes in forty-one. Virchow ascribes it to pressure of gummata on the bile-tracts, while Bierner and Frerich attribute it to perihepatitis.

A great many cases of lues of the liver have a long latent period, characterized only by occasional gastro-intestinal symptoms of a vague nature. Marcuse believes that two-thirds of patients with gummata of the liver have early digestive disturbances. In another group of cases pain, fever and jaundice may subside for a time during which the patients may have only atypical gastro-intestinal symptoms, thus adding to the confusion of the clinician.

The spleen is often enlarged. The urine contains, in some cases, albumin. The leukocyte count is either normal or deviates within small fractions above or below the normal. A number of patients had leukopenia, which in conjunction with a continuous fever and large spleen suggested typhoid. Neusser found a slight increase in eosinophils in several cases.

The physical findings do not seem to be pathognomonic, judging from the number of errors committed. It is usually asserted that the liver is most frequently enlarged. It may, however, be normal or even smaller than normal. The organ may be irregular in shape and distinctly lobulated. The left lobe is sometimes atrophied or separated by bands of connective tissue from the right lobe. Occasionally a fair-sized gumma can be palpated. Adhesions may so fix the liver as to restrict the respiratory excursion of the organ.

DISEASES FOR WHICH HEPATIC SYPHILIS MAY BE MISTAKEN

The diagnosis of syphilis of the liver is difficult and at times impossible, as it simulates closely almost every hepatic disease, gall-stones and carcinoma in particular. At times the clinical course resembles that of several febrile diseases. While bedside experience teaches us that classical or text-book cases are not common, still we have to admit that we must have a number of suggestive symptoms, grouped in a definite manner, in order to make an ordinary diagnosis. With syphilis of the liver we are more or less helpless in the interpretation of clinical manifestations, and logic and experience count for little in its diagnosis. Whenever a patient exhibits a symptom-complex suggesting a disease of the liver, in which the clinical history is atypical, the order and the character of the symptoms unusual, one ought to think, among other possibilities, of syphilis of the liver. A definite history of syphilis, a positive Wassermann reaction and a rapid improvement under the influence of specific treatment are the only means of making a definite diagnosis. The affection may simulate the following diseases:

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[7] Bristowe: Brit. Med. Jour., 1886, i, 878.
[8] Rolleston, H. D.: Diseases of the Liver, 1905, Phila., p. 348.
[9] Lilienthal: Ann. Surg., 1902, xxxvi, 132.

1. *Cholecystitis, with or without Stones.*—The greatest number of diagnostic errors is reported by Riedel,[10] who speaks of several patients operated on for what was thought to be gall-stones, but proved to be gummata of the liver. Joseph L. Miller[11] reports six cases of syphilis of the liver in which the diagnosis of cholecystitis was made once, and that of stones twice. Frank Billings[12] relates a typical history of gall-stones. The patient was operated on by Christian Fenger, and the case proved to be one of gumma. The latter surgeon had another similar experience shortly after. He believed that whenever gummata are situated in the region of the gall-bladder, the differential diagnosis cannot be made. A case of Howard Lilienthal imitated suppurative cholecystitis, although lues was thought of. Exploration revealed a suppurating gumma. Of ten cases of biliary colic reported by Riedel there was icterus in seven. One patient had attacks for fifteen years. The difficulty becomes still greater when the patient really suffers from cholecystitis with or without stones in addition to gummata. This association was present in the collection of Charles H. and W. J. Mayo[13] in four cases, two only having stones. While the histories of the cases reported are suggestive or even classical for cholecystitis, a closer discrimination usually reveals that the pain is not always colicky in character; that it may extend over long periods with irregular remissions; that it is more or less limited to the right hypochondrium, and that it does not radiate toward the shoulder. The fever is capricious in its type and the jaundice, if present, is very mild and of short duration.

2. *Carcinoma.*—Virchow[14] states that he has seen the best clinicians mistake gummata of the liver for carcinoma. Joseph L. Miller speaks of a case diagnosed clinically as carcinoma which was apparently confirmed by exploration, yet in which specific treatment resulted in cure. Syphilis of the liver may exhibit some of the typical symptoms of carcinoma — pain, tumor of the liver, cachexia, ascites, gastro-intestinal symptoms, even blood in the vomitus and feces and absence of free hydrochloric acid from the gastric juice. Fournier holds the view that ascites is rather uncommon in syphilis. A patient of William E. Morgan, as mentioned by Arthur R. Edwards, was extremely emaciated and had enormous ascites in connection with gummata. Prior to the operation a diagnosis of carcinoma was made. Splenic enlargement and albuminuria are absent in carcinoma. The hepatic tumor, if palpable, is never so large in syphilis as it is in carcinoma. Syphilis extends over a longer period of time and usually attacks younger people.

3. *Liver Abscess.*—Two brief histories will illustrate the point. In the first one, a case reported by G. Klemperer,[15] the patient had for several months pain in the region of the liver, chills, followed by an irregular temperature, enlarged liver and icterus. He was to be operated on for liver abscess. At the suggestion of Renvers the patient received intramuscular injections of corrosive sublimate. The whole clinical picture cleared up after fourteen injections. The second case is reported by Lesage. The patient had marked epigastric tenderness, chills and fever extending over a period of nine months, 21,000 leukocytes, and lost 40 pounds. At first a diagnosis of liver abscess was made. After one week of mixed treatment, however, all the symptoms disappeared and never recurred. One is more apt to confuse syphilis with liver abscess in tropical countries.

4. *Septic Pylephlebitis.*—The patient of Dr. Arthur R. Edwards had all the earmarks of septic pylephlebitis of the portal vein. The diagnosis was based on the sudden tenderness over the portal region, large ascites, irregular temperature, preceded by chills and fever. Subsequently a cure was effected by mixed treatment.

5. *Pulmonary Tuberculosis.*—Cases in which there is loss of weight, night sweats, afternoon temperature and cough may resemble pulmonary tuberculosis. Such cases were reported by E. G. Janeway,[16] Joseph L. Miller, Bäumler, and others.

6. *Typhoid Fever.*—A continuous fever with vesperal exacerbation, leukopenia, and splenic enlargement may suggest typhoid. Hirschberg and Raichline report the case of a patient who, after twenty years from the initial lesion, developed a febrile disease with evening exacerbation, some gastro-intestinal symptoms, diarrhea in particular. A diagnosis of typhoid was made. Later, antisyphilitic treatment administered to this patient was followed by a prompt cure. Similar cases were reported by Bäumler and others.

7. *Malaria.*—This was diagnosed in a number of cases by very competent clinicians on account of the intermittent type of temperature preceded by chills and accompanied by splenic enlargement.

8. *Echinococcus Cyst.*—This diagnosis was made in several cases.

9. *Splenic Anemia.*—This condition may be suggested by splenic enlargement, in the presence of a normal-sized liver, leukopenia and anemia of the secondary type.

A splenectomy was performed in a case of Coupland for what was supposed to be splenic anemia. The patient improved shortly after the operation but subsequently died from hematemesis and ascites. A post-mortem examination disclosed syphilis of the liver. Several similar cases have been reported by Osler.

10. *Atrophic or Hypertrophic Cirrhoses.*—The differentiation from these conditions is often impossible. Syphilis of the liver differs somewhat from the atrophic type in that the liver is usually large, irregular, and ascites is not so common. The general nutrition is not necessarily impaired. Hematemesis and melena are usually absent. It differs from the hypertrophic type in that the liver is large but irregular instead of smooth. The jaundice if present is very mild. It never amounts to an icterus gravis.

11. *Movable Kidney.*—A lobulation of the liver may resemble the kidney.

In order to appreciate how easy it is to mistake all the conditions enumerated for syphilis of the liver one must read in detail the individual histories. It is also striking that practically all the cases reported in the literature emanate from the pen of clinicians of repute. One is almost tempted to say that whenever we do not know definitely what is the matter with the patient presenting vague or atypical symptoms referable to the liver, it would be advisable to put the patient on a rigid antisyphilitic treatment for two or three weeks. Rosenbach[17] is not in sympathy with this method of diagnosis simply based on the therapeutic test.

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[10] Riedel: Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1904, xiv, 1.
[11] Miller, J. L.: Illinois Med. Jour., 1905, viii, 240.
[12] Billings: Philadelphia Med. Jour., 1900, vi, 671.
[13] Quoted from Keen's Surgery, iii, 980.
[14] Virchow: Die Krankheiten Geschwülste, ii, 428.
[15] Klemperer, G.: Therap. d. Gegenw., 1903, v, 41.
[16] Janeway, E. G.: Am. Jour. Med. Sc., September, 1898, p. 251.

COMPLICATIONS

Gummata may disintegrate and subsequently suppurate. They may break into the general peritoneal cavity or into neighboring structures or organs. Two cases of peritonitis from this cause were reported by S. Wilks[18] in 1877, and by Griffith[19] in 1888. Newbolt reports a case of empyema of the right chest resulting from rupture of a suppurating gumma situated on the posterior surface of the right lobe. Gummata may calcify and, if numerous, may calcify the entire liver.

TREATMENT

Mixed antisyphilitic treatment has a remarkable influence on syphilis of the liver. It is almost impossible to believe the reports of some cases. Patients suffering from the most intense symptoms for years are reported permanently cured within a week or two, under specific treatment. As far as I know, salvarsan was never used for the cure of gummata of the liver. In my case I deemed it wiser to put the patient on the usual mixed treatment and not to inject salvarsan until some later date. I reasoned that if salvarsan were effective in destroying so many spirochetes, enough antitoxin would be liberated to hazard the patient's life. The case reported by Floyd Burke Riley[20] had a slight fall in the temperature, which was continuous for two months, under the influence of atoxyl. Occasionally, a gumma was removed for diagnostic purposes. In some cases a suppurating gumma was curetted and the cavity packed with iodoform gauze. Keen reported in 1899 twelve cases of resection of the liver for gumma. Cumston[21] in 1903 added fifteen cases to that list.

CASE REPORT

History.—H. C., aged 35, about 18 months prior to this report experienced epigastric distress shortly after meals, which continued almost daily up to the time of examination. At times he had a sense of fulness and distress an hour after eating, frequently associated with nausea, but not with vomiting. This feeling lasted from one to two hours. Occasionally, he was awakened after midnight with sharp epigastric pains. These symptoms were often mild in character; at times, however, they were quite distressing. In addition, the patient had had in the previous year and a half sudden severe attacks of pain in the right hypochondrium, radiating toward the back, sometimes to the tip of the right scapula. These attacks would last from three to seven days. I saw the patient during several attacks and, on one occasion, as mentioned, I found him rolling on the floor with pain. The attacks were severe enough to require morphin. Every attack was usually associated with a chill followed by a rise of temperature. The patient was never jaundiced. He always had a certain degree of tenderness under the right costal arch even when free from attacks. His appetite was poor most of the time and he was frequently nauseated about a half hour after eating, but never vomited. He was chronically constipated. He had no genito-urinary symptoms. He was of nervous temperament. During his illness he lost 20 pounds. He had never been ill before except fourteen years previously when he contracted syphilis while a soldier in the army. The lesion was typical and was followed by equally typical secondary symptoms. He was treated for four months by deep intramuscular injections of mercury. One year later he was again treated for a period of six months by inunctions with mercurial ointment. He had married about three years prior to examination. His wife had no miscarriages; one pregnancy was carried to full term. The child was 13 months old and had no stigmata of syphilis.

Examination.—The patient was admitted to the Presbyterian Hospital, Sept. 4, 1911. Two days previously he had had a severe attack as above described. His temperature, the day of admission, was 101.4 F., dropped to 99.4 the second morning and rose to 101 in the evening. His leukocyte count was 10,300; hemoglobin, 75 per cent. The urine was normal. Physical examination revealed generalized adenopathy, the individual lymph-nodes being painless and movable. The integument was distinctly anemic. The bulbar conjunctivæ were subicteric. He had a marked alopecia. Otherwise the physical examination was entirely negative. Prior to the operation I made a diagnosis of cholecystitis, possibly with stones.

Diagnosis.—The epigastric distress coming on after meals and covering a period of eighteen months compelled me to think also of the possibility of a gastric or duodenal ulcer. On Sept. 7, 1911, I made an incision through the rectus muscle with the purpose of exploring the pylorus and duodenum and also the gall-bladder. I found the stomach and the duodenum normal. The gall-bladder was normal in size and appearance and emptied readily on pressure. The convex surface of the right lobe of the liver and its border were studded with numerous, small, whitish-gray nodules. There were similar tumors along the common duct and also at the neck of the gall-bladder. From the gross appearance I could not identify the nodules. I excised two small nodules for diagnostic purposes. The histologic sections showed the typical picture of gumma.

Treatment.—On the second day after the operation I instituted the mixed treatment and have continued it to the present. There was a sudden drop in temperature from this day on and it remained normal afterward. The patient made an uneventful recovery, the wound healing by primary intention.

At the end of the week the patient was entirely free from symptoms. He remained well and at the end of two weeks had gained 14 pounds.

CONCLUSIONS

1. The clinical statistics underestimate the frequency of syphilis of the liver. The Wassermann reaction will increase the number of cases.
2. The symptom-complex of syphilis of the liver is not pathognomonic, as it simulates almost every hepatic disease; occasionally it simulates febrile diseases.
3. Whenever the diagnosis is uncertain, resort should be had to the therapeutic test as well as to the Wassermann reaction.
4. Mixed treatment has a striking effect on lues of the liver frequently, regardless of the time it has existed.

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[17] Rosenbach: Therap. d. Gegenw., 1903-1904.

[18] Wilks, S.: Tr. Path. Soc. London, viii, 2401; Lancet, London, Dec. 8, 1877.

[19] Griffith: Lancet, London, 1888, i, 220.

[20] Riley, Floyd Burke: Tr. Chicago Path. Soc., Feb. 1, 1911.

[21] Cumston: Ann. Surg., 1903, No. 37.

Conscription for Japanese Military Service.—According to statistics recently published in Japan, 7,941 of 436,343 conscripts examined last year had trachoma and 11,593 venereal disease. The average of educational acquirements is constantly rising, but still there were 4.3 per cent. who were unable to read and write. There were 551,924 young men of the conscript age, but 83,602 were excused on account of attendance at school or college; 35,538 are residing elsewhere than in Japan, and 26,678 could not be located or were in jail and 696 were convicts, while 8,383 were excused on account of sickness. About 70.3 per cent. averaged well physically.—*Journal Royal Army Medical Corps*, 1911, xvii, 112.

MUSCULAR DEVELOPMENT, THE CAUSES FOR THE LACK OF IT AND THE VALUE OF PHYSICAL EXERCISE

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In this age of mental development, when the achievement of success can come only through the exercise of the mental capacities, we are apt to forget the maxim "*mens sana in corpore sano*" and allow the balance between mind and body to be broken. To be sure, the material return in occupations requiring the use of the muscles alone cannot ever equal the return from occupations requiring the exercise of the mind — if we are to measure success by return — nevertheless, the sphere of one's usefulness with a poorly developed body is necessarily limited and short-lived. Civilization unquestionably tends toward an overdevelopment of the mind at the expense of the body. Recently, and in recognition of the marked muscular deterioration of the civilized races, the necessity for improving their development has received much attention.

The term "physical development" applies mainly to muscular development. A short muscular individual could hardly be spoken of as a poor physical specimen, nor could a tall one with a poor musculature be spoken of as having a good physique. The muscle is the standard, since lack of such development brings with itself a train of physical defects. Besides, the human body "exhibits only two forms of vital action necessary to its existence — first, that of the various secreting and excreting organs in pursuing their functions; and second, the entire muscular apparatus, whether of ordinary muscles, arterial coats or otherwise." The importance of the muscular system is, therefore, apparent.

Considering briefly the main points in connection with the muscular system, we find that the muscle — essentially a connective tissue — is developed from the mesoblast of the primitive germ layer by an elongation of the embryonal cells and by a multiplication of their nuclei. The unit of muscular tissue is the muscle fiber. It is estimated that the longest fiber does not exceed 1½ inches and that the width varies from $^1/_{400}$ to $^1/_{600}$ of an inch. Those muscles whose function it is to give a wide range of motion have long but few fibers, while those requiring strength mainly have short but numerous fibers. The absolute force of a muscle is proportionate to the number of fibers, that is, to its "cross-section." There are about 501 muscles in the human body, of which about 405 are voluntary or skeletal, and the rest involuntary or vital. The index of muscle-efficiency is its power of contraction; that is, the power of doing mechanical work without fatigue. Not all the muscle-energy, however, is expended in doing mechanical work — about five times as much is required in the production of body heat.

The muscles might be called the "internal respiratory" organs in which the ultimate exchange of oxygen and carbon dioxid takes place. The blood gives up the oxygen and receives and carries off the carbon dioxid. To accomplish this, the muscles are supplied with an exceedingly fine network of capillaries. Increased muscular activity means increased respiratory efforts, since there is greater oxidation and, therefore, a greater loss of carbon dioxid and a consequently greater demand for oxygen. It is this increased respiratory exchange in muscular activity which increases the nutrition and general health of the body. The greater the muscle power — and that is in proportion to the number of fibers *and especially to their width* — the greater the endurance of the organism.

As a general rule, muscular development is "better in cold or temperate climates than in warm climates; there is less bodily exercise but this is offset by taking less food, augmented skin action and, therefore, increased circulation. In colder climates there is, of course, greater force required to disintegrate the animal tissues to generate heat and the like." Furthermore, the muscular development of people living in the interior is better than that of those living on the coast, and in the mountains better than in the interior. People in the interior are usually farmers whose occupation necessitates outdoor life and the use of the muscles; the reason for the hardiness of the people in the mountains is, of course, apparent.

"Lack of muscular development betrays no specific pathologic condition; there is a simple atrophy of the fibers, which diminish in width, and there is an increase of connective tissue between the fibers." Very frequently there is an increase in fatty tissue, which gives greater girth to the muscle while the fibers are atrophied — a condition which is analogous to the condition in pseudohypertrophic muscular paralysis. The internal perimysium, in these cases, increases at first, is then transformed into fatty tissue while the muscle tissue itself may be well preserved, but later the muscle fibers are forced apart and atrophy. This is the condition found in "fat rickets" and obesity.

Individuals with this simple atrophy present a flabbiness and lack of muscular tone which is especially noticeable in the facial muscles and which gives the face a peculiar expression — or lack of expression — which really amounts, in marked cases, to a facial myopathy; the face looks flabby and the skin droops markedly toward the angle of the jaw. This peculiarity of facial expression betrays the existence of atrophy or weakness of the muscles elsewhere, namely over the abdominal wall — accompanied by hernia — and by noting this sign a great many cases of hernia can be detected.

The great influx of Europeans into this country particularly interests us in the physical condition of these people, both because their well-being depends largely on their physical ability to stand the hardships consequent on settlement in a new country, and especially because that settlement here, in large numbers, might influence the physical character of the people already here. The following remarks about our immigrants are based on five years experience as medical inspector at Ellis Island, the main port of immigration on the Atlantic Coast. Beginning with the races occupying the Mediterranean coast, the first to arrest our attention are the Greeks. They differ from their ancient forerunners not only in language but also in physique. If regarded from the standpoint of physical development they are the exact antitheses of their ancient progenitors, being short, small-headed and thin-muscled. A large percentage of them are undersized and do not present the physical development of their age. This is especially noticeable in boys between the ages of 16 and 20, who do not present the development, physical or sexual, of boys of 12; many of the Greeks have arrested sexual development or total absence of it — eunuchoidism. Individuals with arrested sexual development have a peculiar facial character due to the absence of any beard and to the presence of wrinkles especially noticeable over the angle of the mouth. Once this facial characteristic is noted the condition cannot be overlooked or mistaken.

The modern Greeks are not, in reality, the direct descendants of the ancients; numerous wars, invasions and migrations have changed their ethnology entirely. The Macedonians, a people living north of Thessaly in Greece, are less well-developed — probably for the same reasons — than the Greeks.

Another nationality from which the United States draws a large part of its immigrants is that of the Italians, but here it should be remembered that the northern and southern Italians are two different races and present different physical characteristics. The northern Italians have the characteristics of — and belong to — the Slavic and Germanic races; the southern Italians are a mixture of Italian, Greek and African. They are small, dark and of a poor musculature. The percentage of undersized individuals and of those having arrested sexual development is much smaller than among the Greeks.

The Turks are a well-developed people — quite a contrast to their neighbors, the Greeks.

The Armenians, while not really Europeans, live chiefly in European Turkey; they are a very poorly developed people.

Of the people inhabiting the Iberian Peninsula — the Spanish, the Basques and the Portuguese — the Basques are the best while the Portuguese are the poorest.

What are the factors operating in the physical deterioration of the Mediterranean peoples? Why should not the present peoples be as strong as those of old? Undoubtedly the frequent intermixture or crossing with inferior blood from the African and Asiatic coasts is largely responsible for it. Are not the present peoples the "recessives" of the Mendelian school of evolution? According to this doctrine, there are no transitional types on a crossing between a superior "dominant" and an inferior or "recessive" types, but the result is three "dominants" to one "recessive." Where, then, are the "dominants"? No doubt, in harmony with this doctrine it is possible to conceive of the disappearance of the "dominants" from the fact that the Mediterranean countries have always been the "cock-pit" of Europe, where nearly all the battles were fought and which has required the sacrifice of the best — physically — of the people, leaving only the "recessives." Might not their physical inferiority be explained on the principle that their frequent intermixture with widely different races is analogous to the result, in animals, of the crossing between different varieties of the same species—"mongrelism"? Another factor in their condition is the endemicity of various diseases in that region, especially malaria. Besides, they are a poverty-stricken people, greatly underfed; among the Greeks the poor live almost entirely on olives.

Likewise, with the southern Italians, while the frequent crossing with inferior races and the many exhausting wars may have helped to keep the standard of physical development lower than among the northern peoples, their mode of living, their great poverty and the endemicity of a number of diseases are undoubtedly responsible factors. The Italians are a poverty-stricken people, underfed and underworked; they feed mainly on carbohydrates, rarely consuming any fresh meats. Even discounting the fact that they live in warm climates, they consume too little. It is true that, in spite of their physical inferiority, they are a long-lived people, but only so long as they remain on their own soil, or, if away from it, under similar conditions. If transplanted to another soil under adverse conditions they fare badly. The Italians age so prematurely that their longevity is of little use to them from an economic standpoint, since a prematurely aged people merely vegetates.

In this country a large number of the Italians have taken to tunnel-digging and railroad construction work. Some have gone into the petty tradings, with which we are all familiar. Of those engaging in the heavier occupations, it is not surprising to note what a large number develop tuberculosis, simply because they are not physically constituted for such work. It is, of course, a question whether any people, no matter how good their physique, can long continue in such occupations with impunity. On the other hand, these Italians, as well as other people who change from a poorer to a better environment, have shown marked improvement in physique after settlement here. In fact, the succeeding generations have a tendency to take on all the characteristics of their neighbors. Boas, in a lecture on anthropology, commented on the fact that European immigrants, after their arrival here, changed physically to conform to the types in this country.

Before considering the physical development of the other European races, it might be well to take up a race which seems to belong nowhere, yet is everywhere—the Jews. As a general rule their muscular development is very poor; they are narrow-chested and thin-muscled. They suffer very little from congenital physical defects, but are an extremely neurotic people with a tendency to psychoses in adolescence. They have very little tendency to alcoholic intemperance. While the largest sufferers from hernia—their predisposition to this condition is only a manifestation of weak abdominal muscles accompanying a general muscular deficiency—the Jews, also, have a tendency to age prematurely.

The Jews are said to be comparatively free from tuberculosis—owing to an immunity gained by living, for many centuries, in crowded and unsanitary ghettoes. Besides, unlike the Italians or the Irish, they never engage in occupations beyond their physical capacity. When they do, they contract tuberculosis just as frequently as other peoples. In this country they are engaged largely in the garment trades, occupations entailing close confinement, very long hours of labor and poor hygienic surroundings; and among them tuberculosis is very common.

In the light of the poor physical development of the Mediterranean peoples, explained in part on the ground of the frequency of crossing among those races, how can the physical inferiority of the Jews be explained, who have practically never crossed at all, but have remained racially pure?

If, on the Mendelian doctrine, they were a race of muscular "dominants" in biblical times, they should still be so. The Jews, however, have gone to the other extreme in their racial purity. They have been too close in-breeders, resulting in what might be called "racial consanguinity or incest." Breeding of this kind, while not productive of the physical defects of promiscuous breeding, results in the production of a highly sensitive but weak organism with marked neurotic tendencies, which tendencies are so greatly exemplified by the Jews. Or their continual wandering may have caused a "racial fatigue" and be the reason for the physical inferiority. Besides, their frequent migrations have not allowed them to engage in any definite occupations, but forced them to engage, on a larger or smaller scale, in trading, an occupation hardly conducive to muscular development, but, in fact, tending to cause atrophy from disuse.

But in the countries where they have been allowed the privileges of their neighbors, their original sturdiness has asserted itself; they have mixed freely with their neighbors and intermarriage has especially been productive of good types. In this country the Jews have a large representation in athletic circles.

Coming to the Slavic races, their most numerous representatives are the Russians. The peasantry are among the finest specimens of muscular development; they are a hard-working agricultural people. But even those from the larger cities are well developed. Of the other Slavic races the Servians, Croatians, Bulgarians, Slovenians, etc., have good physiques. The Poles have the poorest, owing, no doubt, to the many exhausting wars in which they have engaged and which have had the effect, so to say, of devitalizing them.

The Germanic races, which, for the purpose of this paper, may include the various German principalities, the Dutch, the Scandinavians and the German Swiss, are, on the whole, good specimens of physical development. The Dutch farmer is a particularly sturdy person. He breeds a large family of well-developed children; from thirteen to fifteen is a number not uncommon in one family. The Danes, from their proximity to the Germans, closely resemble the latter in their physical characteristics. The Norwegians and Swedes are without reservation the finest types of physical development, with the Norwegians probably the better of the two.

A defect among the Germans, which has recently evoked marked comment, is myopia. The Germans are even to-day the greatest exponents of the sciences and the arts in almost every branch. Is it not possible that a race so largely engaged in occupations requiring the close application of the eyes, would change physically to conform to just such needs? For it is well known that myopes have the advantage of being able to magnify near objects. This is not advanced in explanation of the German predisposition to myopia: at any rate, it offers an interesting field for investigation and possibly for preventive optics. In the north of Germany, among the Danes, there are many albinos, individuals having a lack of pigmentation in the chorioid of the eye with resulting defect of vision.

The Magyars, originating with the Finns in Asia, have in the centuries gone by entirely lost their Tartar characteristics from frequent intermixture with their invaders. The peasantry are an especially well-developed people.

The French have good physiques. The Belgians, of whom the greater part are Flemish, are also well-developed. The Swiss partake of the characteristics of the races to which they belong.

On the British Isles we do not find the muscular sturdiness of the continental northerners. The English are the better developed, the Irish the poorer. In so far as the Irish are concerned, their poor physiques are due to their extreme poverty and the consequent under-nutrition. It is a significant fact that the Irish from the country are even more poorly developed than those from the cities. This may be due to the fact that in the country they live almost entirely on vegetables, consuming very little fresh meats. Fresh meats are absolutely necessary to muscle-building, even though vegetarians claim to the contrary and cite instances of athletes accomplishing athletic feats on a vegetable diet. These persons are the exceptions and not the average. Besides, the ordinary labors of life and especially those of the poor people are far more exacting and arduous than the most difficult of athletic feats. Furthermore, the ingestion of proteids is absolutely necessary to conserve the proteid of the body. May not the tendency of the Irish to alcoholic intemperance be dietetic in nature, and an attempt by Nature thus to conserve the proteid of the body? May not the absence of a meat diet be responsible for the notoriously bad teeth of the Irish peasantry? May not also the large number of pelvic deformities among Irish women be dietetic in nature?

The Irish are particularly prone to tuberculosis, but not while they continue on their own poverty-stricken farms, encountering no new adversity. When, however, they come to this country and encounter the keen competition rampant here, they seem to lose their staying-power and a great many contract tuberculosis. On the other hand, probably on the doctrine of the "survival of the fittest," those who weather the conditions at first, later on improve wonderfully, and it is then that we get the "burly" Irishman. He is really a product of this country—a regeneration of a being previously held down by adversity.

What interests us most as students of eugenics in the physical development of the European peoples is whether, in view of the great influx of people from that continent into this country, a crossing of our blood with that of races having a much poorer physical development, will have a deleterious effect on our own physical stamina, whether a crossing with the better northern races will have a tendency to improve our own standard of muscular development, or whether there will be no effect. If we take the view that the poorly developed races of Europe owe their underdevelopment to a distinct degeneration or atavistic retrogression in the evolution of man, due in part to the frequent crossing between widely different races, then their coming here in very large numbers might have the same effect. If, on the other hand, we take the view that their poor physiques are due only to their extreme poverty, poor hygienic surroundings, ignorance and disease, then their coming here—if properly distributed—can but elevate people who can be elevated in no better way. At all events, southern Europe offers a very fertile field for, what might be called, "philanthropic eugenics."

Aside from the effect on our own physical stamina of the ingestion of a great number of physically inferior people, our own mode of living is fast converting us into a race of Lilliputians. There is an undoubted trend away from work involving the use of muscles. We are breeding a race of people with big minds and little bodies. People are willing to engage in occupations far more arduous, though less remunerating, as long as it is not "menial." The trend in this direction is poor economy because our bodies are unable to supply the divers needs of an overactive mind. Overactivity of the mind leads to physical exhaustion just as the exhaustion in manic conditions is due to an activity of the mind out of proportion to the power of the body. In every large center we see evidences of the "strenuous life," in the people who walk with their heads down, fists clenched and looking neither to the right nor to the left as if they were "bucking" a foot-ball line. It is a constant nervous strain—"the pace that kills," and in bodies often so puny that the pace does not last long. This might be well enough if we devoted ourselves to methods to counteract this tendency and to keep up the balance between mind and muscle, namely, systematic physical training or exercises. Without this we will surely degenerate into a race of weaklings, neurasthenics and preseniles.

There is a tendency now to a too early education of the infant, together with a "high-pressure" system of teaching enforced through frequent competitive tests. In ancient Greece children were not educated at all before the age of 8. Now we start the child at the age of 6, and if many parents had their way it would be at an earlier age. There is nothing lost in delaying the education of the child until a later age, because the intelligence and comprehension develop very rapidly without the stimulus of education. A child whose brain is not befogged by too early an attempt at education grasps its learning much more quickly later on. Were the two years, from 6 to 8, spent in preventing the development of any tendencies toward physical defects or correcting those that have already developed and in forming in the child the habit of physical exercise, the time would be more profitably spent. Inculcate in the mind of the child the desirability of a "sound mind in a sound body."

In respect to a good physique, therefore, a proper start in life is also essential. Of course, the diseases of childhood, of which rickets stands foremost and rheumatism next, retard the physical development of the child, but with the enlargement of the field of preventive medicine these causes will soon cease to exist.

While hernia, in the adult, is a frequent accompaniment of a weak musculature over the abdominal wall, neurasthenia is by far the most common result of a poor muscular system. It is the result of a poor muscular system being overstimulated by a too active brain. The most characteristic examples of the muscular nature of neurasthenia are the various trade cramps — writers', telegraphers', etc. One hardly expects to find these conditions in robust muscular individuals, but only in thin, pale and scrawny individuals. Eye strain—muscular—is another example of this condition.

In women a very serious manifestation of a poor musculature is dystocia uteri. This is almost entirely due to a weak uterine muscle, the result of the lack of exercise which the modern woman takes. It is, on the one hand, the "hot-house woman" who never walks or submits herself to the elements, and, on the other hand, the "factory-woman," who does work — "the drudgery which forms one of the attributes of civilization—it is superhuman toil which allows of no repair"—but quite beyond her capabilities.

Commonly a poor muscular system is accompanied by an insufficient chest development and expansion. This is brought about by deficient power in the auxilliary muscles of respiration; the resulting insufficient expansion of the lungs undoubtedly predisposes to pulmonary tuberculosis.

Weak and poorly developed muscles, especially in children, are common causes of curvature of the spine and flat-foot. The former condition is due to the lack of the proper balance of the spinal column, given to it by normal muscle; the latter is due to weakness in the plantar flexors and invertors.

The remedy for the increasing tendency toward muscular degeneration and its allied conditions lies in exercise by muscular movement. "Exercise stimulates the entire network of the circulation, and the vital processes resulting from it, without their being exhausted but rather benefited by it." It is the rational means for the maintenance of the general health. Exercise means regeneration through an increased circulation, accompanied by the throwing off of waste products, and should, therefore, be accompanied by proper and frequent bathing in order to carry off the waste products thrown off by the skin.

Here also, excesses are baneful; too much exercise of mind and body means collapse, while devotion entirely to muscle means its development at the expense of the brain. There is a happy medium within which we could breed a race of people in whom brain and muscle would be equally divided.

> "Roman gladiatorial barbarities were not exercises and are not to be compared to Athenian exercises. The decay of Rome and Greece was marked by pensile baths and beds for the wealthy, and barbarous exhibitions for the masses. A desire to witness the danger and even the destruction of others is usually most prominently exhibited by those who would be the least likely to share them themselves. The poorer the muscular development of a race, the greater its admiration for prowess."

With the increase of physical education there will be a diminution in the desire for the cruel sports such as bull-fights, cock-fights, prize-fights, etc., for these sports are popular only in countries where there is a tendency to such degeneration. "Failing and lost power raises an arena in which are enacted scenes shocking to a healthier sense." If athletics of the "sane and safe" kind were more common and universal there would be little enthusiasm for the barbaric sports. The necessity for therapeutic physical exercise arises only from the fact that the trend of civilization is away from work involving the use of the muscles. Where the ground is cultivated there is little need for artificially devised exercise. When the luxury of city life increases there is less desire to toil in the country, and although the present cry is: "Back to the farm," every one seems to desire "the short life and a merry one." Socrates said of exercise: "The strength of the body is destroyed by violence and idleness but preserved by exercise. . . . shun satiety of food and frequently exercise the body." Modern high livers eat plentifully and exercise very little; and while there is some increase in weight it is due to fat and not muscle, being in fact a fatty degeneration of the muscles.

The realization of the rapid decline of muscular development has, however, stimulated exercise enormously, but thus far only those who need it least have been lured to it—namely, the robust minority. The spectators are enthusiastic enough, the greatest enthusiasm going to the sports requiring the greatest endurance, yet it is but the enthusiasm displayed in all games of chance. In order to develop the muscular system it is important to take up each group of muscles and develop them separately, not merely improving their esthetic value, but also their power of endurance. In the process of exercise one should never fatigue, nor should one endeavor to be "in trim," "in form" or "trained to the minute." These terms mean the attainment of a "maximum at which one can maintain oneself only for a minute." Systematic exercise, however, causes a marked increase in volume, strength, elasticity and tone of the muscles, because exercise increases the circulation and hence the nutrition of the muscles and of the entire body. Not the increase in the number of fibers is aimed at through exercise—that remains the same—but an increase in the volume or "cross-section" of the individual fibers and consequently of the entire muscle. The hyperemia which accompanies contraction causes hypertrophy of the individual fibers.

Physical education should, of course, begin during childhood. The year or two spent in kindergarten play might be devoted to a systematic physical training suitable to age, sex and physical condition of the child. Burdening the mind of the child with preliminary education is useless and must be gone over again; it leaves no real impression. Throughout the child's schooling it should be given only as much mental work as its physical condition warrants. Forced education at a high pressure is harmful; it does not increase the child's worth, while it retards its physical development. During the school course as much attention should be paid to the physical training as to the mental. It should be an actual part of the curriculum—not the waste of an hour or two in the gymnasium, usually given over to play—which play, as such, should be encouraged — only it should have its own time. The instructor is usually too busy with the athletes of his class to give any attention to those who need it most. There is too much pride taken in athletic feats and too little in physical attainments.

The instructor should have an actual record of the physical status of each one of his pupils, noting physical defects as they appear, and to those should be directed his efforts at improvement. A tendency to curvature of the spine should direct the instructor's attention to exercises tending to strengthen the muscles affected; a tendency to flat-foot should receive appropriate muscle-treatment; narrow-chested children should be taught appropriate breathing exercises. Why not home-work in the physical exercises as in the mental—home-work in the particular kind of exercises the child needs? Enlist the aid of the parents, which can easily be done by explaining the purpose in view; let the child's efficiency rating depend on the results. To accomplish this it would be necessary not merely to have an athletic instructor, but one who has perhaps less of that quality and more knowledge of the human body — possibly a physician—but one, at least, who has a working idea of the anatomy of the human body.

In our colleges, where so much attention is paid to sports and athletics, real physical culture in the entire student body is not encouraged. All the attention, and the only attention is paid to those students who can bring home "honors" to the institution. Athletes are persuaded to leave other colleges, expensive "coaches" are hired, delinquent students are given private tutoring at the expense of the athletic associations, but to the real improvement of the real student body no attention is paid.

In conclusion, it might be well to note that, aside from the ability of a well-developed muscular system to endure the physical hardships of life, a good musculature is necessary in order to have a healthy body; that muscular development is influenced by climatic, dietetic and hygienic conditions; that frequent crossing between widely different races seems to lower the standard of physical development, as well as a too close in-breeding; that, while civilization tends to a physical deterioration in general, much can be done to check this tendency through intelligent, systematic physical education, begun in childhood and continued throughout life.

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LOCALIZATION OF SPIROCHÆTA PALLIDA IN THE HEART-MUSCLE IN CONGENITAL SYPHILIS

IN THE ABSENCE OF HISTOLOGIC LESIONS OR SPIROCHETES ELSEWHERE IN THE BODY *

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Case 1. *Patient.*—Infant, aged 2 months and 20 days; weight, 6 pounds, 6 ounces (2,890 gm.); length, 68 cm. The father had syphilis six years ago and gonorrhea eight years ago. He was married five years ago, after one year of antisyphilitic treatment which was continued for half a year after marriage (mercury inunctions). There have been two children and no abortions. The first child had ophthalmia neonatorum but recovered and is now apparently well. The second child (the patient in our case) also had ophthalmia neonatorum, for which it was admitted to the Detroit Children's Hospital. A purulent discharge and corneal ulcers were present in both eyes, and gonococci were demonstrated in the pus. The skin of the infant's body was rough, the palmar surfaces and the soles of the feet were rough and cracked. The mouth, nose and anus showed small erosions and fissures. The scalp behind the ears was roughened and eroded. While in the hospital the face and buttocks became very sore and ulcerated extensively. The infant lost weight rapidly, temperature became subnormal; food was refused, and death occurred from inanition. No spirochetes were found in the discharge from ulcers.

Macroscopic Examination.—Autopsy, performed by Dr. Snyder, showed the following conditions, only the most important features of the protocol being given here: Emaciated body. Palms of hands and soles of feet very rough; small ulcers and erosions on nose, mouth and anus. Panniculus absent; muscles very small and pale on section. Intestines distended. Position and relations of abdominal organs normal. Diaphragm in normal position. Weight of thymus, 12 gm., fibrous in character. Mediastinal lymph-nodes enlarged. Weight of heart, 35 gm. Cavities dilated; muscle very soft and light in color. Numerous small, whitish, translucent nodules beneath the epicardium. On section of the heart-muscle, similar pale, translucent areas seen throughout the muscle. Valves and endocardium normal; coronary vessels prominent and firm. Weight of right lung, 70 gm.; left one, 68 gm. Flesh-colored upper lobes; very marked hypostasis in lower lobes. Left lung adherent to pleura, particularly over the eighth and ninth ribs. Bronchial nodes enlarged, hard and firm, appearing fibrous. Kidneys pale; outline of structures not clearly seen; capsule somewhat thickened; fetal lobulations; weight of right, 28 gm., left, 25 gm. Spleen not enlarged; firm. Weight of liver, 135 gm.; firm; numerous pale areas. Gastro-intestinal tract and genital organs, negative. Mesenteric lymph-nodes enlarged.

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* From the Pathological Laboratory of the University of Michigan.

Microscopic Examination.—Tissue was taken from all parts of the body except from the skin and fixed in a 10 per cent. formaldehyd solution. Part of it was put through the Levaditi method, while blocks from each organ were put through the ordinary paraffin, hematoxylin and eosin method.

Hematoxylin and eosin sections showed no characteristic changes of congenital syphilis in any organ or tissue except the heart. In this organ the pale, translucent areas showed the characteristic pale degeneration of the muscle-fibers, epithelioid proliferation of the stroma, cellular infiltrations, fatty degeneration, etc., described by one of us elsewhere as characteristic of congenital cardiac syphilis.[1] In the Levaditi preparations those areas showed enormous numbers of spirochetes. In the Levaditi preparations of all other internal organs no spirochetes were found by Dr. Snyder. The material was then brought to Ann Arbor and control preparations made by Dr. Warthin with the same result. No histologic lesions of syphilis and no spirochetes were found in any organ or tissue except the heart-muscle. This organ showed throughout its wall numerous characteristic areas of degeneration and proliferation of the stroma, each area corresponding to a spirochete colony. As far as the internal organs of this case are concerned, we have example of the localization of spirochetes and tissue-changes to a single organ, the heart. No sections were made of the small erosions and ulcers about nostrils, mouth and anus, so that the presence or absence of spirochetes in those was not determined.

Case 2. *Patient.*—Illegitimate infant, 8 days old. The mother presented no signs of syphilis. Placenta showed no microscopic signs of syphilis. The child developed "snuffles" a few days after birth, and a papular eruption over the palms of the hands and soles of the feet. It died of "asphyxia."

Macroscopic Examination.—Autopsy by Dr. Warthin. All abdominal organs showed an acute passive congestion, but no macroscopic evidence of syphilis. The lungs were congested and edematous, but presented no characteristic "white pneumonia." The heart was much enlarged, its cavities dilated, and its walls greatly thickened (from two to three times normal thickness), the muscle being much more pale than normal. In the anterior wall of the heart, just over the ventricular septum, there were two light-colored, translucent nodules, jelly-like in appearance, resembling myxomatous tissue. These nodules were raised above the epicardium, each one being about 1 cm. in diameter. On section they were found to be nearly round and to extend entirely through the heart-wall from the epicardium, to the endocardium, projecting on both surfaces.

Microscopic Examination.—Smears of the cut surface of the heart showed the presence of numerous spirochetes, and in the blood from the liver, when examined by the dark-field method, spirochetes were also found. Portions of the cardiac nodules (half of each) were prepared by the Levaditi method, the other half prepared in the ordinary method and sections stained in hematoxylin and eosin. The light areas were found to consist of a gelatinous connective-tissue giving a strong reaction for mucin with mucin-stains (Kresyl-echt-violett). Traces of atrophic muscle-fibers were seen in this new tissue, particularly at its periphery which was rather sharply defined. In the Levaditi preparations these myxoma-like nodules were found to be full of spirochetes. Smaller areas throughout the muscle-wall presented the same picture of syphilitic myocarditis, previously described, and in the Levaditi preparations these also contained spirochetes. Neither the lungs, spleen and liver, nor any other internal organ showed any microscopic lesions of congenital syphilis, and in the Levaditi preparations no spirochetes could be found anywhere except in the heart. The skin lesions were not examined microscopically.

The two cases are important for a number of reasons. They throw light, in a unique way, on the important question of the localization of spirochetes within the body, and the "concentration" of the infection in a single organ or tissue. The fact that the heart may show marked lesions in cases of congenital syphilis when the liver, lungs and spleen show no changes at all and no spirochetes, has a great practical importance in pathologic diagnosis, since in ordinary routine work signs of congenital syphilis are usually looked for in these organs alone. These cases also add emphasis to the view, expressed by Warthin, that the heart-muscle is a favorite place for the colonization of the *Spirochæta pallida,* and that the macroscopic signs of such a localization may be so slight that the question of syphilis can be determined only by the demonstration of the spirochetes.

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[1] Warthin: Am. Jour. Med. Sc., March, 1911, p. 398.

A CASE OF LEPROSY IN INDIANA

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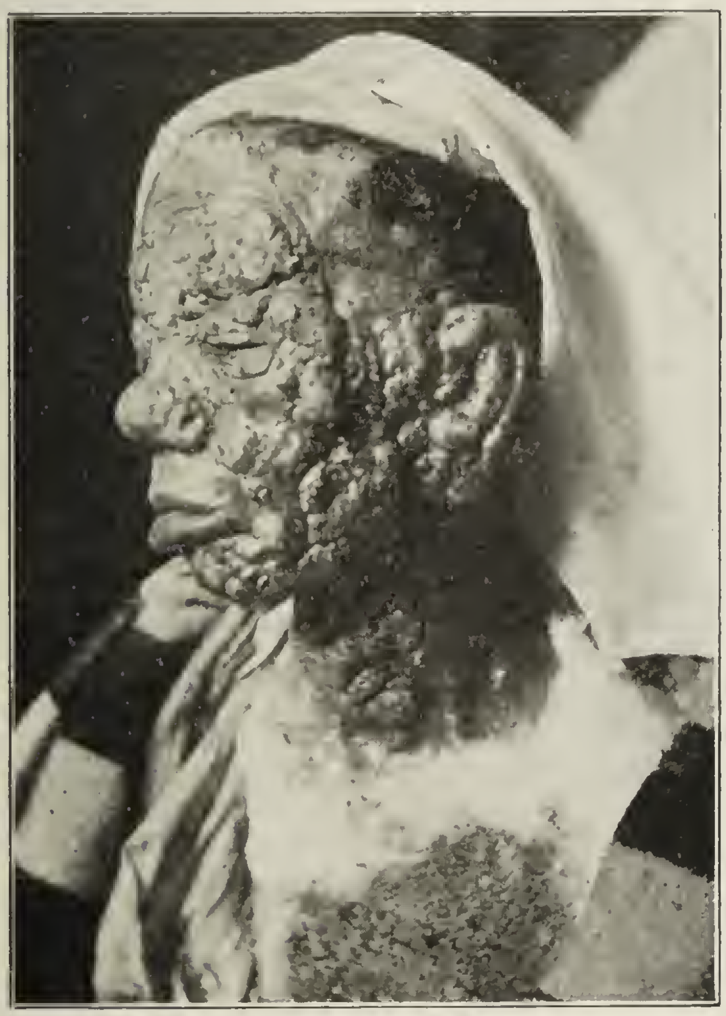
History.—The patient, a colored woman, aged 60, born in Hawkins County, Tenn., twice married, is the mother of six children, of whom two are living. There is no history of any former illness. The woman has never been farther south than Chattanooga, for a brief visit, nor farther north than Chicago, where she remained two weeks during the World's Fair in 1893. She was a free woman, well bred, and from her thirteenth to her thirtieth year she was servant in a family in Knoxville, where most of her life has been spent. Three years ago she removed to Indianapolis, and has not left the city since that time. The history of her affliction dates back indefinitely five years, when a brownish-red papular lesion appeared over her brow. One year ago her arms, trunk and legs were also affected with dark blotches, with slightly elevated margins simulating those of lichen planus; there were small, irregular elevations running together to make the flattened patches, as in that disease. The itching was intense, and led her to become a patient of the city dispensary, where she was seen and treated a number of times. A nodule, small and red, one-half inch in diameter, appeared on her cheek. At about this time she left the dispensary and remained at her home for three months. During this period the lesions grew rapidly, but she did not return to the dispensary.

Examination.—Dec. 19, 1911, she was visited at her home by Drs. A. W. and N. D. Brayton and Dr. Bernard Erdman. Nodulation had progressed with amazing rapidity; the ears, face and scalp presented numerous nodules, becoming confluent and ranging in size from a pea to a silver quarter in diameter, and from one-sixteenth to one-quarter of an inch in elevation. Bleeding and oozing were easily provoked by friction of clothing or rubbing the nodules with a bit of gauze. The nodules were markedly anesthetic. Alopecia of the lids and brows was present. A slight thickening of the left ulnar nerve was detected. There were, however, no arthropathies; no perforating ulcers, bone-lesions or eye-lesions. Hyperesthesia existed in recent erythematous patches on the legs. The thermic and pain senses were not involved. The general health of the patient was excellent. She ate and slept well; her temperature was only one-half degree above normal.

Diagnosis.—The clinical appearances were distinctly those of acute nodular leprosy. Smears were taken from an excised section of a nodule on the ear. The lepra bacillus was readily demonstrated by the usual methods of staining. Smears and sections were again taken December 21, 23 and 27, with the same results. The organism was found in clumps and also separately. They were abundant, but not as numerous as in some reported cases. Smears from the nares were negative; there was no catarrh; no affection of the throat, mouth or other mucous membranes. The characteristic, acid-fast, beaded, curved and slightly tapering forms of the bacillus of Hansen were apparent. There were no evidences of tuberculosis or syphilis. The Wassermann reaction proved negative in blood taken and tested by Dr. John R. Thrasher of the Indiana University School of Medicine.

December 27, I reported the case to Dr. J. N. Hurty, secretary of the Indiana State Board of Health, as a clinically and microscopically verified case of nodular leprosy. Photographs were secured. The case was then referred by Dr. Hurty to the City Health Board of Indianapolis.

Treatment.—Jan. 1, 1912, at the request of the Indianapolis City Board of Health, Dr. Ralph Hopkins, of New Orleans, the visiting physician of the Louisiana Leper Home, was invited by the city health board to confirm the diagnosis and to give advice out of his large experience with leprosy in New Orleans and the State of Louisiana as to the care, treatment and relations of the afflicted person to the community. Dr. Hopkins reported the case as one of the most notable—on account of the rapid growth, multiplication and confluence of the leprous nodules—that he had ever seen. His examination of the case was very complete, including history, clinical features, microscopic sections and also examinations of the associated members of the family—sister, daughter-in-law, and a grand-daughter 12 years old. These persons were not affected. Dr. Hopkins advised the usual treatment of chaulmoogra oil, strychnin, rest, abundant feeding, daily morning and afternoon baths in borated and soapy waters, and the use of petrolatum freely as an unguent.



Facies of typical and extremely rapidly developing nodular leprosy in a colored woman, aged 60. First lesions observed in 1907. All nodules except one have developed since September, 1911. The entire back is also nodular, the arms to the elbows and the legs to the knees. Picture from the collection of the Indianapolis City Board of Health, taken Jan. 26, 1912.

Conjectural interest in the case centers in the unknown manner of the patient's infection, since she is a native of Tennessee, and never has visited the coast regions of the country, or been outside of her native state except as above mentioned. She has, however, for many years, been in the habit of eating salt mackerel and herring and other dried and preserved sea-fish; this may appeal to the Jonathan Hutchinson school, which regards leprosy as caused from the eating of fish products infected with leprosy.

The usual scientific interest precipitated by the occurrence of a rare disease has been developed, and the organism will be grown, if possible, after the manner of Duval, of Tulane University Medical School, as treated in his various articles on the cultivation of the lepra bacillus. These researches will be carried out in the laboratories of the University School of Medicine.

The patient is isolated in her home and is receiving the considerate medical attention necessary to her welfare and the protection of the community.

CYSTIC APPENDIX VERMIFORMIS OF UNUSUAL SIZE

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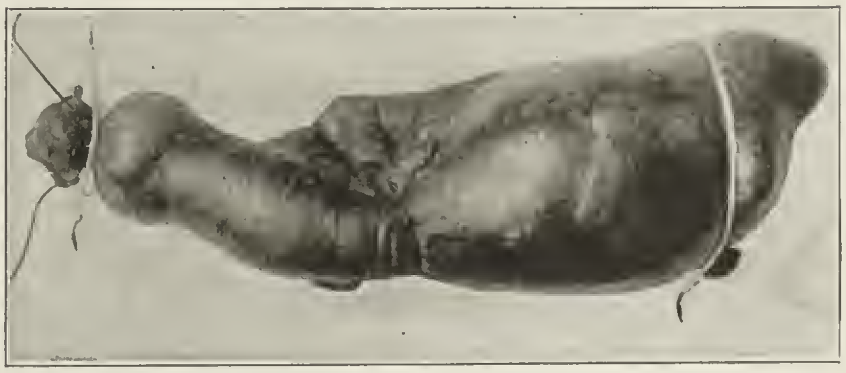
The following case is reported because of the unusual size of the specimen.

Patient.—N. T., a woman aged 42, single, patient of Dr. G. R. Smith, was seen in consultation at St. Joseph Hospital, Jan. 4, 1912. During the past six years she had experienced repeated attacks of abdominal pain of general distribution, with occasionally more localized pain in the right iliac region. These attacks of pain were accompanied usually by nausea and vomiting. Increase in the pulse-rate or temperature elevation was rarely observed. She complained of excessive bloating and that abdomen was frequently painful to pressure. There was chronic constipation; menstruation fairly regular, at no time painful.

Examination.—At the time I saw the patient she had been confined to her bed about one week, during which time she had had violent pain throughout the abdomen localizing in right lower quadrant. The abdomen was painful to pressure on left as well as right side. There was no rectus rigidity. Bimanual examination showed a tumor of some size high up in the right side of the pelvis which seemed to fluctuate and which did not seem to be connected with the uterus, which latter was enlarged. The condition was thought to be an ovarian cyst together with appendiceal disease and laparotomy was advised.



Cystic appendix vermiformis of unusual size

Operation.—Jan. 5, 1912, the patient was operated on under hyoscin (scopolamin), morphin and strychnin and ether anesthesia. A 3-inch incision was made to the right of the median line from the pubis upward and the abdominal cavity was opened. Examination of the abdominal cavity through the incision showed the uterus to be somewhat enlarged and on the posterior surface was discovered one small pedunculated fibroid. The right fallopian tube was cystic at the distal extremity. The right ovary was normal; the left ovary contained a monolocular cyst, the size of a walnut. The left tube was normal. In the right pelvic region was seen a large fluctuating tumor somewhat bound down with adhesions, which proved to be the appendix vermiformis given off from the cecum close to the ileocecal junction.

In the fresh state this appendix weighed 5 ounces, was 7¾ inches long, 5¾ inches in circumference at distal end and 3¼ inches in circumference at proximal end.

Be Skeptical as to What is Impossible.—Every now and then the impossible becomes possible. A professor once made the following bright reply to one of his students who had declared that a certain work was impossible: "Yes, of course, it is impossible; but if you and I do not watch out, some fool will come along and do it right before our eyes."

REMOVAL OF FOREIGN BODY FROM THE RIGHT BRONCHUS *

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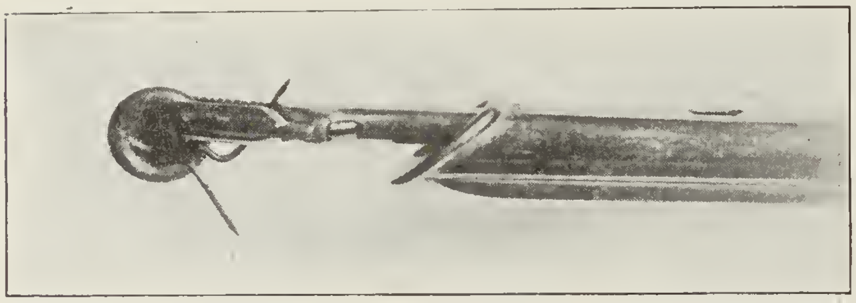
Patient.—Margaret T., aged 3½, had a choking attack Nov. 3, 1910, which led the mother to believe that she had inhaled some foreign body. The attack subsided, however, and a physician was not consulted. the family living on a farm where one was not readily to be had. During the next ten days, however, there were recurrent attacks of difficult breathing, hoarseness and choking. Ten days after the initial attack a physician was consulted who found difficult breathing, and laryngeal diphtheria was suspected. Dr. C. A. Smith was called into consultation and came to the conclusion, from the history of the case and the symptoms present, that a foreign body had been inhaled. The difficulty in breathing seemed localized in the larynx. An *x*-ray picture was taken of this locality (the exposure for which picture, however, did not include more than the trachea, and hence did not show the region of the bronchi and no foreign body could be seen in the negative). Despite this fact, Dr. Smith persisted in the opinion that a foreign body was present and called into consultation Dr. Little, who concurred in the diagnosis and brought the patient to my office. This was on the eleventh day after the first attack.

Examination.—The child walked into my office but the breathing was so noisy that it could be heard across the room. When an attempt was made to give chloroform on the table the patient became immediately cyanotic so that the administration could not be continued, it being necessary to place the child in a sitting position to restore breathing. A second attempt was made with ether with the same result. Then it was found that the patient could not breathe in the recumbent position. The bronchoscope was therefore entered without anesthesia and it was found that the difficult breathing was due to an edema of the glottis, but there was no foreign body present in the larynx. The bronchoscope was passed through into the trachea. The examination had to be discontinued because of the condition of the patient, breathing having ceased and the child being cyanotic.



Jackson bronchoscopic tube and distorted double-pointed thumb-tack extracted from bronchus in a girl aged 3½.

Operation.—The child was then unconscious and an immediate tracheotomy was performed, by Dr. Little, without an anesthetic. An important point was observed in the performance of this tracheotomy in that an attempt was made, which proved successful, to avoid bleeding, so that in the steps following the operation we were not annoyed with blood in the bronchi. The operation resulted in a restoration of good breathing but it was necessary to cocainize the trachea and bronchi before the bronchoscope could be introduced. The difficulties even then were great, as the patient had to be firmly held during the operation and the smallest-sized tube only could be used. In one hour and a half from the time we had started to operate, I discovered what looked like a pin lying across the right bronchus. It had seemed from auscultation and from the appearance of secretion from the right bronchus and the absence of secretion in the left bronchus, that if a foreign body were present it must be located on the right side. The character of the foreign body was entirely unknown to us and we did not have any time to subject the child to an *x*-ray examination. The tubes were exceedingly small, corresponding to the size of the child. Even after discovering what appeared to be a pin, there was great difficulty in extracting it, owing to the fact that the ordinary foreign-body instruments could not be used in such a small tube and with the necessary sponging and manipulation the foreign body disappeared from view time and again. Finally, however, after one hour more of effort, the small alligator forceps was successfully introduced and the jaws expanded immediately on their exit from the tube and brought down on the pin, which had been previously located in relation to the mouth of the tube so that it was transversely across the end of the bronchoscope. The long alligator forceps, when introduced, obscured the vision so that I could tell that I had reached the end only by the fact that the tube allowed the jaws to expand. As soon as this occurred, I brought them tightly together on the pin and removed the bronchoscope, forceps and foreign body all at one time, as it was evident that the foreign body could not be brought through the bronchoscopic tube. We then found that we had at the end of the tube a brass thumb-tack with two crooked sharp points, and it was evident that the brass end had been situated in a bronchiole allowing only one of the pins to project into the bronchus. The picture shows the foreign body removed and also the forceps and Jackson tube used and the exact grasp that was secured on the foreign body. Improvement in breathing took place at once.

A tracheotomy tube was inserted and left in for one day, after which the wound was allowed to heal and in one week the child left the hospital well, no complications having ensued.

It is probable that in this case the foreign body may for a time have been lodged in the larynx, or, at least, it produced sufficient trauma in the larynx to cause the edema which gave rise to the noisy and difficult breathing and the necessity for the performance of tracheotomy.

A lesson which may be learned from this case is that in an *x*-ray picture of cases of foreign body entering the respiratory apparatus, the entire area, mouth and lungs inclusive, should be exposed. A good *x*-ray picture giving the location of this foreign body and its character would have been a great aid in its extraction.

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* Reported before the Minnesota Academy of Medicine.

A CONTRIBUTION TO THE STUDY OF RAT LEPROSY *

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It has been the hope of those interested in the investigation of human leprosy that much information might be gained by careful study of a disease occurring in rats, clinically similar in a superficial way to leprosy in man, and caused by a bacillus morphologically indistinguishable from the *Bacillus lepræ* of Hansen.

Since Stefansky's[1] first observation of this disease among the rats of Odessa, similar observations have been made in many parts of the world, notably in Berlin (Rabinovitsch[2]), in London (Dean[3]), in New South Wales (Tidswell[4]) and in San Francisco (Wherry[5] and McCoy[6]).

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* From the Division of Bacteriology, Medical Department, Stanford University.

[1] Stefansky: Centralbl. f. Bakteriol., xxxiii, 481.

[2] Rabinovitsch: Centralbl. f. Bakteriol., xxxiii, 577.

[3] Dean: Centralbl. f. Bakteriol., xxxiv, 222; Jour. Hyg., v, 99.

[4] Tidswell: Cited by Brinckerhoff in "The Rat and Its Relation to Public Health," Treas. Dept., Washington, 1910.

[5] Wherry: The Journal A. M. A., June 6, 1908, p. 1903; Jour. Infect. Dis., v, 507; Rep. U. S. P. H. and M.-H. S., xxiii, 1841.

[6] McCoy: Rep. U. S. P. H. and M.-H. S., xxiii, 981; abstr. in The Journal A. M. A., Aug. 22, 1908, p. 690.

The great hygienic importance of the possible identity of the disease of rats with that of man, together with the experimental advantages incident to the ease of transference of the former disease from rat to rat, have led to an already considerable collection of facts regarding rat leprosy. Much light has been thrown on the distribution of the disease in various parts of the world by the studies of Brinckerhoff;[7] the relationship of the bacillus to that of human lepra has been studied, by means of complement fixation, by Mezinescu,[8] and more recently by Schmitt;[9] and accurate reports on the pathologic features both of the spontaneous and experimental occurrence of rat leprosy, and on probable modes of transmission have been made by Wherry[5] and McCoy.[6]

Since the chief purpose of this paper is to present experiments on the cultivation of the bacillus of rat leprosy and the observation of bacteria in tissue-plasma preparations and since, in the main, our observations on the pathology of the experimental disease merely serve to confirm the observations of the last-named authors, this phase of the subject will be alluded to very briefly.

Our original strain was obtained through the kindness of Dr. George W. McCoy and has been kept alive by passage through white rats. In agreement with other observations, subcutaneous inoculation has usually given rise to extensive lesions in the deeper layers of the skin, with secondary involvement, often, of the inguinal and axillary lymph-nodes and occasional, sparsely distributed bacilli in the macroscopically normal liver, spleen and lungs. In a few instances there have been small isolated white tubercle-like abscesses on the liver and spleen, rarely on the kidneys, consisting of masses of the bacilli, and in one intravenously inoculated rat there occurred extensive infection of the liver, the entire organ appearing greyish-pink, and containing throughout its friable tissue myriads of the microorganisms. It has also been possible to produce, with considerable regularity, localized nodules in guinea-pigs. These, when left undisturbed for six months, in all cases went on to complete healing.

Attempts to cultivate rat leprosy were begun by one of us in conjunction with Dr. M. C. Terry, of this laboratory, about a year ago. In spite of the negative results of other workers, our first attempts were made by the employment of all the usual laboratory mediums, with and without the addition of glycerin, rat-serum, rat whole blood and rat organs. Cultures were made aerobically and anaerobically, at 37.5 C. and at room temperature, in the dark and in diffuse light. All these attempts had negative results.

In the next series of experiments it was hoped that the growth of the bacilli in the subcutaneous areas of the rat, where adipose tissue is normally located, might indicate a need for fats. Cultures were made on Dorsett's egg medium, to which fats in the form of butter fat and rat fat had been added, with and without glycerin. No results were obtained.

Simple symbiosis on various mediums, both aerobic and anaerobic, with the spirillum of cholera, *Bacillus typhosus, Bacillus subtilis, Bacillus coli communis* and *Staphylococcus aureus*, gave negative results, the cultures being observed at varying intervals for several months.

At the same time, it was attempted to carry out, with this bacillus, the technic by which Clegg has succeeded in cultivating the bacillus of human leprosy. Symbiotic cultures of an ameba with the spirillum of cholera, with the colon and with the typhoid bacillus were made on ameba agar, and on these cultures rat leprosy bacilli were implanted, both before and after encystment of the amebas. In none of the plates and tubes, however, could an increase of the bacilli be determined.

Since the rat leprosy bacillus has recently been cultivated by this method by Hollman, it may well be that our entirely negative results were due to the variety of ameba used. It was not, as in Clegg's experiments, an ameba obtained from man or from the guinea-pig, but was a fresh-water form obtained from hay infusion and thriving best at a temperature of about 30 C., losing its motility in the incubator. Unfortunately we have not had an opportunity to repeat these experiments with an *Ameba coli,* and numerous attempts to obtain intestinal amebas from various laboratory animals proved unsuccessful.

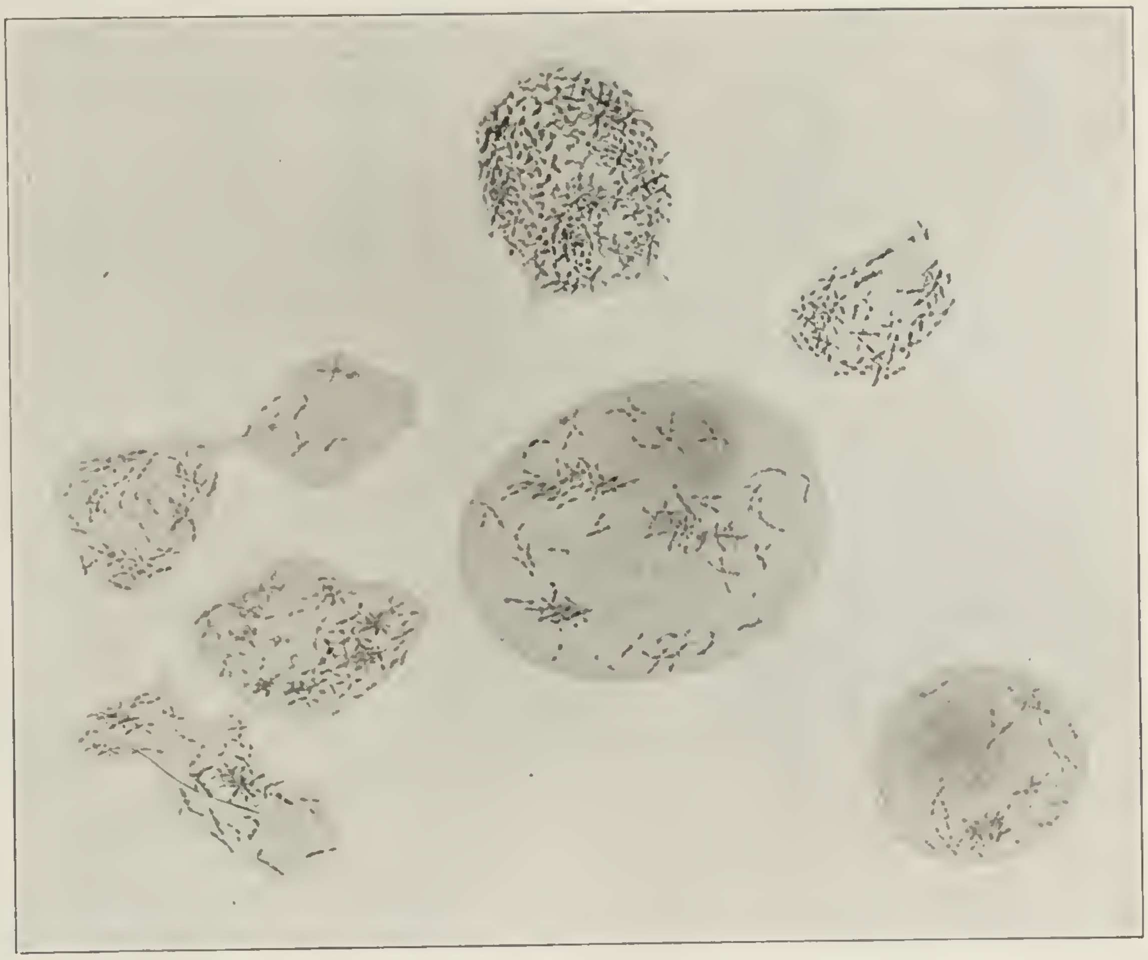

Fig. 1.—Rat leprosy bacilli in cells of embryo rat spleen growing in plasma.

The experiments in which definite multiplication of the rat leprosy bacilli was achieved were carried out by means of the technic developed by Harrison, Burrows, Carrel and others, for the growing of tissue cells in coagulated plasma. They were done in connection with attempts made at this laboratory to study the reactions between growing cells and various bacteria, in the hope of throwing light on the part played by the tissue cells themselves in immunity against certain microorganisms.

The technic in carrying out these experiments was, in the main, that used by other workers for plasma-tissue growth. As a source of tissue we have used small pieces of spleen from rats not over 1 week old, since we have experienced considerable difficulty in obtaining satisfactory growths with adult tissues. We believe, also, that we have obtained more prompt and extensive cell proliferation when the animals from which the tissue was taken were not killed by ether or chloroform, but were killed just before experimentation by cutting rapidly through the cervical cord.

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[7] Brinckerhoff: In "The Rat and Public Health," Treas. Dept., Washington, 1910.

[8] Mezinescu: Centralbl. f. Bakteriol., xlii, 664.

[9] Schmitt: Univ. of California Pub., ii, No. 3, p. 29. Gurd: Jour. Path. and Bacteriol., 1911, xvi, 1.

The plants were made on cover-slips over large hollow ground slides. The plasma was obtained in the usual manner by bleeding a young adult rat from the carotid, into small paraffined tubes set in a brine-ice mixture within large centrifuge holders. Minute drops of a thin emulsion of leprosy bacilli in salt solution were placed, with a very fine capillary pipette, on the flamed cover-slips; a very small bit of spleen tissue was placed in this, and the whole covered with a large drop of plasma from a paraffined pipette.

These preparations were then kept in the incubator at 37.5 C. and observed from day to day in a microscope chamber warmed by an electric bulb. In successful preparations migration of large stellate cells usually began within twenty-four hours. Within from twenty-four to thirty-six hours cellular extensions of projecting processes of the central mass would begin and the optimum growth was attained at the end of the fourth to the sixth day.

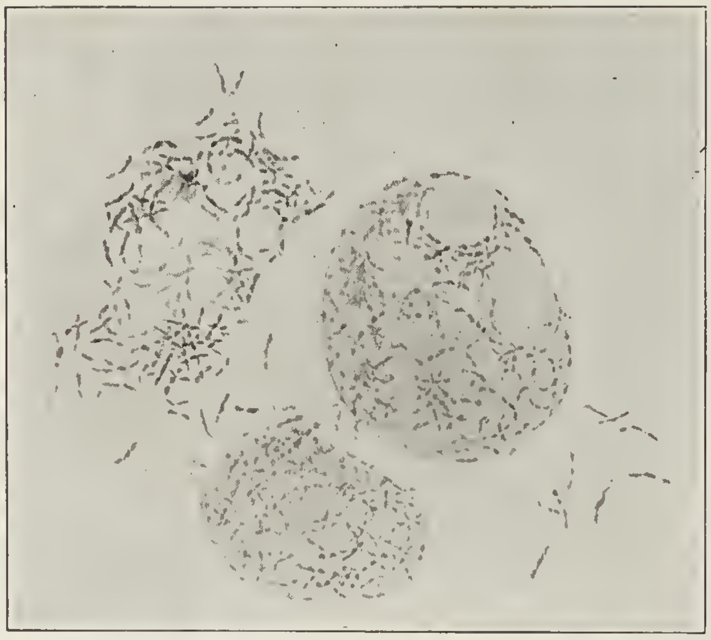

Fig. 2.—Rat leprosy bacilli in spleen cells growing in rat plasma.

Examinations of the preparations by staining were made at varying times, some being opened at the end of the first week, others not until two or three weeks had elapsed. The large number of unsuccessful plants in all of our experiments have served as controls for the few successful ones we have obtained. Further control was furnished by preparations of the original emulsion made on slides, on which larger quantities of the emulsion were placed than those planted with the tissues.

In two preparations examined after two weeks' incubation, an unmistakable and very extensive increase of rat leprosy bacilli had taken place. This increase had in both cases occurred intracellularly, within the large cells growing either separately or in small aggregations throughout the plasma. These cells, at first stellate, often with long protoplasmic processes, almost invariably became rounded and large, and coarse globules developed in the cell cytoplasm at a time (eighth or ninth day) when the tissue seemed to have ceased growing. Whether these cells represent splenic pulp cells or large endothelial elements from the blood- and lymph-spaces, we have no means of determining. Their size, appearance and arrangement, however, as well as their nuclear structure, seem to preclude their being regarded as polynuclear leukocytes.

When the preparations alluded to were opened and stained (carbol fuchsin, alcohol decolorization, counterstained with Jenner's solution), almost all the cells were found crowded with large numbers of the acid-fast bacilli. In some places the cells themselves were preserved fairly well and nucleus and cytoplasm could still be differentiated.

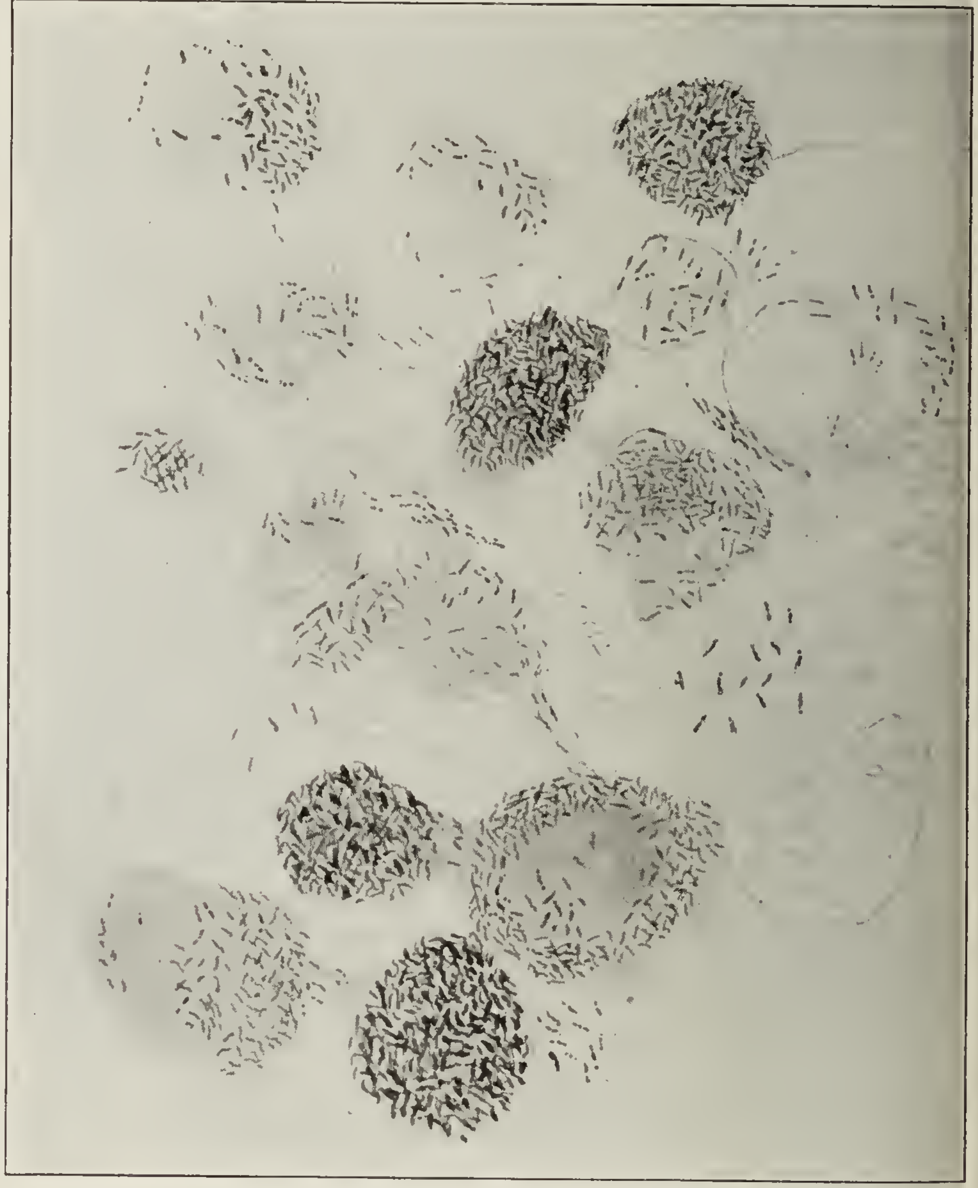

Fig. 3.—Rat leprosy bacilli grouped in the remains of dead spleen cells growing plasma.

In others, where the containing cell was represented only by a faintly stained granular detritus, the outlines of the masses of bacilli still indicated their original intracellular situation. These conditions are shown in the figures. Isolated extracellular bacilli were rarely numerous, never sufficiently so to indicate the probability of extracellular growth.

It was our hope that by frequent transference of the bacilli from such preparations to fresh plants gradual accommodation of the microorganisms to conditions outside the body might result, eventually, in their ability to grow extracellularly, and, finally, on mediums containing no cells. So far this has been unsuccessful, though further attempts, based on the analogous experience of Clegg with human lepra bacilli and amebas will be made. Transference to fresh plants and subsequent growth does not add a satisfactory control to our experiments, since it is impossible in this way to avoid transferring many times the number of bacilli which are planted from a thin emulsion by means of the very fine, hair-like, capillary employed originally. Nothing resembling even the beginnings of an extracellular colony has been noticed by us. It is, moreover, not as a method of cultivation that our technic is of chief interest, but rather as admitting of the direct study of bacteria in their reaction with living tissue cells.

It is an interesting fact that in many unsuccessful plants the rat lepra bacilli, usually so resistant, have almost completely disappeared within a week or ten days. As this is in distinct contrast to a number of experiments carried out by Dr. M. C. Terry, in which the rat lepra bacilli were kept for periods of weeks in mediums containing large numbers of leukocytes, both polynuclear and mononuclear, without disintegration or growth, it would seem to indicate that the tissue cells may exert a destructive influence on these bacteria not possessed by the usual phagocytic cells.

While it is not the purpose of this paper to discuss at length the histologic features of rat leprosy, it is of interest in this connection to note that in preparations from lymph-nodes of infected rats we have often observed the bacilli almost exclusively intracellular. This corresponds to the observations, in human lepra, of Hansen and Neisser and the more recent ones of Gurd. It would appear, therefore, that, as in human lepra, in the disease of the rat the growth of the bacilli takes place within the tissue cells rather than in the intercellular spaces.

The technic developed during these experiments has encouraged us to believe that we possess, in the plasma-tissue preparations, an instrument of great value in studying directly certain phases of the reactions between tissue cells and bacteria not amenable to direct experimental approach in the past.

Dust in the Cotton Industry.—Dust is a prolific source of inefficiency and of morbidity in many industries. Among them is the cotton industry, in some phases of which the problem of dust is a serious menace to the health of the employees, and more recently vigorous and intelligent efforts have been put forth to overcome this difficulty. In the cotton factories, the carding-machines seem to be the source of the greatest amount of dust and employees in this branch are seldom able to follow their employment to a normal age. It is in stripping the carding-machines that the most dust is produced and employees have adopted the expedient of holding a bunch of cotton between their lips to avoid inhaling the cotton fibers. Various respirators have also been used which cover the nose and mouth; but in modern factories various devices have been used to impound the dust from the machines as it is made, mostly consisting of hoods fitting over the dust-making cylinders, the offending material being carried off by air currents. A number of such devices are pictured in the *Scientific American*, Dec. 30, 1911, and are described by J. H. Crabtree. The operation of stripping or cleaning the carding-machines needs only be performed a few times a day and requires only a few minutes for each machine. The apparatus is so arranged that the full force of the exhaust fan or blower may be concentrated on one machine, which gathers up all the dust as it is being cleaned. The exhaust apparatus may be used in the intervals for withdrawing bad air from the work-room generally. It is found that these improved forms of dust extractors work admirably and that the health and efficiency of the employees are improved, and also that the removal of the dust improves the quality of the finished yarn.

THE TREATMENT OF OCCLUDED "S"

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One of the most frequent defects in speech found among the illiterate or the defective is the occluded "s."

In making the normal "s" the tongue is pressed against the hard palate rather tightly, but a narrow groove is left in the middle so that a jet of air passes through. The method of palatography — a very thin black artificial palate covered with chalk is held in the mouth while the sound is being produced — gives a record like that in Figure 1A; the black surfaces indicate where the tongue presses against the hard palate. It is the jet of air through the narrow channel that produces the distinctive sound of "s."

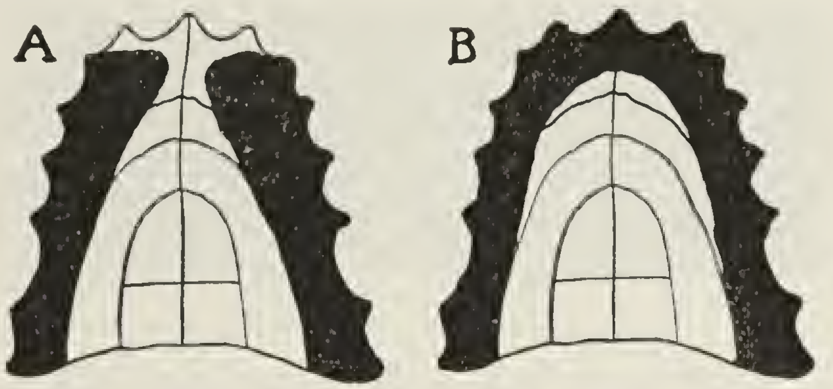

Fig. 1.—A, normal contact of the tongue with the palate in making "s." B, tongue contact for occluded "s."

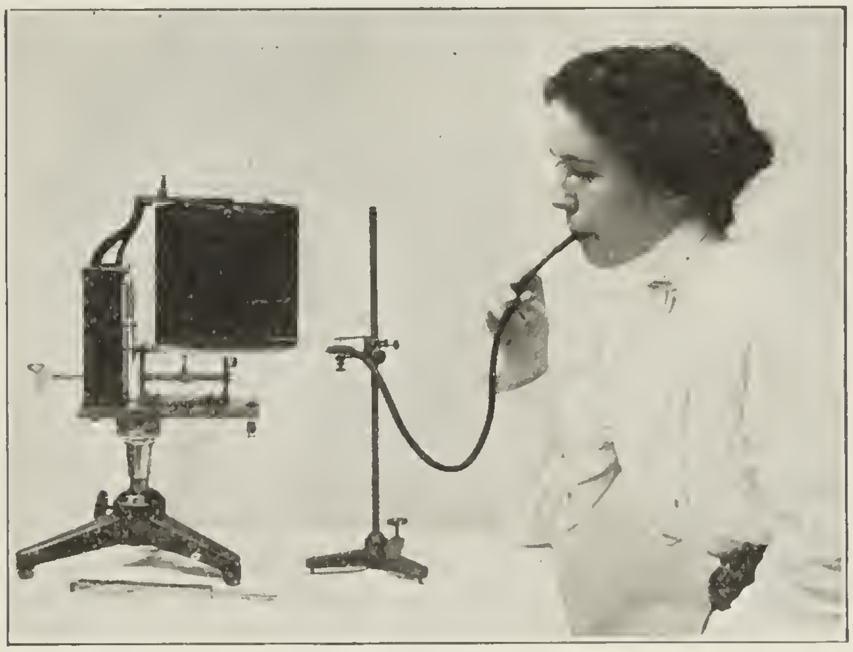

Fig. 2.—Apparatus for making records of tongue-pressure. A small rubber bulb is held behind the teeth above the tongue. A tube from it transmits the movements by air-pressure to the recording apparatus; this draws a white line on the moving surface.

A child with the occluded "s" apparently uses "t" and "d" instead of "s" and "z," saying "tun," "toap," "toup," instead of "sun," "soap," "soup"; or "dode," "Liddy," instead of "doze," "Lizzy."

A palatogram for the occluded "s" is given in Figure 1B. The black surface shows that the tongue stretches across the front of the palate and thus closes the narrow channel.

If a small rubber bulb placed between the front of the tongue and the palate is connected to a manometer or a registering apparatus (Fig. 2), the force of the pressure can be indicated. For an occluded "s" it is greater than for the ordinary "s" or for "t" (Fig. 3).

The occluded "s" is thus not the same as the "t"; it may be defined as an "s" made with excessive tongue-pressure resulting in a sound like "t."

Treatment by having the child imitate the “s” of a normal person usually aggravates the defect; he is already making too much effort with his tongue and the more he tries the greater the effort he makes. Sometimes he can be taught directly to relax the tongue, but this rarely succeeds.

It is sometimes effective to tell the child to stick his tongue between the teeth whenever he wants to say “s”; this has the disadvantage of replacing an incorrect sound by another incorrect sound, although the new sound is nearer the correct one.

The treatment that I have introduced is to place a small stick probe over the middle of the tongue while the patient is saying “s” (Fig. 4). This produces a groove through which the air escapes with a hissing sound, and the child cannot possibly make a sound that is like a “t.” Even a normal person is forced to say “sop,” “sick,” “sap” when he tries to say “top,” “tick,” “tap.” With repeated trials the new sound catches the patient's ear and he learns to replace his occluded “s” by this sound without the aid of the stick.

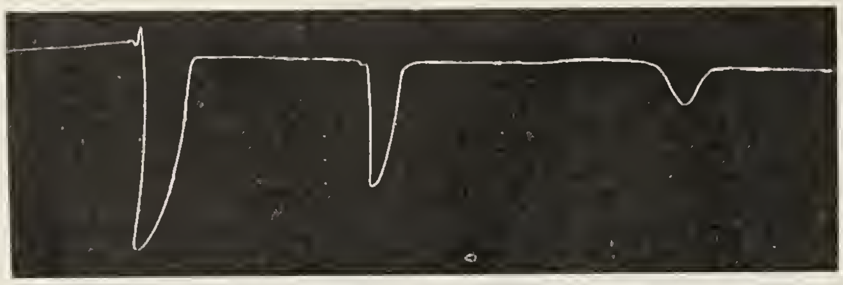

Fig. 3.—Records of tongue-pressure for “s,” “t” and occluded “s.”

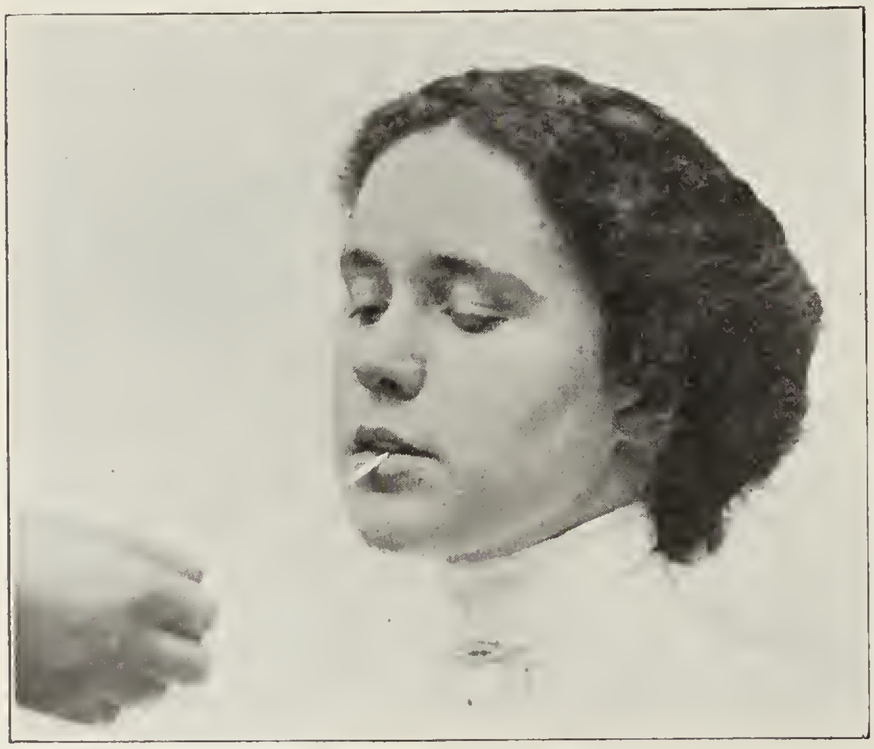

Fig. 4.—Correcting occluded “s.”

130 West Seventieth Street.

The Nervous Patient.—It is occasionally the practice of physicians to try to persuade nervous patients that there is really nothing the matter with them. Such a course is the gravest folly, for it has but the effect of discouraging the patient (since he is certain that there is something the matter with him), and decreasing his confidence in his physician. He feels sick, and no amount of urging can persuade him to the contrary. Functional nervous disorders are just as definite as if they were organic. The sooner the practitioner recognizes that something definite is the matter, and finds out what it is, the quicker he may effect a cure.—W. L. Cowles in the *New England Med. Month.*

THE RESULTS OF THE TREATMENT OF CANCER OF THE UTERUS BY THE ACTUAL CAUTERY, WITH A PRACTICAL METHOD FOR ITS APPLICATION *

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Any treatment of cancer of the uterus, whether by the knife or the cautery, can of necessity awaken but little enthusiasm. Until the embryologist, the pathologist and the bacteriologist widen our horizon as to the causes back of this condition, we can, by an honest exchange of experiences, hope only to prolong life, and with this add comfort to the unknown number of days that a given patient will live. No true idea of what any of our present-day methods will accomplish in the way of prolonging life in comfort, or of cure, can be known unless each surgeon who treats them at all reports his experiences in every instance, and never, under any circumstances, omits his final results in any case. The average primary mortality after the use of the knife in cancer of the cervix and uterus is probably no less than it was when abdominal and vaginal hysterectomy was first attempted. This, as we all know, is so high that it robs the subject, I repeat, of the zeal that we might otherwise have for it.

But cancer of the uterus is a real fact in our daily work. The ordinary fellow of our number sees relatively as many as the master-surgeon. The latter can do a Ries-Wertheim, the former cannot. I am sure that as far as womankind in general is concerned, it is most unfortunate that there are not a few surgeons who do no other work than hysterectomies. Assuming that the Ries-Wertheim operation is the highest expression of skill and judgment for an abdominal hysterectomy in cancer, it is to be regretted that all the cases developing in this country could not be turned over to the surgeon who would attempt no other form of operative work. But we must all agree that this, desirable as it must be from the standpoint of the afflicted, is but a surgical dream. If the knife, after all, is to remain for years yet to come, the important arbiter of the fate of the woman afflicted with this disease, then the public, I am sure, will at no distant day demand that only the man thus trained be given this work.

But, personally, I believe that the removal of the cancerous uterus by the knife is nothing less than legalized assassination. Say what we will, the primary operative mortality is absolutely unknown. It is unknown simply because it is so oppressively high; and when this is true in any operative condition, the rule is that only the exceptional recoveries and the apparent cures creep into the literature. In view, therefore, of the high primary mortality, as well as its moral and sociologic aspects, I will dismiss, for the purposes of this paper, the subject of hysterectomy from an operative standpoint, total, complete, or otherwise, as not worth the effort.

In its place, I want to offer a procedure which is based on the work of the experimental laboratory, and, in addition, an improved method of its application. As far as I can learn, the basis of the procedure is new in the details of its use, and this is also true of the method by which I limit the destructive effects of the cautery outside of the pathologic area. It is not necessary for me to take up time in proclaiming the value of the actual cautery in cancerous growths, for this would be but a repetition of an important part of the medical history of the human race. Let me say here, for fear I may be misunderstood, that this method is advanced only as the best palliative treatment of cancer of the cervix and body of the uterus that is known to-day. That it may also, in certain early stages of cancer in this region, give a symptomatic cure for many years, I am convinced.

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* Read before the Western Surgical Association, Kansas City, Mo., December, 1911.

Dr. Leo Loeb, in a personal communication, stated that mouse cancer could not be successfully transplanted if the temperature of the section was previously raised 13 degrees above the human normal, Fahrenheit; while a very low degree of cold, 22 degrees below zero, seems to exert little or no retarding effect in its power to grow when a control section is transplanted into the same animal.

How much this has to do with the unquestioned benefit that the cautery exerts in some cases in retarding the growth of the ordinary forms of cancer is difficult to prove; but I believe that it is the real explanation of the benefits obtained in this class of cases by those who have made use of it. More than this, I have believed for a long time that if some rational method could be devised, by which a high degree of heat from an actual cautery could be regulated while being applied to the cervix, or body of the uterus, without destroying or even injuring portions of the vagina, bladder, rectum, intestine or ureters, this method of treatment could be made to show better results than any yet devised from the standpoint of the scalpel, not excepting the method of Ries-Wertheim in the hands of the average operator.

Before describing the method that I believe will extend the benefits of the cautery operation in uterine and cervical cancer, permit me a word of historic reference, especially as it refers to one surgeon, the late Dr. John Byrne, of Brooklyn, N. Y. In 1892, Dr. Byrne, while serving as president of the American Gynecological Association, read an address which, in its essence, referred to the relative merits of total or partial hysterectomy for cancer of the cervix by the ordinary methods of his day, and supravaginal excision by the galvanocautery. Dr. Byrne's work has been referred to in a number of articles that have appeared this year,[1] and none has questioned the very favorable reports of results by this surgeon. The four articles that I have included in the footnote are valuable because they refer not only to the abdominal and vaginal routes from the operative standpoint, but also to the use of the cautery, and, as well, the question of metastasis.

Dr. Byrne, in his address in 1892, concluded, in part, as follows:

> As operative surgery [in cancer of the uterus] is in many respects more dangerous than the disease for which it is undertaken, and as the majority of all patients afflicted with uterine cancer would live longer without than with it, it is not a safe or a useful operation, and, as such, is unjustifiable. . . . Amputation of a cancerous cervix by the cautery knife is free from danger, a safeguard against all infection, traumatic or septic, and what is of still greater importance, is destructive to latent cancer-cell proliferation in tissues far beyond the line of incision; hence, much more is comprised in the operation than the mere removal of a part, or parts, not more actively involved in the work of destruction. . . . Any method of operating, for which advantages so vital and so far-reaching can be claimed and established, and which thus distinguish it from all others, renders its adoption on the part of those who undertake to operate for cancer of the uterus no less than a moral obligation.

Unfortunately, those who extol the advantages of the cautery in cancer of the cervix and body of the uterus say nothing about its disadvantages. These, in the far advanced case, especially when the soldering-iron is used as the cautery, are both insistent and real. The difficulty is in optionally regulating the heat that is applied to the area to be treated. My experience has been that the patient inefficiently treated by the cautery is in as great danger from a rapid recurrence as is the patient treated in an unsurgical way by the knife. On the other hand, if the cancer is cauterized to the degree that is necessary in an advanced case, no method or instrument has been devised up to the present time, so far as I know, that will protect the vagina, even when not invaded by cancer, from ultimate advanced cicatrical contraction. Here, too, the possibility of a vesicovaginal or a rectovaginal fistula is not an unimportant danger. If the vagina is almost obliterated, or greatly contracted by cicatrix, because of the use of the cautery, a recauterization, which is sometimes necessary, may be out of the question. If a vesicovaginal, or a rectovaginal fistula develops as a result following the use of the cautery, one can but question what the patient has gained in the comfortable prolongation of life aimed at; certainly not very much.

The object striven for by Dr. Byrne seems to have been a high amputation of the cervix with the electric cautery — in other words, a supravaginal amputation. In the *American Journal of Obstetrics* (1892, xxvi, 578) are four beautiful illustrations which show Dr. Byrne's conception of the use of the cautery in this disease. According to these illustrations, Dr. Byrne was able to cone out a uterus and leave merely a shell, evidently by simply sensing by the hand holding the hot knife.

The greatest fear that I had in my early work was cauterizing the bladder, ureters or rectum. The ureters are particularly in danger because cancer so frequently starts in the fornix of a lateral tear, and to attack and follow it up with an unregulated, or unknown, quantity of heat, is the real problem in the use of the cautery in this region. It was this fear, on the one hand, of too much heat, and on the other, of not enough, that led to the development of the technic which I now use.

TECHNIC

1. The abdomen is prepared as for any abdominal section.

2. The patient is put in full Trendelenburg position.

3. An abdominal incision is made just sufficient to admit one or two fingers of an assistant into the pelvis; in the thin patient, one finger is enough.

4. A fever thermometer indexed to register at least 250 F. is introduced through the urethra into the bladder after the urine is removed by catheter. A second similar thermometer should be in readiness for use in the rectum, if it is found necessary to cauterize deeply posteriorly. The fingers can be used here also.

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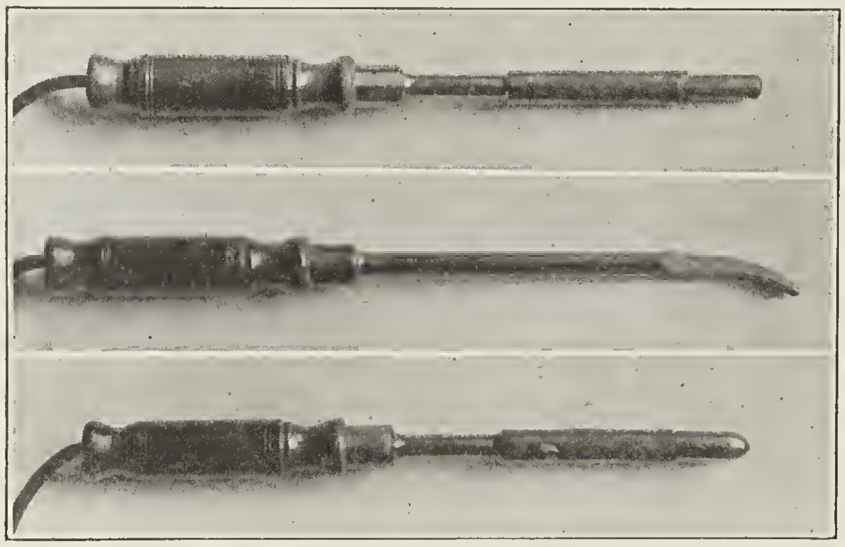
[1] Findley, Palmer: Treatment of Inoperable Cancer of the Cervix, THE JOURNAL A. M. A., April 22, 1911, p. 1174. Frederick, Carlton C.: Use of the Cautery in Treatment of Carcinoma of the Cervix, THE JOURNAL A. M. A., Jan. 14, 1911, p. 94. Jacobson, J. H.: The Results Obtained by the Radical Abdominal Operation for Carcinoma of the Uterus, THE JOURNAL A. M. A., Jan. 14, 1911, p. 96. Sampson, John A.: The Participation of the Tissues Adjacent to the Uterus and of the Pelvic Lymphatics in Uterine Cancer, THE JOURNAL A. M. A., Jan. 14, 1911, p. 101.

5. The cautery is applied in the vagina through a Ferguson speculum, made on the plan of a vacuum bottle.[1]

6. There is no use in attempting this work unless the cautery used is perfect in its action, i. e., has more heat under control at command, than the operator will ever require.

I believe that I have such an instrument, made for me by the Vulcan Electric Heating Company, of Buffalo, N. Y., which is shown in the accompanying illustration.

The procedures that I have outlined above, viz., the Trendelenburg position, to empty the pelvis as far as possible; the buttonhole incision, by which the assistant's finger can roughly, but for all practical purposes, determine not only the degree of heat coming into the pelvis, but the proximity of the cautery head to important structures; the thermometer in the bladder, rectum or urethra, to determine as far as possible the amount of heat that is coming into these important structures, and last, but by no means least, the use of the principle of the vacuum bottle in a speculum to preserve intact the vaginal walls, to say nothing of the vulva—this combination of procedures removes the use of the cautery in cancer of the uterus and cervix from the uncertainty and inexactness which have previously been true of it.


Cautery points used in operating on cancer of the uterus, made heavy to hold more heat. The high degree of heat transmitted to the surrounding tissues is largely responsible for the successful results of this method.

A speculum, which is made for me by Mr. Francis Storm, 63 Fulton Street, New York, promises to solve the important problem of protection of the vagina and vulva from the great heat. As a result, the after-condition of the patient is one of comfort and necessitates spending but a day or two in bed.

The use of asbestos paper in protecting the vaginal or vulva walls from the heat is decidedly of no value. The heating engineer puts around his steam-pipes asbestos of a thickness of three-fourths inch to retain heat within the pipes of 250 F. The heat developed from the cautery is in the neighborhood of 1,000 F. How much actual protection the thin sheet of asbestos paper will give when used can be understood from the above comparison. I have had no experience with the water-cooled specula, but I do not see how they can be made self-cooling without being cumbersome, expensive and much less efficient than the one here offered.

If the observation of Loeb that mouse cancer cannot be replanted successfully after raising its temperature to 113 F. plus, holds true in human cancer to the same extent, then with the procedure outlined above, we have a more efficient method than the most refined operative measure so far devised.

The tragedy of the knife in hysterectomy for cancer of the uterus is the energy of growth in the autoplanted cells, after an incomplete excision. The knife seems to stimulate mechanically the cells that it turns into a new environment, just as the thread drawn through the sluggish, although malignant, tumor of the mouse, will seemingly insult it into new potency.

The heat in the pelvis can be raised approximately to 120 F. This can be determined by the finger, or thermometer in the pelvis, as already outlined. The finger of the surgeon will rarely stand a continuous temperature over 120 F., but it takes a higher degree of heat than this to produce a burn of the first degree, so that the effect of this increased energy in the way of heat can be made to diffuse itself through the pelvis and lower abdomen far beyond the immediate contact of the cautery point. We should not forget, also, that the

TABLE OF RESULTS IN DR. PERCY'S CASES OF CANCER OF UTERUS TREATED WITH ACTUAL CAUTERY

No.	Name	Age	Parts Involved	Character of Involvement	Date of Use of Cautery	Repeated	Result.
1	Mrs. W.	53	Cervix and uterus.....	Infiltrating	9/22/03	....	Lived one year and seven months.
2	Mrs. W.	49	Cervix, vagina, uterus, broad ligaments.	Infiltrating	8/29/04	12/12/04	Lived seven months.
3	Mrs. A.	76	Cervix...............	Infiltrating	6/19/06	....	Lived two years and two months. Died after short but unknown illness.
4	Mrs. D.	55	Cervix...............	Vegetative.	9/25/06	....	
5	Mrs. F.	45	Cervix...............	Enormous vegetative	9/21/08	....	Still living and well, three years and three months after single use of cautery.
6	Mrs. S.	49	Cervix, vagina, uterus, broad ligaments.	Infiltrating	11/7/08	12/18/08	Lived one year and eight months.
7	Mrs. C.	58	Cervix...............	Infiltrating	12/18/08	3/22/09	Extensive involvement of vagina and right broad ligament. Lived eight months.
8	Mrs. H.	57	Cervix and post. vaginal wall.	Infiltrating	2/18/09	....	Died uremic, twenty days after treatment.
9	Mrs. N.	57	Cervix, vagina, right broad ligament.	Infiltrating	11/4/08	3/2/09	Vesicovaginal fistula. Lived eight months after first cauterization. Vesicovaginal fistula followed second cauterization.
10	Mrs. C.	48	Cervix and body of uterus.	Infiltrating	3/10/10	....	Lived forty days.
11	Mrs. H.	46	Cervix, vagina and uterus.	Infiltrating	3/21/10	....	Lived three months.
12	Mrs. S.	50	Vagina, cervix, uterus, pelvis.	Infiltrating	4/3/11	4/3/11 4/22/11 6/19/11	Lived in comparative comfort for six months. Practically no morphin until last few days and offensive discharge greatly reduced.
13	Mrs. H.	42	Cervix...............	Vegetative.	5/1/11	10/9/11 Vaginal hysterect.	Hysterectomy was done because of signs of recurrence in post. part of cervix. This case should have been amputated supravag., with cautery primarily.

tissues to which the cautery heat is applied are wet, and that some of the diffusion of heat must be in the form of steam. Because of the wet tissues, the temperature rises slowly in the pelvis.

In closing, I want to advise strongly against the use of the curet as a preliminary to cauterizing, or operating the cervix or uterus, when malignant. Those of us who have studied cancer in serial section have witnessed portions where eroded lymph- and blood-vessels were penetrated by the aberrant cells, to be carried by these currents to distant parts of the body. The sections that I obtain for microscopic study of cancer in the living subject are neither cut nor scraped; they are burned off with the cautery knife.

Heretofore, I have not tried to do a supravaginal amputation with the cautery, as advised by Dr. Byrne, because under former methods it was impossible to tell how close the cautery point was to the serous surface of the uterus. Under the technic above outlined, the Byrne operation is feasible. For the purposes of clinical work, I have divided this disease into two classes; the one involving the cervix, and, with it, often the vaginal walls, including the urethra; the other recognizes the uterus as the principal factor, and when present, the secondary involvement of the broad ligaments and adjacent pelvic tissues. The main object of the treatment is to raise the temperature in the outlying tissues to a point which will prove inimical to the further development of the cancer cells, while destroying the gross pathology with the fire at the cautery point. It is for this reason that I have had these points made so heavy, in order to carry a maximum of heat. A small point will cut, when hot; but not heat to the degree required. When the anterior wall of the vagina is involved, I put the thermometer in the urethra, and make it register a temperature of 115 to 120 F., by the smallest cautery point in proximity to the anterior vaginal wall. It is quite surprising to note the amount of heat that the pelvic tissues will tolerate without giving way. The explanation must be that when the process of repair is inaugurated, the heat-destroyed tissues act as a scaffolding on which the new normal repair cells bridge their way.

The method outlined above should precede all operations, even where the knife is chosen as the justifiable means to be used for the removal of the cancerous cervix or uterus. In the after-treatment, no packing is used in the vagina.

As to results, unfortunately, not all of my patients with uterine cancer have been treated by the methods here outlined. In common with others, I have used the knife more than the cautery, and, as a result, in no advanced cases have the patients lived long enough after operation to make statistics valuable enough to quote. With the cautery, thirteen patients have been treated, the first operation being done Sept. 22, 1903. Of these patients, I have one living (Case 5), three years and three months after the use of the cautery. The base of the cervix, in this case, was over 3 inches in diameter, and the cauliflower-like growth filled the entire vaginal space, ballooning it to a considerable degree. In addition, the woman was almost exsanguinated, and with this, a hemoglobin percentage of 30. Another patient (Case 3) lived two years and two months after the use of the cautery, and died after a short but unknown illness. In this woman, the cervix only seemed to be involved. Patient 1 lived one year and seven months; Patient 6 lived one year and eight months; Patient 7, eight months. It must be remembered that these patients were submitted to the cautery because, from a clinical standpoint, they were considered otherwise inoperable. If all cases of cancer in the region of the body under consideration were submitted to the improved cautery operation here described, I am more than convinced that we would obtain not only the advantage of no primary mortality, but, in addition, a largely increased percentage of lives greatly prolonged in comfort, with freedom from hemorrhage, exhausting and offensive discharge, and mental distress. More than this, an appreciable number of symptomatic cures extending over a period of years would result.

RADIOGRAPHS IN THE DIAGNOSIS OF GASTRO-INTESTINAL ADHESIONS AND ULCERS *

SINCLAIR TOUSEY, A.M., M.D.
NEW YORK

I. ADHESIONS OBSTRUCTING TRANSVERSE COLON

Case 1.—*Patient.*—Mrs. McM., aged 41, a patient of Dr. Gonzales, was referred to Dr. Robert Coleman Kemp, the gastro-enterologist, and Dr. Parker Syms, the surgeon, with a history of having an amputation of the cervix eighteen years ago, hysterectomy thirteen years ago and an operation for adhesions and removal of the appendix seven years ago. Subsequent to the last operation she had suffered from constipation and prolapsus ani to such an extent as to suggest a kink in the sigmoid or an invagination into the rectum.

Radiograph.—I was asked to make a radiograph to determine the nature and seat of the obstruction. The stomach and intestines were empty and an enema was given which filled the rectum and large intestine with an opaque emulsion of bismuth oxychlorid and bolus alba.

℞ Bismuth oxychlorid	oz ii
Bolus alba	lb ss
Water to make	O ii
M. Sig.	

This is sufficient for one injection per rectum.

Diagnosis.—The radiograph showed no abnormality except a strikingly empty part of the transverse colon where the latter crossed the spine. This meant that a certain portion of the transverse colon was permeable but subject to such pressure as not to be distended with the bismuth mixture. It did not seem probable that this pressure could be due to a tumor without the latter giving other signs. Another possibility to be considered was that the pressure was due to the convexity of the spine, but no compression was applied over the abdomen and no such appearance had been noted in other cases. The diagnosis became narrowed down to pressure by a band of adhesions.

Operative Findings.—Dr. Syms performed a laparotomy so as to expose this portion of the intestine instead of the lowest part as had been anticipated. He found an area of the omentum, 3 inches wide, bound down and firmly adherent to the transverse colon for about two-thirds of the circumference of the intestine. This caused both compression and angulation which were relieved by separating the adhesions. The patient made a good recovery and is now having movements without a cathartic.

Dr. Kemp wishes me to emphasize the fact that no symptoms pointed to the transverse colon as the seat of obstruction, and that this part was not under suspicion and would not have been operated on except for the revelation made by the radiograph.

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* Read before the Surgical Section of the New York Academy of Medicine, Dec. 5, 1911.

II. GASTRIC ULCER

Case 2.—Mr. S. was referred by Dr. Kemp, with gastrosuccorrhea as the principal symptom. The stomach was always found full of gastric juice. The radiograph showed that the bismuth meal passed through the stomach and small intestine in a normal manner but that a splotch of bismuth remained adherent after the rest of the stomach was empty. This indicated an ulcerated area near the esophagus which had not secreted enough pus to show in the stomach analyses, yet still was a constant source of irritation. This had been accompanied by sick headaches which had been only temporarily relieved by an operation on the gall-bladder and by fasting and catharsis. The stomach would frequently fill up with bile. Acting on this diagnosis the patient has been put on a bismuth treatment for gastric ulcer and Dr. Kemp reports the greatest improvement.

III. PERFORATED GASTRIC AND DUODENAL ULCERS WITH ADHESIONS OBSTRUCTING PYLORUS

Case 3.—Patient.—Another man, Mr. B., aged 58, was also referred to me by Dr. Kemp. The patient had had a weak stomach all his life, getting worse two or three years ago and losing 25 pounds. Food was found in the stomach seven to eighteen hours after eating.

Radiographic Diagnosis.—After fasting and purgation, a bismuth meal was given consisting of 1 ounce bismuth oxychlorid, a dish of mashed potatoes and a glass and a half of water. A fluoroscopic examination, with the patient standing up, showed the bismuth meal as a shapeless mass a hand's breadth below the umbilicus. Radiographs, made twenty minutes and six hours respectively after ingestion showed the stomach vertical and confined to the left side of the median line and extending below the level of the umbilicus. The second radiograph showed most of the bismuth still in the stomach, none in the duodenum but some in the ileum. The radiographic diagnosis was pyloric obstructions, possibly cancerous.

Operative Findings.—An exploratory operation seemed to be urgently required. Dr. Kemp reported that there were two or three old ulcers of the stomach and duodenum, all of which had perforated. Leakage was prevented by adhesions to omentum and pancreas but these adhesions had dragged the stomach down and obstructed the pylorus. The operation of separating these adhesions was a severe one and the patient died.

140 West Fifty-Seventh Street.

RELATIVE FREQUENCY OF AORTIC INSUFFICIENCY[*]

J. E. Greiwe, M.D., Cincinnati

The idea so long held and so frequently quoted by textbooks, that mitral disease is by far the most frequent of the valvular lesions of the heart, must, in my opinion, be modified. From my own experience in private practice as well as from extensive hospital material, I believe that aortic lesions are as frequent as, or more frequent than, lesions at the mitral orifice.

The total number of heart lesions on the South Medical Service of the Cincinnati Hospital on Dec. 21, 1911, numbered fifteen cases, classified as follows:

Mitral lesions, 3; aortic lesions, 5; aneurysms of aorta, 2; combined mitral and aortic lesions, 4; pericarditis, 1.

From past experience with the material in the Cincinnati Hospital, this does not differ greatly from the usual run of heart lesions seen on this service.

From the records of this hospital it is found that for the four years, 1900 to 1903, inclusive, there were 854 necropsies reported. Of these 854 patients, 160 had had well-defined heart lesions. No mention was made of the character of the myocardial changes found in the various diseases, but the rather impressive fact was again established that aortic disease and mitral disease were equally well represented, and, in fact, with a slight margin in favor of the greater frequency of aortic lesions. There were recorded as follows:

Aortic lesions, 43; mitral lesions, 43; combined aortic and mitral lesions, 38; pericarditis, 16.

Of these sixteen cases of pericarditis, ten were well-marked cases of adhesive pericarditis. Here, again, is a point of extreme interest from the pathologic as well as from the clinical standpoint, viz.: of these ten cases of chronic adherent pericardium there was found an involvement of the aortic valves in five instances and disease of the mitral area in two. In two cases in which the tricuspid valves were organically diseased there was also disease of both aortic and mitral valves.

Of the forty-three cases of aortic disease, nine showed functional insufficiency at the mitral orifice.

Admitting that the infection as seen in acute articular rheumatism more frequently affects the mitral area, the fact remains that the severest types of the so-called ulcerative endocarditis do greatest damage to the aortic area. Considering syphilis, gout, lead-poisoning, hard manual labor, sudden and severe strains, arterial degeneration and chronic nephritis, or their causes, as etiologic factors in the production of valve lesions, it must be admitted that these, individually and collectively, predispose more to alterations about the aortic area than to alterations about the mitral area.

There is a large class of cases which one sees in private practice in which arteriosclerosis occurs comparatively early in life. My experience has been that such cases have a tendency to mitralize—if one may use such an expression. By that I mean that, sooner or later, changes about the mitral valve will become evident, and not infrequently we notice both stenosis and regurgitation at the mitral orifice. The necropsies in such cases reveal the fact that the chordæ tendinæ, the tips of the papillary muscles and the myocardium have also been involved in the extension of the sclerotic process. On the other hand, because of the tremendous increase in arterial tension and because of the increase in strain and tension at the aortic orifice, we find degenerations of the lower part of the aorta, the aortic ring and the aortic valves. Syphilis as an etiologic factor in the causation of heart lesions, and more particularly as the cause of aortic lesions has long been an acknowledged and well-established agent, and although Wharton has demonstrated the relation between the specific organism of syphilis and myocardial changes, nevertheless the lower part of the aorta, the aortic ring, the openings of the coronary arteries and the aortic valves are favorite sites for the manifestation of cardiac syphilis.[*]

With the addition of salvarsan to our remedies in attacking early syphilis, we may hope to turn the tide of the frequency of the valve lesions back to the old belief, but for the present, we must modify our statements concerning the relative frequency of valve lesions.

32 Garfield Place.

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[*] Read before the Clinical Society of the Cincinnati Hospital, Dec. 21, 1911. Four cases of aortic insufficiency were presented at this time, one occurring in a boy of 12 after an attack of acute articular rheumatism and the other three being due to syphilitic infection.

Plague and the Tarbagan.—Plague is known to be endemic in several regions in Siberia and Mongolia. From remote times, the tarbagan, a marmot common in these regions, has been observed to suffer from a fatal epizootic, beginning in the autumn before the hibernating season. The symptoms of this disease suggest plague. The tarbagan is hunted in the late autumn for its fur. Plague is reported to break out among hunters of tarbagans, especially among imported coolies, who, unlike the natives, are unable to detect sick animals. Tarbagans are reported to be susceptible to inoculations with the *Bacillus pestis,* and fleas have been found on them. A priori, from the rôle played by ground squirrels and their fleas in the transmission of plague, the hypothesis that a similar rôle is performed by the tarbagan is presented. This has, however, only the value of an hypothesis since bacteriologic and pathologic proofs are as yet lacking.—Preble in *Public Health Reports.*

New and Nonofficial Remedies

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with the rules adopted by the Council.

W. A. Puckner, Secretary.

CORNUTOL—Liquid-Extractum Ergotæ, Mulford.—Cornutol is a biologically tested liquid extract of ergot, containing the water soluble, alcohol insoluble, constituents of ergot and about 10 per cent. alcohol.

Cornutol is made by removing fat from ergot with petroleum benzine, percolating the fat-free drug with water, purifying with strong alcohol and concentrating in vacuo; 2½ parts of drug are employed in the manufacture of 1 part of cornutol.

It is a brownish-red liquid, having a characteristic not unpleasant odor and disagreeable taste.

When 0.04 Cc. cornutol per kilo weight of animal is injected intravenously into dogs, a rise in blood-pressure of not less than 12 mm. is produced.

Actions and Uses.—Cornutol has the actions and uses of ergot.

Dosage.—Hypodermically, 0.65 to 2 Cc. (10 to 30 minims); by the mouth 0.65 to 4 Cc. (10 to 60 minims) repeated as may be necessary. On account of the deterioration that is liable to occur in this preparation, the date when it was tested appears on each package.

Manufactured by H. K. Mulford Co., Philadelphia. No U. S. patent. U. S. trademark No. 50,043.

Ampuls Cornutol.—Each contains cornutol 2 Cc. (30 minims).

DIGITOL.—Fat-Free Tincture of Digitalis, Mulford.—Digitol is a biologically and chemically standardized, fat-free tincture of digitalis, corresponding in drug strength to tincture of digitalis, U. S. P., and containing not more than 70 per cent. alcohol.

Digitalis which has previously been subjected to percolation with petroleum benzine is extracted by percolation with the hydroalcoholic menstruum in the usual way.

It is a brownish-green liquid having a characteristic and highly alcoholic odor and a bitter taste.

It is standardized to contain not less than 0.025 Gm. digitoxin in 100 Cc. and to such a strength that the minimum lethal dose for a 250 Gm. guinea-pig is approximately 1 Cc. Digitoxin may be determined by the method described by Reed and Vanderkleed (*American Journal of Pharmacy*, March, 1906). The minimum lethal dose on normal (250 Gm.) guinea-pigs is also determined and the preparation adjusted so that 1 Cc. is the minimum lethal dose.

Actions and Uses.—The same as Digitalis.

Dosage.—0.3 to 1 Cc. (5 to 15 minims). On account of the deterioration that is liable to occur in this preparation, the date when it was tested appears on each package.

Manufactured by H. K. Mulford Co., Philadelphia. No U. S. patent or trademark.

Therapeutics

TREATMENT OF ACUTE ARTICULAR RHEUMATISM

It is interesting to compare the 1911 edition of a text-book, like Anders' "Practice of Medicine," with an old edition, that of 1899, for instance. Twelve years of experience have only confirmed the treatment of acute articular rheumatism advocated then, but a few details have been added, such as, for example, in referring to the cardiac manifestations: "Unless combined with the symptoms outlined above [increase in the febrile movement, more or less palpitation, sometimes dyspnea, precordial pains which often do not amount to more than a sense of soreness, with possibly attacks of angina pectoris of apparently purely nervous origin] the presence of a blowing systolic murmur does not afford trustworthy evidence of the existence of acute endocarditis. I have witnessed two instances in which endocarditis preceded the arthritic manifestations. Church and Cheadle state that in a large majority of cases, if no endocardial murmur is present during the first ten days of an attack the endocardium escapes."

Anders adds in reference to the subcutaneous rheumatic nodules: "Riess believes them to be of embolic origin." And further, "Cheadle considers that the eruption of large nodules signifies persistent and uncontrolable cardiac disease." He adds to the usual eight groups of symptoms a ninth, namely, "Inflammation of the parotid gland—rheumatic parotitis—which was met with in three cases by Courtois-Suffit and Beaufume." He says of the clinical peculiarities of the disease in children, "The febrile movement is brief and hyperpyrexia less frequent than in the adult. The nervous features are more marked, notably chorea." Bareno reports a case in a new-born infant. In diagnosis he adds: "The acute development as a primary affection of polyarthritis with fever, *early tonsillitis, sudden anemia, moderate leukocytosis and fresh cardiac murmurs*, is a symptom-complex on which an assured diagnosis can be based."

In differential diagnosis, he adds a sixth affection—"glanders, which at the onset may be mistaken for rheumatism." In treatment, he repeats his former directions as to diet and stimulants, "milk being the best food-article, with buttermilk or egg-white if milk cannot be taken in adequate amount, returning to the earlier liquid or soft diet on return of pain or fever." He adds: "The prompt treatment of tonsillitis among children and young adults is important prophylactically." "The bowels should be opened early with calomel, followed by salines." He says of ammonium salicylate that his experience with it, although limited, has been satisfactory. His method with sodium or ammonium salicylate is to give grains x (0.6 gm.) every two hours the first day, or until the pain and other local features have largely disappeared; then the remedy is given at longer intervals, but not omitted entirely.

He says of antipyrin that he has "come to believe that safer and equally efficacious remedies have replaced this drug. Potassium iodid and the preparations of colchicum belong to this category and should be tried. Their effects are most beneficial in cases that drag on after the acute stage is over. Good results have been reported from the use of acetyl salicylic acid (aspirin) (grains vij-xv or 0.50-1.00 gm. thrice daily) in both acute and chronic rheumatism. Stengel has noted improvement from the use of antistreptococcic serum in three cases of protracted recurring rheumatism. Menzer has successfully treated a number of cases with a serum made from streptococci of human origin. It is also indicated in cases showing a pyemic temperature (Chipman)." Among old local measures Anders advocates perfect rest for the affected joints, padded splints, a roller bandage or plaster casts. For hyperpyrexia he advises cold "affusions." In conclusion he states "Gürich succeeded in curing ninety-eight out of 125 patients with articular rheumatism by tonsillectomy." See further, the abstracts on pages 443 and 444 of The Journal, Feb. 10, 1912

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[*For other information see second page following reading matter*]

SATURDAY, MARCH 9, 1912

THE PHYSIOLOGIC PROPERTIES OF EXPIRED AIR

The problems of ventilation are perennial in their interest. The pendulum of hypothesis in regard to the assumed toxic properties of the atmosphere of restricted spaces has swung from one extreme to another. At the present time there is a consensus of opinion that, aside from obvious extreme alterations of the inspired air, lack of oxygen or increased concentration of carbon dioxid does not play any significant rôle in the familiar malaise of "poor ventilation." We have lately referred to the growing tendency to charge the ill effects of vitiated air to increased temperature and humidity, factors which unquestionably exert a most depressing influence under the given conditions.[1]

Whether there are any more specific "poisons" in the expired breath cannot be so easily answered. The succession of attempts to demonstrate the existence of some harmful compound or to isolate an organic toxin has led to the most contradictory results. Two familiar methods of investigation have been employed; one, to compel an animal to breathe the expired breath of another animal; the other, to inject the condensation products of the air we breathe, in order to obtain evidence of toxic products.[2] Flügge and his pupils have demonstrated, however, that in coughing, speaking, or forced respiration of various types minute particles, including bacteria, may be sprayed into the surrounding atmosphere—a form of dangerous contamination which the refined practice of the modern surgeon seeks to avoid during operative procedures.

In the editorial[1] previously referred to, we mentioned the search for further evidence of the presence of organic matter in the expired breath by Rosenau and Amoss.[3] Their method consisted briefly "in condensing the vapors from the expired breath of man, injecting the liquid so obtained into guinea-pigs and, after an interval of several weeks or more, testing the guinea-pigs to determine whether they have become 'hypersusceptible' to normal human blood." With this delicate and specific anaphylaxis test positive reactions were obtained in a sufficient number of cases to warrant a further prosecution of this research. Professor Rosenau's unusual experience with anaphylaxis methods and problems lends a degree of assurance to this striking report which might not apply to a less adept observer. As is often the case in science, the facts cited bring with them a host of new questions regarding the real significance of the findings and the source of the sensitizing substance. Does it pass into the air with watery vapor, and how? Is the phenomenon concerned in the normal susceptibility of certain people?

In our earlier reference to this work some critique of the results was offered. There has been a tendency in some quarters to attach a significance and suggested application to these preliminary findings which they scarcely warrant as yet. As Rosenau and Amoss remark, the fact that organic matter is present in the air expired does not mean that these exhaled substances are poisonous. They report that the injection of the condensed liquid caused no other untoward symptoms in the animals. Weichardt,[4] however, has claimed to obtain exhibitions of toxicity from the condensation water of expired air obtained under very special conditions. The results are not entirely convincing and have been subjected to adverse criticism.[5]

The final word in respect to this important matter cannot yet be spoken. Meanwhile the subject is being studied from new points of view which are certain to broaden the horizon of the hygienist.

CAN PROTEINS BE ABSORBED WITHOUT PRELIMINARY DIGESTION?

At various times we have emphasized the current doctrine regarding the complete digestive disintegration of proteins prior to their absorption from the alimentary tract. The advances in the chemistry of digestion have more and more indicated that profound cleavage is a fundamental necessity for the normal utilization of the food intake.[1] The efficiency of the intestinal lining in preventing ordinarily the entrance of undigested protein has been compared to the normal resistance of the kidney epithelium to the egress of blood protein into the urine. The question may therefore well be raised whether a foreign protein can be absorbed unchanged through the intact alimentary epithelium.

The difficulty of detecting traces of a foreign protein beyond the intestinal wall has at length been overcome by the application of the anaphylaxis test, a method whereby a twenty-millionth part of a gram of protein may suffice, according to H. Gideon Wells, to sensitize a guinea-pig. Using this procedure, several American investigators have offered reports of the passage of egg-white into the circulation in a form still detectable by the anaphylactic response, i. e., in a form still *protein* in character. In their pioneer experiments on anaphylaxis, Rosenau and Anderson showed that animals fed with foreign protein might become sensitive to this protein, an observation since repeatedly confirmed, showing that at least a trace of the protein must pass from the intestine into the blood in practically unaltered condition.

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[1] Editorial, The Journal A. M. A., Sept. 16, 1911, p. 980.

[2] Billings, Mitchell and Bergey: The Composition of Expired Air and Its Effect on Animal Life, Smithsonian Institution Publications, 1895.

[3] Rosenau and Amoss: Organic Matter in the Expired Breath, Jour. Med. Research, 1911, xxv, 35.

[4] Weichardt: Ueber Eiweissspaltprodukte in der Ausatemluft, Arch. f. Hyg., 1911, lxxiv, 185.

[5] Inaba: Ztschr. f. Hyg., 1911, lxviii, 1.

[1] Body Cells and Food Substances, The Journal A. M. A., Feb. 24, 1912, p. 556.

Vaughan, Cummings and McGlumphy[2] have succeeded in sensitizing animals to egg-white with the blood removed from rabbits after introduction of this protein into both the stomach and the large intestine. More interesting are the experiments by Van Alstyne and Grant,[3] who placed egg-albumin in isolated loops of intestine in dogs carrying the well-known Thiry-Vella fistula. Here the ordinary opportunity for digestive alteration is largely excluded. They found that the protein was rapidly absorbed and was then present as such in the circulating blood. In cases of alimentary albuminuria they were likewise able to identify the food protein in the urine by the anaphylaxis method; but not all of the protein appearing in the urine under these conditions is foreign albumin.

Before placing too great emphasis on the practical bearing of such observations the extreme delicacy of the method employed must be borne in mind. It remains to be learned whether, indeed, these facts represent a normal process at all, and if not, what are the pathologic factors concerned. It is of interest to add that these investigations also attest the speedy subsequent disappearance of the foreign protein from the circulation.

MUSCULAR DEVELOPMENT AND PHYSICAL EXERCISE

Dr. Friedman, whose article on this subject appears in this issue, discusses a topic which is worthy of more attention by practicing physicians. On the shoulders of the general practitioner rests a large part of the responsibility of educating the public to the need of systematic methods for securing proper physical development. The conditions which make this need imperative have developed largely within the last half-century and are without remedy in themselves; to reverse them would be to return to the age of the spinning-wheel and the flint-lock. Modern labor-saving machinery and industrial progress are responsible for the conditions under which many men live by mental activity, while many others, though engaged in physical toil, employ but a few muscles of their bodies, and use those under the racking nervous strain imposed by the necessity of keeping pace with machinery.

The general trend of Friedman's arguments cannot but receive hearty endorsement, notwithstanding the fact that he makes occasional statements to which exception might be taken. For example, the statement that the Jews suffer little from congenital physical defects seems to conflict with the marked prevalence of hernia, flat-foot, refractive errors, myopia, etc., among the Jews. Also, if the Jews "gained an immunity to tuberculosis by living for centuries in crowded and insanitary ghettos," it is difficult to understand why tuberculosis should be so very common among them in this country under hygienic conditions certainly not much worse than those which produced the alleged immunity. Again, not all neurologists would agree with Friedman's statement that "neurasthenia is the most common result of a poor muscular system being overstimulated by a too active brain." Some authors reverse the sequence and speak of the enfeebled muscular condition in neurasthenia as a result of enfeebled nervous stimulation.

In his emphasis on the need for physical education, Friedman is in line with the foremost educators of the day. That there is need for reform in our system or lack of system of physical training, there can be no question. Physical training, conducted as it is in our schools and colleges, as well as in our athletic clubs, on a competitive basis, is not fulfilling its true mission. The individuals are placed, or place themselves, in the class of exercises at which they excel rather than in the class in which they are deficient. The purpose of this misdirection is to develop a few athletes who can win honors or establish records rather than to make the average man or woman a physically well-rounded and well-balanced individual by correction of weaknesses and development of deficient groups of muscles. Even the athlete is a physical machine geared to accomplish record feats rather than to be generally efficient and durable. The evil effects of this one-sided type of training in the athlete were commented on recently in these columns.[1] Figures from the report of the Surgeon-General of the United States Army show that the men who were especially fine athletes during their training course at Annapolis Naval Academy are especially subject to disabilities in their subsequent careers or to premature death. The evil effects of the complementary neglect of the non-athlete are only too generally apparent in the flabby muscles and generally undeveloped physical organization of the average student.

When physical training is reorganized on a more rational basis, it is to be hoped that from the time the child enters school the body as well as the mind of each student will be developed by exercises suited to its capacity, and that physical training will be so planned that each individual will receive training, not so much in the line of his proficiency as in that of his deficiencies. The purpose should not be specialization, but well-rounded development; not a few athletes with future usefulness impaired by overtraining or overstraining on the field of contest, but a race of men with physiques abounding in endurance, energy and resilience.

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[2] Vaughan, Cummings and McGlumphy: Parenteral Introduction of Proteins, Ztschr. f. Immunitätsforsch. u. exper. Therap., 1911, ix, 1.

[3] Van Alstyne and Grant: The Absorption of Albumin Without Digestion, Jour. Med. Research, 1911, xxv, 399.

[1] THE JOURNAL A. M. A., Jan. 6, 1912, p. 40.

HEALTH CONDITIONS IN ALASKA

In striking contrast to the prompt and efficient medical interest displayed by the United States in the Philippines, Hawaii, Panama, Cuba and Porto Rico, has been the attitude of the government toward health affairs among the natives of the District of Alaska. Here is a territory approximating in area one-fifth of the United States and bounded by many thousands of miles of seacoast. The native population of twenty-five thousand is scattered through this vast expanse in villages averaging from thirty to three hundred inhabitants each.

At the request of the Secretary of the Interior, a medical officer was detailed from the Public Health and Marine-Hospital Service to investigate sanitary conditions and health problems in Alaska. The report of Dr. M. H. Foster,[1] who was assigned to this duty, was sent to the House of Representatives on Jan. 23, 1912. Dr. Foster traveled extensively through Alaska and improved every opportunity of obtaining information from teachers, missionaries, physicians and government officials, as well as by direct investigation of the natives and their surroundings.

From the sanitary standpoint the worst conditions were those associated with overcrowding in small, poorly ventilated houses, and with a very imperfect water-supply. Overcrowded living quarters are largely responsible for the wide dissemination of tuberculosis. With the present inadequate water-supply in most of the villages, it is useless to preach personal or household cleanliness to the natives. Above the arctic circle, it is no uncommon thing to find urine used for personal ablutions, and decomposed urine used for washing clothes, because of the ammonia contained as well as because of the lack of a good water-supply.

The habits and character of the natives are such as to foster unhygienic conditions. Laziness, carelessness and indifference are the rule. Were it not for the healthful climate and outdoor occupations, such as fishing and salmon-canning, the results would be far worse on the general health. Alcohol has its usual evil influence on an uncivilized people. Infant mortality is very high, partly because of the lack of cow's milk; only condensed milk is available.

The three diseases of most threatening aspect are tuberculosis, trachoma and syphilis. Many of the Indians present an unusual resistance to tuberculosis, and this Foster attributes to the very high fat content of their diet, which contains large quantities of fish oil. In 1,364 Indians examined, about 4 per cent. suffered from tuberculosis, most of which was of the pulmonary type. Over 7 per cent. of those examined suffered from trachoma, and nearly 3 per cent. were blind, largely as a result of trachoma. Syphilis was found in 1.5 per cent. Blind natives lead a pitiable life, having no employment and little sympathy from their fellows.

Foster makes three recommendations: (1) the establishment of a sanatorium for cases of pulmonary tuberculosis requiring hospital care; (2) the establishment of a home with suitable employment for destitute blind and crippled natives; (3) authority for a public health service officer to act as commissioner of public health for Alaska. In addition he urges extension of the medical work in connection with the Alaskan school service.

Considerations of justice and humanity urge that these recommendations be followed.

PRACTICAL TYPHOID PREVENTION

Recently[1] we called attention to the suppression of epidemic typhoid fever in Yakima County, Washington, and the possibilities of similar practical work if applied throughout the country. A few further deductions may be made from the results of that campaign.

Among the important lessons of the work in Yakima County are, first, that typhoid fever in the average community in the United States can be practically eliminated by carrying out reasonable and comparatively inexpensive measures; second, that the community itself must bear the greatest part of the burden, and that in this the first requisite is the appointment of an expert, full-time health officer at an adequate salary (a salary of five thousand dollars per annum was provided for the health officer of Yakima County); third, that the expert assistance and advice of the national public health bureau are almost invaluable in organizing local health work. Were Congress to make it possible for this bureau to put even as many as one hundred men into the field for typhoid work, and were they to succeed in securing the cooperation of the local authorities as did Lumsden at Yakima, the increased expenditure would be insignificant in comparison with the resulting saving of health, life and economic resources.

It is gratifying to be able to record for the same year in the United States two notable achievements in sanitation as regards typhoid: the one, in the spring, in the Army encampment on the Mexican border, when, under military discipline, the maintenance of excellent hygienic conditions, together with antityphoid vaccination, kept some 12,000 troops practically free from typhoid fever; the other, in the summer and fall, in North Yakima, where, under civil administration and through awakening of intelligent public sentiment, measures were carried out which eradicated 87 per cent. of the typhoid fever of a community of about 45,000 persons.

Emphasis should be placed on the fact that the work in Yakima County, like that of the eradication of plague in San Francisco and of yellow fever in New Orleans, was carried out in the absence of the military control which facilitated the marvelous work of the United States in Cuba and Panama — a fact which brings the work and its lessons very near home.

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[1] Foster, M. H.: Relief of Indians and Other Natives of Alaska, contained in House Document 477, 62d Cong., 2d Session.

[1] A Triumph of Sanitation, THE JOURNAL A. M. A., March 2, 1912, p. 639

Current Comment

MILK-FAT, TISSUE-FAT, AND FOOD-FAT

We recently referred[1] to the unique series of nutrition experiments conducted on cattle at the Wisconsin Agricultural Experiment Station.[2] The animals were kept over long periods—four years—on foods derived from a single plant: wheat, corn, oats, or a mixture of these. This afforded an unusual opportunity for making a study of the influence of qualitatively unlike rations on the composition of the milk and the tissues under comparable conditions of environment. It will be observed that here is the old question of "breed versus feed." The problem at issue is not a new one, and the question of the influence of diet on milk secretion has a peculiar interest to the physician in pediatric practice. It cannot be denied that foreign substances, such as certain drugs, may readily pass into the milk. That a surfeit of foreign fats will undoubtedly influence to some extent the character of the fats secreted in the milk is beyond question. But in most respects—and this is supported by the Wisconsin investigations referred to—"the character of the fats secreted is influenced more by individual metabolism than by the character of the food intake. This is particularly true when the fat content of the intake is not excessive and the content only that incident to normal feeding materials." In harmony, moreover, with the finding that the widely divergent rations had little direct or positive influence on the chemical constitution of the fats secreted in the milk were the facts noted in connection with the tissues examined. The variations that did occur were more of an individual nature. There is growing belief in the strong tendency of the organism to maintain a constancy of ultimate chemical structure independent of variations in the nature of the proteins ingested. Similarly the fatty tissues exhibit a proneness to uniform and constant composition even when the character of the fat in the diet is entirely different from that normally deposited. Judging by the Wisconsin studies, in connection with many others, the oils in corn, oats or wheat are so markedly different from those stored in the tissues of animals fed exclusively on these grains that very important synthetic processes must have been active in their deposition. Fat transportation cannot account for all; transformation must play an added rôle.

HEALTH QUESTIONS AND POLITICS

An interesting phase of the education of the public in health matters is the attitude of the newspapers, which are constantly giving more and more intelligent discussion to health questions. A hopeful feature of this discussion is the tendency to demand of public officials, local, state and national, support of public health movements. In a recent editorial in a Chicago newspaper concerning aldermanic primaries, the attitude of prospective aldermen concerning health matters is placed first in the discussion of the qualifications of an alderman. It is said: "A bad alderman may do you more harm than a bad president: if your child dies because he has blocked a milk ordinance; if your family sickens in an epidemic which an inadequate health inspection has made possible; if you wear your life out with bad transportation, bad air, bad housing. . . ." This is followed by a discussion of the business and other qualifications of candidates, etc. It has, of course, always been true that the health of the people should demand first consideration and that health measures should receive adequate support; but health and health measures have never received such consideration and support, and politically regarded, the health of the people has always occupied a subordinate place. It is therefore significant and encouraging to find these matters mentioned as of first importance in the qualifications of candidates for office.

THE RELIABILITY OF DIGITALIS AND ERGOT PREPARATIONS

Manufacturing pharmaceutical houses for years have claimed that their preparations of digitalis, ergot, strophanthus and other drugs whose quality could not be determined by chemical means were carefully standardized by biologic methods. As a natural corollary, these firms asserted that their respective preparations were most uniform and trustworthy. Then appeared the reports of the investigations by Hale[1] on the standardization of digitalis and of Edmunds and Hale[2] on the testing of ergot. These authors concluded that although there were methods available whereby the activity of digitalis and of ergot could be determined, the proprietary preparations for which reliability and permanence were claimed, in reality were not only unreliable, but also, in some cases, practically worthless. It was suggested that as the methods for such standardization were not simple the manufacturers had not used the care and skill in making the product which the advertising claims would lead one to expect. In fact, it almost looked as if the biologic assays of this class of preparations had been largely a matter of printers' ink. The criticisms that have been made of the various preparations investigated are serious ones and are of vital importance not only to scientific medicine, but, which is of more moment, to the public. Most of the manufacturers whose products were thus proved either unreliable or practically worthless, have apparently made no effort to correct the evils whose existence has been demonstrated to exist. In justice it must be said, however, that one firm took the reports seriously and proceeded to put its house in order. The H. K. Mulford Company first published an acknowledgment that its products were not permanent and promised that in future it would date its packages so that physicians might know the exact age of each preparation. As a next step, it submitted its products to the Council on Pharmacy and Chemistry for approval. The Council, having assured itself that the company's proprietary preparations of digitalis and of ergot—Digitol and Cornutol, respectively—were sold under proper claims and precautions, has accepted them for inclusion with New and Nonofficial Remedies[3] along with an exact statement of the strength to which the preparations are adjusted. How long it will be before the manufacturers of other proprietary digitalis and ergot preparations secure similar endorsements is as yet uncertain. It will unquestionably depend on the length of time that physicians continue to use preparations whose reliability is attested only by those who are interested in the financial success of the products.

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[1] Unappreciated Factors in Diet, The Journal A. M. A., March 2, 1912, p. 637.

[2] Hart, McCollum, Steenbock and Humphrey: Physiologic Effect on Growth and Reproduction of Rations Balanced from Restricted Sources, Univ. Wisc. Agric. Exper. Sta., Research Bull. 17, June, 1911.

[1] Hale, Worth: Hyg. Lab. Bull 74. Referred to editorially in The Journal A. M. A., April 22, 1911, p. 1198.

[2] Edmunds, C. W., and Hale, Worth: The Physiologic Standardization of Ergot, Hyg. Lab. Bull. 76. This report was also given, in part, in The Journal A. M. A., Oct. 14, 1911, p. 1302, and was commented on editorially in The Journal of the same date, and also of Oct. 7, 1911.

MEDICAL HUMOR

For relaxation from his serious work the physician finds little humor that is distinctly medical, and so occasionally creates it. We commented some time ago on the humorous special number of a German medical weekly. Now comes the *Journal of Humorous Medicine,* a supplement to the February number of the *California State Journal of Medicine.* It contains some alleged articles, a play, etc., read before the San Francisco County Medical Society, when the members evidently had a night off. A report is made of a singular case, pleural in origin, in which a man who did not go out much suffered from roomertism, and, though a high liver, showed signs of hepatoptosis. In an accident reported, a physician fractured his coccyx when attempting to sit on a weakly constructed chair placed by a patient's bedside. The editor remarks that this is the first instance of the doctor's carelessness in examination of stools. Announcement is made of a vaccine of the hay bacillus which cures hay fever, while one made of melon seeds will cure meloncholia. Some jokes are rather labored, but what of it? The intentions are good and the results happy. We congratulate the editor, Dr. Philip Mills Jones. Another piece of medical facetiousness just received is the *Medical Gewalt,* "officious organ of the Associated Alumni of Mount Sinai Hospital, New York; published for the disintegration of medical inflammation; foundered 1902; resuscitated annually." This eight-page periodical is said to be "copy writ by the editor and admitted to be second-class stuff." It contains original articles, society reports, editorials, etc. The editor dodges responsibility with the remark: "If the *Gewalt* does not please you—forget it. We have other troubles." The Journal is flattered by several pertinent references. Our Department of Queries and Minor Notes is imitated. To a correspondent who asks for references to the literature and says: "For example, what can I find on bread?" the editor answers "Butter." In a society report someone is reported as having conducted the ceremonies in "his usual happy, external jocular vein." In the advertising department we find: Antiflowgistine for leukorrhea; U Reform for cystitis; Amour and Company's He Licks Her Ten Times, which is recommended as an aid to digestion and a good vehicle for idiots, bromids, etc.; Sharp and Do' Em's complete line of tablets of all varieties, from alimentary to the cemetery; Mennen's Powder for meningitis; Victor Cackle & Co.'s Slamiton, Pileiton, Prurital, Damitall, Watsitphor, etc. An announcement in the advertising department states that the *Gewalt* will not admit to its advertising pages any of the proprieties. Judging by some of the advertisements, this caution is not out of place.

PROPERTY RIGHTS VS. PUBLIC HEALTH

A New York dealer in drugs was recently prosecuted for counterfeiting the trade-mark of Carter's Little Liver Pills and for selling goods bearing this counterfeit mark. He was found guilty and, although it was the first offense, the court refused to impose a fine, but sentenced him to four months' imprisonment in the penitentiary at hard labor without the possibility of commutation for good behavior. Counterfeiting, of course, is a serious crime and as such should be punished. Nevertheless, there are more serious crimes, such, for instance, as adulterating foodstuffs, selling putrid material for good or dispensing dangerous habit-forming drugs, like cocain, in the shape of soft drinks. All these crimes are crimes against the person—against the public health—against the very lives of the people. Although the government officials have brought evidence sufficient to convict over 1,200 firms or individuals of violating the federal Food and Drugs Act, and although this act provides that its violation may be punished by imprisonment, yet in not a single instance has the court imposed any sentence more severe than a fine. And the majority of the fines have been trivial to a degree. A Canton (Ohio) concern was convicted of selling a soft drink containing cocain. The court considered a $25 fine sufficient punishment. A St. Louis house sold a powder for infants that was said to make "teething" easy; it contained opium. A $10 fine was sufficient punishment. An "agreeable and efficient tonic" was found to contain cocain, although the presence of this drug was not stated. In this case, the court suspended sentence! Some day, possibly, a court may be found that will consider the crimes of making drug fiends of young people, of poisoning babies with opium mixtures or of killing women with headache powders as more serious offenses than the counterfeiting of the label of a fraudulent "patent medicine." Apparently, that time is far off.

BLIGHTING A REPUTATION

Few American manufacturers of pharmaceutical products have stood as high in the estimation of the medical profession as the firm of E. R. Squibb & Sons. None has been higher. For years, Squibb's name on the labels of medicinal products stood for honesty and reliability. This reputation was deserved and retained so long as Dr. E. R. Squibb controlled the concern. After Dr. Squibb's death, the responsibility for the reputation of the concern seemed to be divided, and, while the name remains, recent events indicate that the principles governing the house of E. R. Squibb & Sons have changed. Within the last few months, the medical profession has received a pamphlet from this firm dealing with a wonderful new remedy put out first under the proprietary name "Thoradin," which was later changed to "Thoremedin." In the past, E. R. Squibb & Sons had been particularly free from the blight that seems to be inseparable from the exploitation of proprietary remedies. Possibly because all of the products this house put out were non-proprietary in character and relied exclusively on the brand-mark, the firm's advertising matter was practically free from exaggeration and falsehood. With its entrance into the proprietary field, the company apparently intends to make up for lost opportunities; the literature of Thoremedin is typical of all that is bad in proprietary exploitation. The claims made for this nostrum were so radical that the Association's chemists were asked to examine the product. The result of this examination appears elsewhere.[1] As the claims made for therapeutic effect were such as competent dermatologists could prove or disprove, Dr. W. A. Pusey was asked to investigate them and the product. With this request he kindly complied, and the result of his practical experiments appear in the Propaganda for Reform department of this issue. Let it be said in passing that Dr. Pusey has done the profession a distinct service; it would be well if more work of this kind could be undertaken by men who are peculiarly fitted for it. Dr. Pusey's exposé, while both interesting and instructive, will come as a shock to those members of the medical profession — and they are many — who have always believed that the name of Squibb was the very antithesis of humbug or deceit. There is nothing sadder in commercial or professional history than to see the honored name of a great firm brought into discredit by the penny-wise and pound-foolish tactics of those who consider dividends of greater moment than reputation.

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[3] See page 701, this issue of The Journal.

A SINGLE FEDERATION OF STATE LICENSING BOARDS

In this country the licensing of physicians is a state and not a national responsibility. At present there are in the forty-eight states sixty-one distinct licensing boards, scarcely any two of which adhere to the same methods of testing the ability of those who seek the right to practice medicine. While some of the states have excellent laws and competent boards to enforce them, there are many which afford insufficient protection to the public against uneducated doctors. In some of the states conditions are bad — practically hopeless it would seem if left to themselves — on account of political entanglements. Some influences from the outside could be exerted with success, and one source of such influence would be a single federation of state boards. If such a federation could be formed holding to fixed educational standards as a requisite for membership and having as its chief object a nation-wide elevation of the standards of licensure, a strong influence over the individual states could doubtless be exerted, especially through an effort to administer interstate reciprocity on an intelligent basis — the basis of an accurate knowledge of conditions actually existing in each state. Two rather loosely organized federations have existed for several years, but neither has been able to wield so much influence for good as might be wished, and as could be exerted by a single organization representing at least a majority of the state boards—an organization in which membership would be an honor and an opportunity for service. At present the two federations represent respectively only fourteen and seventeen states, and several states have membership in both organizations, so that only twenty-three states are represented in the two federations. It is to be hoped, therefore, that the movement now on foot to merge the two will be successful, and that the new organization make special effort to develop better licensing regulations in the states most needing improvements. Medical colleges are already making rapid progress. The greatest need at present is for a movement by state boards which will bring a corresponding improvement throughout the country in testing the qualifications of those who are to practice medicine. We believe that this can be attained quickly and effectively through a single and efficient federation of state licensing boards.

Medical News

ALABAMA

New Dean for Medical College.—Dr. Eugene D. Bondurant, Mobile, has been appointed dean of the University of Alabama, Medical Department, vice Dr. Rhett Goode, deceased.

Memorial Hospital Company Incorporated.—The Memorial Hospital Company has been incorporated in Selma, with the object of maintaining and operating hospitals and conducting a training school for nurses. The incorporators are physicians of Selma, headed by Dr. F. Goodwin Du Bose.

Mobile Alumni Organized.—Alumni of the University of Alabama, Medical Department, Mobile, met February 21 and organized a local branch of the Alumni Association of the University of Alabama. Dr. John O. Rush was elected temporary chairman, and Dr. Eugene Thames, temporary secretary.

ARIZONA

State Association Meeting.—The Arizona Medical Association is to meet in Bisbee, April 7, and will adjourn to Douglas, April 8, to be entertained with a banquet and ball by the Cochise County Medical Association.

Activities of Maricopa County Physicians.—The Maricopa County Medical Society commenced on December 9 last a series of public health lectures, which are being given every week under the auspices of the society and the Phoenix Young Men's Club. The subjects include trachoma, tuberculosis, preventable diseases of children, garbage and sewerage, ventilation and fresh air, flies, milk and dairying, wells, cesspools and drinking water, venereal diseases of men and women, fakes and nostrums and climate and health.——Dr. Herbert K. Beauchamp has been elected president of the society and Dr. W. Warner Watkins, secretary, both of Phoenix.——The February issue of the bulletin of the Maricopa Medical Society announces that at the next regular meeting of the society a report regarding the proposed revision of the state medical laws is to be expected. The bulletin also contains an open letter to druggists.

ARKANSAS

New County Hospital.—The county and probate judge at Pine Bluff has named a commission to sell the present Jefferson County Hospital and Poor Farm, and to purchase a new site and establish a suitable institution.

New Officers.—Greene County Medical Association: president, Dr. William W. Verser, Brighton; secretary-treasurer, Dr. Olive Wilson, Paragould.——Crittenden County Medical Society: president, Dr. Logan C. McVay, Marion; secretary-treasurer, Dr. Thomas S. Hare, Crawfordsville.——Phillips County Medical Society: president, Dr. William C. King; secretary-treasurer, Dr. William R. Orr, both of Helena.——Texarkana Physicians' Business Association: president, Dr. Robert H. T. Mann; secretary, Dr. Francis M. Leonard.

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[1] Propaganda for Reform department, p. 719.

DELAWARE

Personal.—Dr. Edward M. Vaughan has succeeded Dr. Charles A. Ritchie, resigned, as health physician of Middletown.——Dr. L. August H. Bishop, Dover, was thrown in a ditch under his overturned buggy in a runaway accident recently, but fortunately was not injured.——Dr. James H. Wilson, Dover, secretary of the state board, is reported to be seriously ill after an operation for the removal of gall-stones.——Drs. Pietro A. M. Rovitti, Harry M. Frist, George R. Foulke and Napoleon B. Morrison have been elected vaccine physicians of Wilmington.

Sanatorium for Colored Patients.—The Delaware State Tuberculosis Commission, at its quarterly meeting, announced that it had $20,000 at its disposal; one-half raised by the commission and the other appropriated by the state legislature. Of this $10,000 is to be used in the establishment of a sanatorium for colored tuberculosis patients, and the other half will be applied to the administration building at Hope Farm. During the year 559 patients were treated for tuberculosis at the seven dispensaries in the state. Of these, fifty-two were sent to sanatoriums. There was distributed among the consumptives during the year 10,000 pieces of literature.

IDAHO

New Quarters for Health Department.—The capital commission has decided to convert one of the passages leading to the new wing of the building into rooms for the State Health Department, including the bacteriologic and chemical laboratories and sample rooms for storage of food samples.

City Pest-House Prohibited.—The city health officer of Wallace, Dr. F. Leo Quigley, states that the state law distinctly provides that transportation of small-pox patients into the boundary limits of the city is a misdemeanor and that, therefore, small-pox patients from Kellogg and Wardner must be cared for outside of the city.

ILLINOIS

Commitments of Insane.—Dr. Charles Eberlein, Chicago, senior physician at Cook County Hospital for the Insane, Dunning, maintains that many commitments to institutions are unjust, as the patients are alcoholic cases who should be cared for in a municipal hospital. In his opinion, the Detention Hospital should be able to care for four hundred patients and should be prepared to keep these patients, if necessary, for five or six months before commitment to institutions for the insane.

Hospital Notes.—The board of health of East St. Louis has made a demand on the mayor and city council for a city emergency hospital in the downtown district, provided with cots and an operating room equipment for emergency relief for the sick and injured.——Will County Medical Society, at its meeting February 20, unanimously adopted resolutions asking that the city, township and county cooperate in the establishment of a contagious disease hospital and dispensary to be erected in Joliet.——At the annual meeting of the directors of the Lake County Tuberculosis Institute in Waukegan, February 21, the number of directors was reduced from twenty-five to twelve. Drs. W. H. Watterson and L. H. Tombaugh were elected directors for one year; Dr. J. L. Taylor, Libertyville, a director for two years, and Drs. J. C. Foley, F. C. Knight and W. C. Bouton, directors for three years.

Chicago

Fire in Hospital.—A fire in the basement of St. Joseph's Hospital, February 25, caused a loss of about $1,000. By systematic and cool-headed work on the part of the interns, sisters and nurses, the 130 patients in the hospital were kept from panic.

Personal.—Dr. and Mrs. Harry Spenser-Brown, formerly of Chicago, but now of Paris, are visiting in Chicago.——Dr. Henry B. Favill has been elected vice-president of the Beta Theta Pi Fraternity.——Dr. H. C. Castor has been elected president of the National Association of Life Underwriters.

Conference on Mental Diseases.—The West Side Branch of the Chicago Medical Society, of which Dr. W. T. Mefford is president, is perfecting arrangements for a series of meetings April 17 to 19, to discuss the various phases of mental disease. Papers have been promised by alienists from several states.

INDIANA

State Sanitary Meeting.—The Indiana Sanitary and Water Supply Association, at its annual meeting in Indianapolis on February 16 reelected F. C. Jordan, Indianapolis, president; Dow R. Gwin, Terre Haute, and H. E. Barnard, chief chemist of the state board of health of Indianapolis, Dr. Charles S. Woods, city sanitarian of Indianapolis, J. W. Elms, Cincinnati, and J. W. Peck, Evansville, vice-presidents, and Dr. William F. King, assistant secretary of the State Board of Health, Indianapolis, secretary.

Personal.—Dr. Harry S. Leonard is seriously ill at his home in Indianapolis with septicemia, due to an autopsy wound.——Dr. Albert R. Burton, Princeton, while making a night call, February 15, fell, fracturing his skull, is reported to be improving.——Dr. James Biggerstaff, Bippus, is said to have recovered damages of $200 from the Western Union Telegraph Company, on account of the failure to deliver a message requesting him to make a call.——Dr. John W. Crismond, Anderson, is reported to be seriously ill from cerebral hemorrhage at St. Johns Hospital in that city.——Dr. William G. Ralston, Evansville, celebrated his ninety-third birthday anniversary, February 13.

MARYLAND

Baltimore

Health Conditions in Maryland.—At a recent noonday luncheon of the Baltimore City Club, Dr. William H. Welch, who presided, urged that the state give each county $1,500 a year for the employment of a local health officer who should give his entire time to the work and who should be vested with the proper authority.

Public Health Exhibit.—The public health exhibit of the Medical and Chirurgical Faculty of Maryland, which has just closed, was notable. It was under the charge of a large committee, headed by Dr. William Royal Stokes. One of the most interesting parts of the exhibit was that illustrating the sanitary work at Panama, which showed models of rat-infested houses and houses protected against rats. Other exhibits of especial interest were those relating to malaria, typhoid fever and tuberculosis.

Personal.—Dr. Emil Novak was operated on for appendicitis at Mercy Hospital, February 25.——Dr. J. H. Hogan has been appointed physician in charge of the accident department of Mercy Hospital, vice Dr. William W. Hobson, resigned.——Dr. Conrad P. Strauss has recovered from his recent operation at St. Agnes Hospital.——Dr. John Woolman Churchman, who recently resigned as house surgeon at Johns Hopkins Hospital to carry on research work in the hospital, has been appointed assistant professor of surgery in the Yale Medical School, New Haven, Conn.

MASSACHUSETTS

Hospital Opened.—The Symmes Hospital, Arlington, was opened to the public last week. During the afternoon tea was served in the reception room and the opening was in charge of the Woman's Aid Association of the hospital. After the inspection, which lasted two days, the hospital was opened to receive patients.

Defective School Children.—Dr. William J. Gallivan, chief of the Bureau of Child Hygiene, connected with the Board of Health, Boston, reports examinations of 82,224 school children. Of these 65 per cent. were found defective in some particular. The chief defects noted were: defective teeth in 40.8 per cent.; hypertrophied tonsils in 22.6 per cent.; enlarged cervical glands in 12.4 per cent.; defective nasal breathing in 8.2 per cent.; skin disease in 5.5 per cent.; malnutrition in 3.5 per cent.; cardiac disease in 2.8 per cent.; orthopedic defects in 2 per cent.; and of these, sixty-four out of the 1,638 children were of a tuberculous nature and of pulmonary disease 1.4 and of the 1,181 children thus affected, sixty-three showed evidence of pulmonary tuberculosis. The mayor announced that plans are being considered for the cure of these defects by the agency of the family physician, and through clinics in hospitals, after the approval of the parents has been obtained.

MINNESOTA

Combat Infectious Disease.—Dr. H. M. Bracken, St. Paul, secretary of the state board of health, is making strenuous efforts to stop the spread of trachoma and other infectious diseases among the Indians on the White Earth reservation. Only those living on allotments and under local government can be looked after by the state.

Antituberculosis Exhibit.—The Free Antituberculosis Exhibition prepared under the auspices of the Minnesota State Board of Health was installed in Cannon Falls, February 6, and is creating considerable local attention. In connection with the exhibit, lectures are being given and demonstrations made working along the line of conservation of life.

Personal.—Dr. William J. Mayo, Rochester, was given the honorary degree of LL.D. by the University of Pennsylvania, February 22.——Drs. Thomas McDavitt, St. Paul; John E. Campbell, South St. Paul, and Albert G. Moffat, Howard Lake, have been appointed members of the state board of medical examiners.——Dr. Walter J. Marcley, Minneapolis, formerly a member of the staff of the State Tuberculosis Sanatorium, Walker, has been elected executive officer of Hopewell Hospital, Minneapolis.

NEW YORK

Dispensary for Medical College.—It is reported that the trustees of Syracuse University have decided to erect a teaching dispensary near the medical college, to cost about $75,000.

Straus Milk Charity Incorporated.—The Nathan Straus Pasteurized Milk Laboratories has been incorporated to establish infant milk depots throughout the state and dispense pasteurized milk free or at cost.

Personal.—Dr. Thomas W. Salmon, New York City, has resigned as chairman of the New York State Board of Alienists.——Dr. Clara Barrus, for seventeen years assistant physician in the Middletown State Homeopathic Hospital, has opened a home for mild mental and nervous invalids at Pelham.——Dr. Rupert Folger, Whitestone, fractured his arm while cranking his automobile, February 25.——Dr. Charles F. Clowe, Schenectady, is reported to be critically ill with typhoid fever at his home.

Health Institute for Poughkeepsie.—The State Department of Health will hold a health institute in Poughkeepsie, March 7 and 8, in charge of Dr. Hills Cole, New York City. On the first day the laboratory and its uses will be discussed and in the evening, at a public meeting, the question of the treatment of diseases will be taken up. The control of communicable diseases, nuisances and the disposal of wastes, county sanitation and legal questions affecting the health officer will occupy the second day, and in the evening there will be an illustrated public lecture.

State Society Meeting.—The Medical Society of the State of New York will hold its one hundred and sixth annual meeting in Albany, April 16-18. The annual oration on medicine will be delivered by Dr. Harvey W. Wiley, Washington, D. C., and the annual oration on surgery by Dr. John M. T. Finney, Baltimore. On the first evening there will be a general meeting in the assembly chamber of the capitol, at which addresses will be delivered on "Prevention of Blindness and the Instruction of the Blind Child" by Dr. George E. deSchweinitz, Philadelphia; "Prevention of Deafness and Instruction of the Deaf Child" by Dr. G. Hudson Makuen, Philadelphia; "Prevention of Insanity" by Dr. Albert Warren Ferris, New York City; and "Prevention of Tuberculosis" by Homer Folks of the State Board of Charities of New York. On the second evening a "public meeting" will be held at the capitol, when Dr. Walter B. Cannon, Boston, professor of physiology in Harvard Medical School, will deliver an address on "Benefits of Animal Experimentation to Mankind." Following this address, the president's reception will be held at the Ten Eyck.

New York City

New Officers.—Bronx Medical Association: president, Dr. Charles Graef; recording secretary, Dr. William J. Walker.

Small-Pox on Liner.—The White Star liner *Cedric* came into port from the Mediterranean on February 28 having on board a case of small-pox among the cabin passengers.

Insane Employee Poisons Babies.—The mystery of nine deaths of babies in the Brooklyn Nursery and Infants' Hospital has been solved by the confession of a woman employed in the kitchen of the hospital, who is said to have admitted that she placed oxalic acid into the bottles for the babies' milk.

Hospital to Be Enlarged.—At the annual meeting of the directors of Beth Israel Hospital it was reported that the building fund had reached $198,694, but it is still undecided whether the present building will be enlarged or whether a much larger hospital will be built in another locality. During the past year the hospital provided treatment for 1,948 patients but was obliged to turn away 2,047 for lack of accommodations.

Infant Mortality Lower.—According to the bulletin of the Department of Health, there were only 258 deaths of babies under one year of age in this city during the week ended February 24 as compared with 309 for the corresponding week of last year. The total number of deaths since January 1 amounts to 2,035 as compared with 2,137 for 1910. There were only twenty-three deaths of infants from intestinal ailments during the week as compared with fifty for the corresponding week of last year. The Board of Health attributes this low mortality to the milk stations and says that at present the stations are caring for 3,011 babies. There are at present thirty-three milk stations open.

Ophthalmia Should Be Reported.—In the annual report of the Committee on Prevention of Blindness of the New York Association for the Blind the statement is made that there are 2,018 blind children in seventeen schools, of whom 521 are blind because of ophthalmia at the time of birth. In making a local investigation of the subject in cooperation with the Department of Health the committee found that ophthalmia occurred much more frequently than was supposed, and that the requirement that redness and swelling of the eyes within two weeks after birth shall be reported to the Board of Health is not generally obeyed. It is hoped through investigation and prosecution of cases of neglect, with attendant publicity, every case of ophthalmia neonatorum will be reported to the Board of Health. The general impression conveyed by this investigation was that there should be a careful and scientific examination of school children's eyes and that if the results of such an examination should corroborate the figures stated in the report it would be desirable to have special classes for children with seriously impaired vision.

Hospital Conference.—At a special meeting of the executive committee of the Hospital Conference of the City of New York the nursing situation was considered and the president was authorized to appoint a special committee to secure either such modification of the Nurse Practice Act or of the regulations adopted by the education department under the same act, or such interpretation by the education department of the existing regulations as shall render it possible for the hospitals of the city to continue the training of nurses in sufficient numbers to meet the public demand. The committee at a meeting held February 13 adopted resolutions setting forth that the strict enforcement at this time of the existing regulations of the State Education Department governing the admission of probationers to registered training schools for nurses is impracticable; that the restriction of the admission of probationers is working a hardship on hospitals which are conducting properly equipped ethical training schools, and that this restriction has caused a dearth of pupils, and hence of New York graduates, and tends to attract to New York City large numbers of undesirable nurses and poorly trained nurses of inferior schools, and urging on the education department the adoption of such amendments to the existing regulations as will give to the authorities of properly organized, registered training schools a freer hand in the selection of probationers.

NORTH CAROLINA

New Buildings for Medical College.—Plans are being made for the erection of an entire new set of buildings for the North Carolina Medical College at Charlotte. The present site in the city is to be sold and a larger piece of ground secured in the suburbs, adjoining which the city will build a charity hospital to be operated in connection with the college.

Personal.—Dr. B. W. Page has been elected superintendent of health of Robeson County.——Drs. Isaac W. and Yates W. Faison have been placed in charge of the department of pediatrics of the Charlotte Sanitarium.——The supreme court is said to have decided that Dr. James J. L. McCullers, McCullers, is legally superintendent of health of Wake County.——Dr. William J. Lumsden, Elizabeth City, fell on the ice recently and sustained painful injuries.

Asheville's Health Problems.—The report of the joint committee of the Asheville Board of Trade and Buncombe County Medical Society, outlining plans for the better handling of the health problems of Asheville, recognizes Asheville's position as a resort for tuberculosis patients. It aims to draw certain and emphatic distinctions between inns and boarding-houses which accept guests who are ill, and those which do not. It is in harmony with the ultimate idea of segregation of communicable diseases, and urges the establishment of a great sanatorium, which by reason of its situation and equipment shall attract general attention.

OHIO

All Municipal Officers But One Physicians.—In the reorganization of the village and township of Oxford, Dr. Harry H. Smith is president of the village board; Dr. D. D. Borger, president of the township board of education; Dr. William S. Alexander, president of the village board of education, a member of the village council and president *pro tempore* of that body; and Dr. Harvey R. Cook is a member of the village school board. The only officer not a physician is a Presbyterian clergyman.

Personal.—Dr. Addison W. Hopkins, who has already served for twenty-one years as health officer of Ashtabula, has been reelected to that position.——Dr. Corliss R. Keller, Hamilton, is seriously ill in Mercy Hospital with pneumonia.——Dr. Charles C. Hill, Athens, fell while making a call in West Athens on February 16, fracturing both bones of his right forearm.——Dr. Harry T. Miller has succeeded Dr. D. King Gotwald as president of the Springfield City Hospital, and Dr. William P. Ultes has been elected secretary.——Dr. Howard H. Herman has been succeeded by Dr. Harry E. Palmer as a member of the medical staff of the Miami Valley Hospital, Dayton.——Dr. Myron S. Clark has been reelected vice-president and Dr. Harry E. Welch, health officer, Youngstown.

PENNSYLVANIA

New Officers.—Erie County Medical Society: president, Dr. Guy C. Boughton; secretary, Dr. J. M. Burt, both of Erie.

Hospital News.—Dr. E. F. McGinty, Pittston, announces the opening of a new private hospital in Scranton.——The president of the Rittersville State Hospital Board announces his intention of enlarging the hospital property by the purchase of adjacent farms.——A sun parlor is to be erected at the front entrance of Mercy Hospital, Altoona.

Personal.—Dr. G. T. Matlack, Wilkes-Barre, has been appointed a member of the staff of the Danville Hospital for the Insane.——Dr. L. C. Robinhold, Auburn, was thrown from his buggy in a runaway accident, February 25, and sustained painful injuries.——Dr. W. N. Pringle, Johnstown, sailed on a trip around South America, February 24.——Drs. C. F. Heard, North East, and D. N. Dennis, Erie, are in Europe.

Typhoid at Coatesville.—On March 1, four new cases of typhoid were reported, making a total of 251 under treatment. The death list totals 16. The report of Dr. Samuel G. Dixon, State Health Commissioner, covering the epidemic shows that it was largely due to carelessness, and demands that the borough augment its pumping capacity at the pumping station; abandon the present gravity supply so soon as the additional pumping facilities are installed and install at once a temporary filtration plant at the pumping station to chemically treat and filter every drop of water pumped into the borough reservoir. It also shows that the watershed of Sucker Run and Heffner Creek, from which the borough gets its water supply, is and has been for the last three years in a condition detrimental to public health and one that might have caused an epidemic of typhoid fever, and that the silk-mill tail-race, from which water was pumped in an emergency, was badly polluted by sewage from the Coatesville Hospital. The report also states that the Coatesville Council has always failed to file any plans of its water system with the Commissioner of Health at Harrisburg as required by law. Dr. Samuel G. Dixon, the chief medical inspector, Dr. C. J. Hunt, and Miss Katherine Gillespie, state nurse, have practically taken over the powers of the Coatesville Board of Health.

Philadelphia

New Home for Clinical Club.—The Philadelphia Clinical Association, an organization of medical men and chemists, has made final arrangements for the purchase of a permanent club house in the neighborhood of Broad street and Columbia avenue. The committee appointed to transfer the property consists of: Drs. G. Morton Illman, William McKeage, Ellis E. W. Given, B. F. Devitt and Harry A. Duncan. The cost of the building and lot will be about $9,000 and the amount will be raised through the sale of bonds to association members.

University Society Election.—At the annual meeting of the Philadelphia Alumni Society of the Medical Department of the University of Pennsylvania, February 17, the following officers were elected: president, Dr. Herbert B. Carpenter; honorary vice-president, Dr. Edgar F. Smith, Provost; vice-presidents, Drs. J. Gurney Taylor, Howard A. Sutton and John J. Robrecht; corresponding secretary, Dr. B. Franklin Stahl; recording secretary, Dr. Harvey E. Schrock; treasurer, Dr. Isaac H. Jones; executive committee, Drs. Lewis H. Adler, Jr., George C. Stout, Clarence P. Franklin, George G. Ross and William S. Wray.

Personal.—Drs. S. Weir Mitchell, Edgar F. Smith, Robert G. LeConte, Samuel G. Dixon and J. William White were the guests of honor of the New York Alumni of University of Pennsylvania at a dinner at the Waldorf-Astoria on February 10, and Dr. S. Weir Mitchell's name was inscribed on the "Honor Cup," the permanent trophy of the society, for the year 1912.——Dr. Fielding O. Lewis has been appointed to fill a vacancy on the staff of the Philadelphia General Hospital.——Dr. Alexander C. Abbott, formerly chief of the Bureau of Health, Philadelphia, received the honorary degree of D.P.H. (doctor of public hygiene), from the University of Pennsylvania, February 22.——Dr. Nathan G. Ward has been elected president of the Philadelphia Clinical Association.

Plan to Aid Health Boards.—The County Medical Society has formed a committee of public preventive medicine, to work in connection with local, state and national health authorities to aid in the dissemination of measures to prevent the spread of disease. Public-spirited physicians have banded together under the chairmanship of Dr. Alexander C. Abbott, former chief of the Bureau of Health, and have placed themselves in readiness to support the government in every measure it takes to conserve public health. The committee will enlist in the local crusade against tuberculosis; help in the work of baby saving, and further the efforts of the milk commission and the department of health to gain a pure milk supply for the city. The work of the committee will be carried on by means of public lectures and personal effort. If necessary, the committee will lend its aid as an advisory board to the health authorities, when problems of municipal hygiene are involved.

Public Warned to Boil Water.—Owing to the freshets, the river is bringing down the winter's accumulation of filth from up state and even filtration cannot entirely eliminate the odor and taste. This is an annual occurrence at this time of year. The turbidity in the case of the Delaware River at Torresdale is the highest in the city's history. Whereas the raw water in the river at this point ordinarily shows on the Water Bureau's turbidity scale as from 1 in 1,000,000 parts to 2 in 1,000,000 parts, the turbidity on February 28 was 2,100 to 1,000,000 parts. In twenty-four hours the city's filtration plants removed nearly 1,800 tons of mud from about 330,000,000 gallons of water. Dr. Joseph S. Neff, director of Public Health and Charities, warns the public to boil the water used for drinking purposes. This practice must be continued, especially in West Philadelphia. Even after the turbidity and the odor have disappeared it will be necessary to continue to boil the water for at least two weeks after conditions become normal.

WASHINGTON

The Rat Campaign.—Dr. Louis L. Lloyd, U. S. P. H. and M.-H. Service, Seattle, has held a conference with the municipal commission in Tacoma relative to the methods to be used in the extermination of plague-infected rats.

Leper Feared.—John Ruskin Early, the leper, who is said to have contracted the disease during the Spanish-American War in the Philippine Islands, and who has been located temporarily in Tacoma, is threatened with ouster by his neighbors, who, at an indignation meeting held recently, are said to have adopted resolutions that the United States Government should take charge of the unfortunate and remove him from the community.

WISCONSIN

Personal.—Drs. John L. Yates and Nelson M. Black, Milwaukee, were slightly injured in a wreck on the Pennsylvania Railroad in Huntingdon, Pa., February 15.——Dr. Gustav Schmitt, Milwaukee, has been elected president of the Baron von Steuben Monument Association.——Dr. Joseph Schneider, Milwaukee, has made a donation of $25,000 to the University of Würzburg, as an endowment fund, the income of which is to be devoted to the free treatment of poor eye patients.

GENERAL

Small-Pox on Training Ship.—Owing to a death from small-pox at the training station at Norfolk, Va., the U. S. S. *Franklin* and the training station have been placed under a strict quarantine.

Medical Society of the Missouri Valley.—The preliminary program of the semiannual meeting of the Medical Society of the Missouri Valley, to be held in Colfax, Iowa, March 21-23, has appeared. The arrangements include a three days' meeting, with two evening sessions, and a clinical day at the hospitals in Des Moines, which is located twenty-three miles from Colfax.

Tri-State Meeting.—The fourteenth annual meeting of the Tri-State Medical Association of the Carolinas and Virginia was held in Columbia, S. C., February 21-22, under the presidency of Dr. J. Howell Way, Waynesville, N. C. Norfolk, Va., was selected as the next place of meeting and the following officers were elected: president, Dr. Archibald E. Baker, arleston, S. C.; vice-presidents, Drs. Augustus B. Knowlton, olumbia, S. C.; Andrew J. Crowell, Charlotte, N. C., and lfred L. Gray, Richmond, Va.; and secretary-treasurer, Dr. olfe E. Hughes, Laurens, S. C. (reelected).

Denison Prize Essay.—By the will of Dr. Charles Denison, enver, who died in January, 1909, $10,000 was bequeathed "of hich every two years $1,000 is to be devoted to a prize for the st essay of between 5,000 and 10,000 words on the subject The Relation of the Sun as the Source of Electric Energy to ealth and to the Vital Functions"; said prize to be open to ny one and to be judged as to its worthiness by a prize comittee of three, one to be appointed by the Denver City and ounty Medical Society, one by the American Climatological ssociation, the other to be my son, Henry S. Denison, M. D. . . it being understood that . . . the committee reserves the ght to refuse reward to any or all essays submitted if none ttain to a worthy standard which they will fix, or that they ay have to divide the prize if in their judgment it seems est to do so." For further information address Dr. Henry . Denison, 1405 Glenarm street, Denver.

National Committee for Mental Hygiene.—At the meeting f this organization in New York City, February 17, it was nnounced that an anonymous gift of $50,000 had been given oward the work that had been planned and that another 50,000 had been promised contingent upon the raising of 200,000. This fund will make possible the inauguration of national movement for mental hygiene. It will take the orm of a systematic effort to improve conditions affecting the nsane as well as the education of the sane on the subject f mental disorders, their known causes, prevention and cure. survey of the national field is to be made by a subcommittee f which Dr. William L. Russell, superintendent of the Bloomngdale Hospital is chairman. Dr. Thomas W. Salmon, U. S. . H. and M.-H. S., has been granted a leave of absence for he purpose of taking charge of the active work of this comittee, which has opened an office at 50 Union Square. The fficers elected at this meeting were: president, Dr. Lewellys . Barker, Johns Hopkins University; vice-presidents, Dr. Villiam H. Welch, Johns Hopkins Medical School; and Dr. harles P. Bancroft, superintendent of the New Hampshire tate Hospital, Concord, N. H.; treasurer, Otto T. Bannard; hairman of the executive committee, Dr. George Blumer, ean of the Yale Medical School; chairman of the finance ommittee, Prof. Russell H. Chittenden, director of the Scienific School of Yale University; and secretary, Clifford W. eers.

FOREIGN NEWS

Coming Medical Meetings Abroad.—Besides those previously nentioned in these columns, may be cited the eighth annual neeting of the German roentgenologists, to open at Berlin pril 14, two days before the twenty-ninth annual meeting of he German internists, which convenes at Wiesbaden, April 6 to 19. The topic appointed for discussion at the latter is he use of the Roentgen rays in diagnosis and treatment of tomach and intestine trouble. The eleventh annual meeting f the German orthopedic surgeons is scheduled also at Berlin, pril 9 to 13, and the forty-first annual meeting of the erman surgical society for April 10 to 13, also at Berlin.——he annual meeting of the obstetricians and gynecologists of ermany is to be held at Berlin May 29-31, and the Sixth International Congress for Obstetrics and Gynecology convenes at erlin September 10-13.——The annual meetings of the French nternists and surgeons are to be held at Paris in October as sual. The topics to be discussed by the internists (*xiii con- rès de médecine interne*) are oxaluria and oxalemia; acute nfectious colitis, and treatment of hemorrhagic syndromes.

CANADA

New Officers.—South Ontario and West Durham Medical Association: honorary president, Dr. John T. Fotheringham, Toronto; president, Dr. D. Alfred Farncomb, Newcastle; secretary-treasurer, Dr. Joseph F. Finnegan, Oshawa.

Enforcement of Vaccination Laws.—The provincial board of health of Quebec has determined to take legal action to recover from the town of Beauport the fine of $25 a day, provided for by law, for its neglect to enforce the by-law regarding compulsory vaccination.

Hygiene in Schools.—At the sixth annual convention of the Association of School Trustees for the Province of Alberta held recently in Calgary, the most important resolution discussed was the request that instruction in hygiene be placed on the same basis as the other subjects in the school curriculum.

National Department of Health Considered.—In parliament the Right Hon. R. L. Borden informed the House of Commons recently, in reply to a question, that the government is considering the establishment of a department of health for the dominion, but that the question of the minister of health has not yet been discussed.

Personal.—Dr. J. G. Adami, professor of pathology at McGill University, Montreal, is said to have declined the offer made him by Northwestern University, Evanston.——Dr. Ernest L. Williams has been elected president of the board of health of London, Ont.——Dr. A. S. Moorhead, Toronto, has been made a Fellow of the Royal College of Surgeons, London.

New Medical Act.—Legislation has recently been enacted by the Canadian parliament placing the medical profession of Canada on a national basis. The Canadian medical act establishes a Canadian Medical Council to grant a dominion license, entitling the holder to practice his profession anywhere in Canada. Hitherto only provincial licenses have been issued.

Small-Pox.—Comptroller Wilson urges that the Ontario government should establish north of Pembroke a provincial small-pox hospital, to which cases of the disease which occur in the lumber camps may be transferred and cared for. At present these patients are shipped to Ottawa.——Hemorrhagic small-pox is reported to be epidemic in Champlain and L'Islet counties.

Dominion Association Meeting.—The Canadian Medical Association will hold its annual meeting August 10-14, in Edmonton, Alberta. This is the first time the association has held a meeting in the Province of Alberta and the committee of arrangements is making strenuous efforts for the success of the meeting that the occasion may be memorable in the medical annals of Canada.

Fighting Tuberculosis.—At a meeting of the board of trustees of the Brant Sanatorium, Brantford, it was decided to proceed to collect immediately $25,000 for building and furnishings of the sanatorium. A site has already been donated and $14,000 has been subscribed for the building fund.——The Strait Shore site has been approved for a tuberculosis hospital and day camp for St. John, New Brunswick.——Mr. William Reid, president of the Reid-Newfoundland Company, has made an offer to the government to erect and equip a sanatorium at St. John, at a cost of $50,000. Two of Mr. Reid's brothers have offered to erect sixteen cottage hospitals in outlying districts, to cost a similar amount.

LONDON LETTER

(From Our Regular Correspondent)

London, Feb. 24, 1912.

The Crisis in the Profession in Connection With the Insurance Act; Defeat of the Extreme Party

The special representative meeting of the British Medical Association to decide the attitude to be adopted by the profession toward the insurance act has been held. As foreshadowed in my previous letter, a keen contest took place between the two parties in the association—the extreme one whose policy is to refuse to work the act at all and the more moderate one, which, while entirely agreeing with the other as to the objects desired (the obtaining of the six points laid down by the association), thinks the best course is to endeavor to obtain them by regulations. To such a pitch is the profession roused that three organizations have been formed outside the British Medical Association—the British Medical Association Reform Committee, the National Medical Union and the Medical Federation—for the purpose of resisting the act and influencing the policy of the British Medical Association, which all parties recognize as the only body capable of speaking for the whole profession. These outside bodies held meetings on the day before the association meeting for the purpose of promoting the extreme policy. At the representative meeting the first trial of strength between the two parties took place on a motion that the chairman of the representative meetings, Dr. Maclean, "be asked to resign the chair and a more vigorous advocate of our rights be elected." As explained in previous letters, Dr. Maclean, as well as the council of the association, has been censured by the extreme party for not adopting a more vigorous policy of opposition to the government. Dr. Maclean specially for telling the representatives in answer to an appeal, that they were not simply delegates, but could vote as they thought best even in opposition to the resolutions of the divisions of the association which they represented. This was shown to be at variance with one of the bylaws of the association, which says that a representative is bound to vote in accordance with any resolution of his division passed within three months of the representative meeting. Dr. Maclean admitted that he was in error but said that the question was sprung on him under peculiar circumstances. After a debate in which even those who supported the motion spoke in the highest terms of Dr. Maclean's services, the motion was defeated by seventy-eight votes against sixty-three. This defeat of the extreme party was the prelude to defeat of all their motions. The crux of the whole situation was their motion "that the council be instructed to inform the government and the insurance commissioners that until the minimum demands of the profession are placed beyond doubt by an amending act further negotiations will be useless." Against the alternative that the profession could obtain its demands by regulations it was urged that such regulations could be altered again at any moment. A strong speech against the motion was made by Dr. Macdonald, chairman of the council of the association. He pointed out how much easier it was to get their demands put in the form of a regulation than in the form of an amending act, which would have to pass the House of Commons. They had obtained one great point under the act—the free choice of doctor by the patient. If they now refused to work the act they would have against them the great confederation of the friendly societies which would become about three or four times as strong as they were now. These would not give free choice of doctor. At present, about 12,000 physicians were engaged in attendance on the friendly societies for a capitation fee of only about $1 per annum. Even under the meager arrangements of the act they would get 50 per cent. more, and at the same time would have three times as many men in the clubs. Could these physicians, who were to a great extent dependent on clubs, be persuaded to surrender them? The motion was defeated by eighty-one votes against fifty-eight. The second day of the meeting the extreme party brought forward another motion to inform the insurance commissioners that if an amending act embodying the six points of the association were not passed by parliament the profession would refuse to work the act. After much discussion the resolution was adopted as a compromise between the two parties "that the commissioners be informed that unless the minimum demands of the association be embodied in the regulations in such a manner as to be permanent, with a view to having the same embodied in an amending act, it is the intention of the British Medical Association to call on the profession to decline to work the act." This was carried by a vote of 159 to threee. A motion of want of confidence in the council was brought forward but was not put to the vote.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Feb. 16, 1912.

Reform in Medical Instruction

With regard to the superior commission of medical instruction, the formation of which I mentioned in a previous letter (The Journal, Feb. 24, 1911, p. 568), the council of administration of the Syndicat des médecins de la Seine has just passed a resolution protesting energetically against the composition of the commission which contains no representative of the syndicats or of any professional organization whatever, provincial or Parisian. Out of twenty-four representatives only eight are practicing physicians and those physicians appointed by the minister are not appointed as official delegates of the groups to which they belong. Consequently, the commission is constituted on lines absolutely opposed to the ideas expressed by the medical profession. It corresponds in no way to the superior medical council demanded by the Congrès des praticiens, since conception of this council was based on the collaboration of the syndicats with public officials and the recent decree refuses such collaboration.

Death of Dr. Eugène Caventou

Dr. Eugène Caventou, member and former president of the Academie de medecine, section of pharmacy, since 1870, has just died, aged 88. He was the son of the chemist Caventou, whose name, in connection with that of Pelletier, is connected with the discovery of sulphate of quinin.

A New Periodical Devoted to Abnormal Infancy

The first number of a monthly review entitled *L'Enfance Anormale* has just appeared. It is published under the direction of Dr. A. Courjon and M. Louis Grandvilliers, and is devoted especially to charitable, pedagogical and medical aid of abnormal children.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Feb. 16, 1912.

Personal

Professor Cramer of Göttingen has refused the call t Ziehen's chair of neurology in Berlin. It is to be hoped tha the next candidate on the list, Professor Bonhöffer of Bresla will accept, and thus we may be spared the annoyance in fillin this chair which was experienced in connection with ophthalmology.

Dr. Otto Kahler, a privat-docent of Vienna, a son of th former director of the second medical clinic of that place, ha been appointed director of the university clinic for laryngology to succeed Professor Killian.

A bacteriologic department of the Berlin pathologic institut has been formed, and Professor Morgenroth, a pupil of Ehrlich has been named as its director.

The Practical Year

As may be well known to your readers, there has been fo some years the arrangement in Germany that before the young physician can get his license to practice, he must after he ha passed his state examination spend a so-called practical year generally in the hospitals, but sometimes in purely scientific institutions. A catalog of these institutions which are entitled by the government to receive practitioners is published yearly.

The reason of this requirement was the well grounded idea that before the young practitioner should be placed on his own feet, or, as Billroth once expressed it, let loose on the suffering public, he should get into closer touch with patients than is, as a rule, possible in the student period, especially in the great university cities. Moreover, the spirit of professional ethics should be instilled into him under the supervision and guidance of the directors of the hospitals, and they should se that he has the necessary tact and understanding of the tasks of the practicing physician. The young physicians, who during this practical year bear the title of *Medizinalpraktikanten*, are required to furnish as evidence of their activity, the certificates of one or more directors of institutions in which they have spent the period. If this certificate is not accorded to the candidate by one or more of the directors concerned, the license to practice may be denied.

After this arrangement had been in force for several years it was demonstrated from various sources, particularly by the transactions of the medical chambers (*Aerztekammer*) that, while it was thoroughly worthy of recognition in theory, in practice it had not accomplished what had been expected of it. The directors of institutions in the larger and middle sized cities are as a rule too busy to undertake the supervision of the *Medizinalpraktikanten* with sufficient care. They leave this duty to assistant physicians, who naturally have not the necessary skill and experience and sometimes not enough goodwill for so responsible a task. At the smaller hospitals where the directors have time enough to busy themselves with the praktikants the material is not large enough to supply to the candidates the desired enlargement of their experience. As a result the praktikants as a rule prefer to remain in the large cities, particularly in the university towns where they are in a position to carry on scientific work. In addition to all this, another objection has developed. While before the institution of the practical year every young physician who had a sufficient sense of duty and the necessary time endeavored to spend one or more years as an assistant physician in a hospital, the opinion has established itself in the minds of many young physicians that the practical year is sufficient to supply their need of service as assistants. As a result there has developed a lack of assistant physicians and this again has brought about the result that the hospitals have attempted to supply this lack by the employment of praktikants, with the resulting competition for young physicians to fill these places. In this strife the victors are the institutions which offer the best inducements, and therefore the young physicians receive not only free lodging and care, but are given a fee, naturally very small, but amounting at least to $12.50 (50 marks) per month. All these difficulties have convinced the government that there is need for a change. A conference of the government and medical councillors (*Regierungs- und Medizinalräte*) has been called for the latter part of April in which some new arrangement of the conditions for the practical year is to be discussed.

[The above item is of particular interest this week in connection with the report of the discussion of the same subject at the Conference on Medical Education. See pages 723 and following.—Ed.]

eduction of the Birth-Rate in Prussia and Germany and the Campaign Against It

At its last session the scientific deputation for medical ffairs in Prussia, of whose activity I have repeatedly given on accounts, discussed the following questions: Are there ndications that in the constant decrease of the birth-rate in russia and Germany a diminution of the reproductive capac-y is an etiologic factor? What measures seem suitable to ppose this evil in case it exists? On the basis of reports ade by the reporting councilor Professor Dietrich and the ormer reporting councilor, Dr. Pistor, the scientific deputa-on adopted the following theses: The undoubted decrease in he birth-rate affects chiefly legitimate fertility. It is most xtensive in the cities, although the number of women capable f child-bearing has increased in the cities and decreased in he country. The number of marriages has remained the ame. A variation unfavorable to the portion of the popula-ion capable of reproduction and in favor of those not yet or o longer capable of reproduction has not yet taken place in onsequence of the lowering of the death-rate and the increase n the length of life; on the contrary, the number of persons f reproductive age has increased. A diminution of the repro-uctive capacity of either sex in Prussia and Germany has not een demonstrated up to the present. The reduction of births ust be referred chiefly to the voluntary limitation of the umber of children. The reduction of the birth-rate appears ot to be threatening in the near future in view of the com-ensatory reduction of the death-rate, but this will reach its atural limit. For that reason the welfare of the state and f the people demands that suitable measures to obviate the vil be thought out in due time. As questions with reference o the reproduction and preservation of the race need scien-ific elucidation in various directions, systematically continued fficial inquiries with reference to the conditions affecting the irth-rate in various strata of the population are much to e desired.

The Smoke and Soot Nuisance

At the same session the Wissenschaftliche Deputation für as Medizinalwesen in Preussen also voiced its opinion with eference to the smoke nuisance and the campaign against it. he deputation arrived at the following conclusions: The xcessive production of smoke and soot is detrimental to uman health. To what extent this injury to health occurs y the production of smoke and soot must be determined by omprehensive investigation of an experimental and statistical haracter. The official medical authorities should stimulate he hygienic institutes to research in this line. The meas-res of a legislative nature with reference to the smoke ques-ion hitherto promulgated have been directed only against he locally occurring smoke contamination. These measures n future should be energetically continued and increased in igor. In addition there is need to combat the very consid-rable part of the diffused smoke nuisance of the large cities, hich is due to domestic fires, by instruction of the people y means of circulars and by suitable instruction in schools or girls and in domestic science courses. In this connection t is important to emphasize the great advantage of cooking y gas and of central heating, as well as the use of fuel pro-ucing little smoke and the proper care of stoves. As the ctivity of societies and commissions for combating the smoke uisance in various cities has given good service, the formation f such unions or commissions in other cities suffering from he smoke nuisance should be encouraged. For the uniform onduct of the campaign against smoke as well as for more xtensive information as to the extent and cause of the moke nuisance in large cities, there is need of constant coop-ration of the officials for trade supervision and of the police uthorities with the district physicians.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Feb. 10, 1912.

he Austrian Government Obtains the Practical Monopoly on the Sale of Radium

An official report announces that the government has bought p all the mines of Joachimsthal (Bohemia), where radium s present. Extensive investigations by experts have shown hat it will be possible to obtain per year from these mines t least a ton of uranium ore, equivalent to 3 gm. of radium, alued at $240,000. Together with the production of the ther state mines, the yearly output of this precious sub-tance will amount to 5 gm. and Austria will monopolize in eality the sale of radium; the mines in California, in Spain and in Saxony cannot compete with the Austrian. The bulk of the year's output will be handed over to the Radium Institute in Vienna, which will use it for extensive experiments. A large quantity will be disposed of to hospitals, and the surgical clinics in Vienna will soon possess the largest quantity possessed by any charitable institution in the world. Small quantities will be sold to physicians and scientists, mostly as radium salts. The mines were bought for nearly $500,000. The cost of "manufacturing" 1 gm. of radium is very low (only $4,000), while the by-products are very valuable, for nearly 6,000 pounds of uranium colors are obtained in the process of separating 1 gm. radium. This uranium is valued at $20,000. Thus the government has no doubt made a very good bargain, and it may easily place large quantities of the precious material at the disposal of clinical teachers for the benefit of the diseased poor.

Proposed Reform of the Medical Curriculum

The methods of instruction of medical students, as well as the entire system of study in force at present, does not find much favor with the students in this country. They complain that too much time is devoted to purely theoretical subjects of minor importance, while the actually important practical service of the student, the clinical instruction, is too superficial. The examinations are also, in the opinion of the students, not satisfactory because they do not at all furnish a proof of the real knowledge of a candidate. What is really wanted is an examination by the professor without any time limit—which has hitherto been fifteen minutes for each candidate—and at the bedside not only on one case but on a series of cases. The students have formulated their wishes in a memorandum and delivered it to the ministry of education. They want to be allowed to pass their first theoretical and practical examination (on biology) at the beginning of the second year of the curriculum, and to spend four years in clinical wards instead of three as at present. Instruction in serology, otology and physical therapeutics should be compulsory, and examinations more practical and searching and not simply a matter of a few minutes. A hospital year should be made obligatory before granting the diploma of M.D. It is not often the case that students themselves ask for heavier and increased regulations of their duties, and nothing but the well-considered needs of their profession have prompted them to do so. There is reason to believe that these wishes will be fulfilled in a short time.

Marriages

Thomas B. McClintic, M.D., U. S. P. H. and M.-H. S., to Miss Theresa E. Drexel of Washington, D. C., March 2.

George William Shipp, M.D., Newton, N. C., to Miss Bessie May Reid of Baltimore, January 17.

Francis V. Carden, M.D., Coatesville, Pa., to Miss Anna Brennan of Harrisburg, Pa., February 20.

David Treadwell Bishop, M.D., to Miss May Constance Shelley, both of Brooklyn, February 12.

Smith McMullin, M.D., Berkeley, Cal., to Mrs. Laura Q. Wilson of Petaluma, Cal., February 18.

Sidney L. Feldstein, M.D., to Miss Carrie Blumenthal, both of Philadelphia, February 22.

John R. Hall, M.D., Napton, Mo., to Miss Ferda Roberts of Boonville, Mo., February 11.

Deaths

John Goodman, M.D. Tulane University, New Orleans, 1859; one of the founders of Louisville Medical College, later demonstrator of anatomy in the Kentucky School of Medicine; professor of obstetrics in the University of Louisville, and for a quarter century physician to the Louisville Industrial Home for Reform; one of the original members of the American Gynecological Society; one of the organizers and first members of the Louisville Board of Health; died at his home in Louisville, February 19, from arteriosclerosis, aged 74. Physicians of Louisville served as honorary and active pallbearers

Thomas Chalmers Minor, M.D. Medical College of Ohio, Cincinnati, 1867; a member of the Cincinnati Board of Health and health officer in 1878-1879; for six years a member of the board of trustees of the University of Cincinnati and for a similar period police examiner; chief examining physician of the police and fire departments of Cincinnati since 1907; at one time a member of the board of education; who is said to have established the first quarantine against yellow fever while health officer of Cincinnati in 1878; died at his home, February 18, from pneumonia, aged 65.

Asa Brainerd Isham, M.D. Medical College of Ohio, Cincinnati, 1869; a member of the American Medical Association; from 1876 to 1880 professor of materia medica and therapeutics in the Cincinnati College of Medicine and Surgery; president and for many years a member of the board of directors of the Cincinnati Hospital; state commander of the Military Order of the Loyal Legion of the United States; died at his home in Cincinnati, February 20, from cerebral hemorrhage, aged 67.

Adam Guthrie, M.D. University of Arkansas, Little Rock, 1893; a member of the American Medical Association and president of the state medical board of the Arkansas Medical Society; at one time professor of materia medica, therapeutics and hygiene in the University of Arkansas and visiting physician to the Logan H. Root Hospital, Little Rock; died at his home in Prescott, Ark., February 15, from cerebral hemorrhage, aged 49.

Henry Sampson Isaacs, M.D. Western Pennsylvania Medical College, Pittsburgh, 1903; a member of the Medical Society of the State of Pennsylvania; formerly of Braddock but for two months a resident of Denver, Colo.; died in that city, February 19, as the result of injuries received two days before in a collision between a street car on which he was riding and a hosewagon of the Denver Fire Department, aged 31.

Robert C. White, M.D. University of Louisville (Ky.) 1853; acting assistant surgeon U. S. P. H. and M.-H. Service, in charge of the Pensacola (Fla.) Station; port physician of Pensacola since 1885; a member of the Association of Military Surgeons of the United States; died at his home in Pensacola, February 15, after a protracted illness due to influenza, aged 70.

William T. W. Dickeson, M.D. University of Pennsylvania, 1849; a member of the Medical Society of the State of Pennsylvania; surgeon of the Ninety-Ninth Pennsylvania Volunteer Infantry and of the Fourth Pennsylvania Reserves during the Civil War; the oldest practitioner of Media; died at his home, February 21, from senile debility, aged 85.

Leander Rankin Webster, M.D. New York University, New York City, 1864; formerly assistant surgeon U. S. Army; a member of the American Medical Association; for twelve years a practitioner of Grass Valley, Cal., and for twenty-five years a resident of Oakland; died at his home, February 18, from heart disease, aged 75.

Alexander Cook Major, M.D. Washington University, St. Louis, 1885; formerly local surgeon of the Kansas City Southern Railway at Anderson, Mo., and from 1892 to 1894 second assistant surgeon at the Soldiers' Home, Milwaukee, Wis.; died at his home in Excelsior Springs, Mo., February 14, from pneumonia, aged 49.

Edward Bernard Mathiot, M.D. Jefferson Medical College, 1882; a member of the American Medical Association and a specialist on diseases of the eye, ear, nose and throat, of Pittsburgh; for several years a member of the staff of the South Side Hospital; died at his home, February 20, from pneumonia, aged 50.

George Denison Whedon, M.D. Albany (N. Y.) Medical College, 1853; Surgeon of the Twelfth New York Volunteer Cavalry from 1861 to 1862 and later in charge of the field hospital near Stafford, Va.; for many years a practitioner of Syracuse, N. Y., died at his home, February 13, from uremia, aged 79.

Oscar Porzer, M.D. College of Physicians and Surgeons, Baltimore, 1906; of Bloomfield, N. J.; a veterinarian in the Army during the Spanish-American War; died in the German Hospital, Newark, N. J., from malignant disease of the jaw due to the kick of a horse fourteen years before, aged 41.

Albert Aurelius Hornor, M.D. University of Pennsylvania, Philadelphia, 1854; a member of the American Medical Association; a pioneer practitioner of Helena, Ark.; surgeon of Hindman's Legion, C. S. A., throughout the Civil War; died at his home, February 21, from senile debility, aged 80.

Morton Leon Hunt, M.D. Rush Medical College, 1906; formerly a member of the American Medical Association; formerly of Akron, Ohio, and anesthetist to the Akron City Hospital; died at his home in Winchester, Ind., February 21, from septicemia due to an operation wound, aged 31.

Raymond Sorber Moyer, M.D. Medico-Chirurgical College Philadelphia, 1909; a member of the Medical Society of th State of Pennsylvania; of East Mauch Chunk; died in th Palmerton (Pa.) Hospital, February 16, from peritonitis following an attack of appendicitis, aged 23.

Patrick H. Harriman, M.D. New York University, New York City, 1884; a member of the American Medical Association and a well-known practitioner of Norwich, Conn.; died in th General Memorial Hospital, New York City, February 17 after a surgical operation, aged 51.

Wesley A. Daniel, M.D. Rush Medical College, 1853; surgeon of the Twenty-Fourth Iowa Volunteer Infantry; a practitioner of Tama County (Iowa) for fifty-nine years; and firs surveyor of the county; died at his home in Traer, February 8, from senile debility, aged 86.

Frederick B. Lawson, M.D. Berkshire Medical College, Pittsfield, Mass., 1865; surgeon in the Navy during the Civil War for thirty years a practitioner of New York City and then fo ten years a resident of Boston; died at his home in Acushnet Mass., February 19, aged 72.

Thomas Robert Dougher, M.D. University of Maryland Baltimore, 1909; of Avoca, Pa.; for many years a member o the staff of Pittston Hospital; died at his home, February 16 from meningitis following an attack of pneumonia, aged 27.

Edwin L. Smith, M.D. Rush Medical College, 1884; a member of the American Medical Association and for twenty-eigh years a resident of Shelton, Neb.; died in a sanatorium i Kansas City, Mo., February 28, from nephritis, aged 64.

John Theodore Scholl, M.D. Washington University, St Louis, 1858; a practitioner of Port Washington, Wis., unti 1883, and thereafter of Los Angeles; died at his home, February 15, from senile debility, aged 78.

Robert Patterson, M.D. Trinity Medical College, Toronto Ontario, 1880; a pioneer practitioner of Clay County, Minn and a resident of Barnesville; died in Biloxi, Miss., Februar 16, from cerebral hemorrhage, aged 60.

Fred Nelson Burnett, M.D. Long Island College Hospita Brooklyn, 1892; formerly of Webster and Attleboro, Mass. died suddenly at his home in Dorchester, Boston, February 2 from valvular heart disease, aged 51.

Eugene Warren Martin, M.D. Rush Medical College, 1897 formerly of Jewell, Ia.; third assistant physician in the Cherokee State Hospital; died at Cherokee, February 9, from cerebral hemorrhage, aged 42.

Ransom Tiffany Gates, M.D. Geneva (N. Y.) Medical College, 1867; a member of the Medical Society of the State o New York; died at his home in Newark Valley, January from erysipelas, aged 89.

Hermann Wichmann, M.D. Humboldt Medical College, S Louis, 1862; a member of the staff of Lutheran Hospital, S Louis; died at his home in South St. Louis, January 23, from angina pectoris, aged 69.

William Guy Wren, M.D. Medical School of Maine, Brunswick, 1896; a colored physician of Columbus; formerly surgeon of the Ninth Battalion, N. G. Ohio; died at his home February 14, aged 40.

Samuel Douglass Gillespie, M.D. University of the South Sewanee, Tenn., 1908; of Vidalia, La.; was found unconscious near his office, February 15, and died a few hours later, from heart disease, aged 27.

Edwin Glover Morey, M.D. Chicago Homeopathic Medical College, 1886; formerly of Rock Island and Oak Park, Ill died in Florida recently from influenza and was buried at Rock Island, February 16.

John D. W. Henderson, M.D. Jefferson Medical College, 1867 of Philadelphia; a veteran of the Civil War; died in the Presbyterian Hospital, Philadelphia, February 13, from heart disease, aged 72.

Francis Joseph Durocher, M.D. Detroit (Mich.) College o Medicine, 1901; health officer of Ecorse village and townshi Michigan; died at his home, February 8, from acute bronchiti aged 38.

John Melvin Lamb, M.D. College University, Washington D. C., 1884; for twenty-five years professor of physiology i his alma mater; died at his home in Washington, February 2 aged 49.

James H. Hudson, M.D. Vanderbilt University, Nashville Tenn., 1883; of Boonshill, Tenn.; died in an infirmary i Nashville recently and was buried at Boonshill, January 29.

James H. Hatch, M.D. Medical College of Virginia, Richmond, 1857; a Confederate veteran; died at his home nea Beaver Dam, Va., February 10, from paralysis, aged 79.

Riley Jackson Butts, M.D. Vanderbilt University, Nashville, Tenn., 1895; a member of the Arkansas Medical Society; died at his home in Altus, February 18, aged 55.

William C. Sprinkle, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1879; died at his home in Shelbina, Mo., February 19, from pneumonia, aged 62.

Oscar Whitfield, M.D. University of Tennessee, Nashville, 1880; died suddenly at his home in Birmingham, Ala., February 11, from angina pectoris, aged 52.

Carl F. G. Bergner (license, Berks County, Pa.); a practitioner of Reading for nearly half a century; died at his home February 15, from pneumonia, aged 73.

Humphreys W. Beaty, M.D. Memphis (Tenn.) Medical College, 1907, of Binghampton, Tenn.; died in St. Joseph's Hospital, Memphis, February 11, aged 34.

George Wylie Rae, M.D. Trinity Medical College, Toronto, 1875; formerly of Bradford, Pa.; died in the Warren (Pa.) Hospital for the Insane, February 13.

Robert Anderson Hamill, M.D. College of Medicine of the University of Nebraska, Lincoln, 1907; of Chapman, Neb.; died in Denver, February 8, aged 32.

Tancrede Fontaine, M.D. Laval University, Montreal, 1900; died at his home in Black Lake, Que., January 8, from musculo-respiratory paralysis, aged 37.

David P. Shie, M.D. Kentucky School of Medicine, Louisville, 1892; died at his office in Orrville, Ohio, February 6, from cerebral hemorrhage, aged 49.

Clinton G. Cooley, M.D. Albany (N. Y.) Medical College, 1884; of Montgomery, N. Y.; died at the home of his brother, near Pine Bush, N. Y., aged 56.

Alice C. Bellows, M.D. Bennett Medical College, Chicago, 1895; died at her home in Chicago, February 14, from chronic interstitial nephritis, aged 50.

George A. Knox, M.D. Eclectic Medical Institute, Cincinnati, 1894; was found dead in his office in Pittsburgh, February 7, from heart disease, aged 38.

Stafford L. Parker, M.D. University of Louisville (Ky.) 1864; died at his home in Athens, Ky., February 13, from heart disease, aged 73.

John Wellington Morton, M.D. Rush Medical College, 1877; died at his home in Ann Arbor, Mich., February 15, from heart disease, aged 66.

Daniel H. Bailey, M.D. Medical College of Ohio, Cincinnati, 1876; of Denison, Texas; died in Terrell, Tex., Dec. 30, 1911, from paresis, aged 51.

Elmer Ellsworth Fuller, M.D. Hahnemann Medical College, Philadelphia, 1893; died at his home in Plymouth, Mass., February 6, aged 49.

Isaac J. Lane, M.D. Queen's University, Kingston, Ont., 1886; died at his home in Edmonton, Ont., Dec. 14, 1911, from nephritis, aged 62.

Richard H. Ely, M.D. Jefferson Medical College, 1882; died at his home in Hawley, Pa., February 20, from cerebral hemorrhage, aged 74.

William Smith, L.R.C.P. & S. Edinburgh, Scotland, 1889; formerly of Kirksville, Mo.; died recently in Dundee, Scotland.

James Gerrie, M.D. New York Homeopathic Medical College, 1868; died at his home in Brooklyn, February 19, aged 75.

Sucher Drozdowitz (license, Illinois, 1892); died at his home in Chicago, February 21, from angina pectoris, aged 54.

Association News

FUND TO PROMOTE RESEARCH

The Committee on Scientific Research of the American Medical Association has charge of a small fund which is to be used to promote research. The committee is desirous that this money should be used to meet actual needs and to promote investigative work not otherwise adequately provided for. Applications for grants are invited. The applicant should state fully the purpose for which the grant is desired, the qualifications of the applicant and the general opportunities and conditions under which the work is to be done.

The members of the committee are Drs. Ludvig Hektoen, Chicago (1743 West Harrison street), Graham Lusk, New York, and Eugene L. Opie, St. Louis.

THE SCIENTIFIC EXHIBIT FOR 1912

The fact that the first official scientific exhibit of the Association was held in Atlantic City will naturally lead to comparisons of the present with the first effort. To this end it behooves us to make such a creditable showing at the coming meeting that the comparison will be indicative of progress. That the exhibit of 1912 will exceed the preceding efforts both in size and in points of excellence is already assured. The East has always responded most liberally when the meetings have been held in that region, and the present indications point to patronage even beyond that previously accorded. From the city of Washington alone six distinct exhibits have already been promised. These prospects show the necessity of more ample quarters than were provided in 1909. It will be gratifying to prospective exhibitors to learn that the Committee on Arrangements has promised at least double the floor space provided three years ago, besides facilities for microscopic and lantern demonstrations.

To prospective contributors it may be stated that exhibits relating to any of the fundamental branches of medicine (anatomy, physiology, chemistry, pathology, etc.), as well as those related to the so-called practical fields, will be highly acceptable. Anything and everything is to be encouraged which sets forth in graphic manner the progress for which the Association stands. Primarily such exhibits are for the instruction of the large number of practitioners attending the meetings; secondarily, they proclaim to the medical world the progressiveness of the institutions and the men presenting them.

Exhibits in series are, generally speaking, preferable to heterogeneous collections. Persons preparing exhibits are urged to do so with a view to making a formal demonstration of them at a time which the committee will be pleased to designate on the program. It is designed to make the demonstrations at the coming meeting a conspicuous feature. They will include gross, lantern and microscopic presentations; emphasizing research problems and methods in diagnosis; illustrating advancement made in the different departments of medicine; showing newer methods in preventive medicine, hospital construction, management, etc., etc. Those expecting to participate should inform the director as to the scope and character of demonstration.

Reference to one of the demonstrations already arranged for will give an idea of the plan which we are trying to realize. The entire subject of syphilis will be illuminated. One very eminent authority will present the laboratory and experimental phases; others will show by photographs and specimens the cutaneous, visceral and bone lesions of the disease. It will be an exceptional privilege to the many attending the meeting to be able to see pure cultures of the *Spirochæta pallida* and other spirochetes, the living motile organisms by dark-field illumination, inoculated animals, and the luetin test; these features will certainly interest a great many.

Awards to exhibitors will be made as follows:

1. *Certificates of Honor.* These will be given to a few of those presenting exhibits of distinctively superior merit.
2. *A Gold Medal.* This and fifty dollars, or a hundred dollars, will be given for the best research exhibit relating to any of the fundamental branches of medicine.
3. *Gold Medal for Best General Exhibit.* Consideration will be given to the scope, excellence of material presented, care in preparation, and value as an instructive educational exhibit.
4. *Cartoon Exhibit.* Through the Council on Health and Public Instruction two cash awards are offered, of $200 and $100, respectively, for the first and second best series of six cartoons on the following health subjects:

A. Cartoons dealing with public health questions.
  (a) Public water- and milk-supply.
  (b) The health of the people versus the health of domestic animals, trees, grain, etc.

B. Cartoons on the nostrum business and quackery.

Notification of intention to participate in the Cartoon Contest should be sent at the earliest possible moment to the Director of the Exhibit, Dr. Frank B. Wynn, 311 Newton Claypool Building, Indianapolis.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THOREMEDIN

A Typical Nostrum Put Out Under the Honored Name of Squibb

WILLIAM ALLEN PUSEY, M.D.
CHICAGO

In September, 1911, E. R. Squibb and Sons published (in *Squibb's Memoranda for the Medical Profession*) the "first comprehensive report regarding Thoradin which in the hands of Dr. Bulkley and other eminent dermatologists, both here and abroad, has proved a remarkably efficient and safe remedy for Epithelioma, Lupus, Nevi, Pustules (?), Angiomata, Verrucæ, Moles, Chronic Eczema, Acne, Etc." In passing, it may be said that in this report, aside from Dr. Bulkley, there were no "eminent dermatologists" whose names were familiar to me. In January they issued another report on the same remarkable agent, but this time under the name Thoremedin, because "since our previous report in which the *new* remedy[1] was called Thoradin, we have learned that an entirely different article is offered under a similar name."

The reports do not specifically assert that the therapeutic efficacy of the remarkable "new remedy" is due to its radioactivity, but certainly they do not suggest that it is an old chemical caustic, and the implication is clear from the context that its efficacy is at least bound up with "radio-active Thorium." First, there is the radiant-energy suggestion of the name Thoradin—name surrendered under trade necessity—with its combination of the roots of thorium and—that element of the mysterious powers—radium. Then again, "Thoremedin (the name given to the Thorium Remedy) consists of *radio-active* Thorium in combination, etc." Note in this connection that it is specifically a "Thorium Remedy"—in capital letters. Further, "in some cases it [Pasta Thoremedin.—W. A. P.] *alone* produces the same results as an operation and postoperative *radium* treatment *combined*." Still further, "Pasta Thoremedin affords an excellent substitute for the *x*-rays in postoperative treatment of neoplasms . . ." Of course, suggestion of the radio-active efficacy of this remedy could go little further than the last two sentences offering it as a substitute for radium and *x*-rays for postoperative therapeutic purposes.

On the other hand, as suggestive that it is not simply a chemical treatment these sentences suffice: "Its destructive power can be entirely controlled . . .; a thing that cannot be done in the case of . . ., *concentrated mineral acid* . . ." And ". . . most of the cases thus far treated have been chronic where prolonged *chemical treatment* and even surgical operation had been of no avail."

THE IMPOSING CONTAINER

As a final indication of the mysterious potency and dearness of the remedy the container of Pasta Thoremedin is, I think, an interesting study. First, there is a handsome round screw-top aluminum box; within there are two little glass rods and two little glass spatulas; then a strip or two of fire-resisting asbestos, lining the sides of the box; and finally—oh mystery!—one comes to a little two- or three-dram glass-stoppered bottle with its precious contents of a teaspoonful of the Pasta, or, in the vernacular, paste. Surely here is a precious and powerful agent. As examination will show, the bottle would as well be packed in a handful of sawdust.

With the report of the new remedy came, from Europe presumably, one C. B. Semerak, to me unknown, who has "decided to remain permanently in the United States"—address, care Squibb—and give instruction and advice concerning his remedy. In the January report he modestly admits having received, in addition to "a large number of records of good results from its use," "a few adverse criticisms," "but in each case careful investigation proved that the difficulty was due to a faulty technic rather than to Thoremedin itself or to my method of applying it." And "in my experience, covering eight years of observation in the use of Thoremedin in various hospitals and of treatment of many hundreds of patients, including cases of lupus, epitheliomata, angiomata, moles, verrucæ, etc., I have not found more than from 3 to 4 per cent. fall short of a good result. These failures were all cases of epitheliomata in which the deep tissues were infiltrated and for which a surgical operation should have preceded the use of Thoremedin." (Here the suggestion of the postoperative use of Thoremedin bobs up again). In short the remedy has proved, in a long experience of Mr. Semerak's—he is not a physician—without failures in various formidable skin lesions, including lupus and angioma, and almost infallible in epithelioma.

WHAT IS IT?

What is this wonderful remedy with such claims and sponsored by the great firm of Squibb? Exactly, we are not told. It "consists of radio-active Thorium in combination with didymium, lead and sulphuric acid. . . . To state at this time the exact quantity in which each ingredient is present would add nothing of practical value to the physician, but . . ."—the well-worn reason of proprietaries.

What the use of didymium is in this mixture we can only surmise. It has no known value as a local therapeutic agent and is not classified among the radio-active elements. My own surmise is that it is the old expedient of adding something rare and unfamiliar for mystery's sake.

The thorium practically falls in the same class. It has no known therapeutic uses. Its radio-activity is about the same as that of uranium—about one two-millionth part of that of radium. If Thoremedin Paste were saturated with thorium, it would be as useful therapeutically on account of its radiant energy as a paste made of powdered Welsbach mantles.

Nevertheless it seemed desirable to determine the radio-activity of Thoremedin Paste, and Prof. Henry Gale and Mr. L. J. Lassalle, of the University of Chicago, kindly made the determination for me. The material for this examination and for all of my other tests of Thoremedin were obtained from a package of Thoremedin Paste which I purchased unbroken from a local druggist. This sample of Pasta Thoremedin was found to have about one-fortieth the radio-activity of thorium nitrate in a fine powder and one-fourth the radio-activity of a paste which I had made up containing 10 per cent. thorium nitrate with 33 per cent. sulphuric acid and 57 per cent. lead sulphate. In other words, it has a content of radio-active material equivalent to 2.5 per cent. thorium and has a radioactivity of one eighty-millionth part of that of radium bromid.

A COMPARISON

In order to get some idea of what this means it is interesting to compare for a moment its possible therapeutic application with that of radium, whose remarkable therapeutic uses have given rise to these various "radio-active" remedies. Let us assume that an epithelioma the size of a finger-nail will be cured by an application of 10 mg. of radium bromid for ten minutes—an assumption far short of actual practice with radium. On the same basis, to cure the epithelioma with the radiant energy from the same quantity of Thoremedin would require 80,000,000 times ten minutes, or over 13,000,000 hours—a good deal more than 1,400 years. And if the patient could not wait 1,400 years for a cure, and wished to apply a quantity of radiant energy in the form of Thoremedin Paste equal to that of 10 mg. of radium bromid, he would have to use 80,000,000 times 10 mg., or 800,000 gm.; i. e., almost a ton. Or if instead of applying 1,800 pounds—say a barrelful—of Thoremedin Paste for ten minutes, he wanted to reduce the quantity and increase the time of application to, say five hours, he would still have to use 60 pounds of Thoremedin Paste; and 60 pounds of Thoremedin Paste would eat the face off a graven image in five hours.

In view of its entire lack of any effective amount of radiant energy, I have no doubt whatever that radio-activity plays not the slightest part in the therapeutic action of Thoremedin.

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[1] The italics given in the quotations throughout the article are for the most part mine.—W. A. P.

What then is the active ingredient in this "new Thorium remedy"? Since the published report included sulphuric acid, I concluded it could only be sulphuric acid, but I was surprised when Professor Puckner, director of the Chemical Laboratory of the American Medical Association, notified me that it contained more than 35 per cent. by weight of free sulphuric acid, U. S. P. According to the analysis[2] of the Association Laboratory, which was carried out on a specimen labeled "Thoradin," which, according to the exploiters, is identical with "Thoremedin," the product contains approximately 35.6 per cent. of free sulphuric acid, U. S. P., and 62.7 per cent. of solids—to make a paste—nearly all of which is lead sulphate. Its radio-activity indicates less than 2.5 per cent. of thorium.

A SULPHURIC ACID PASTE

Here is a radio-active remedy with a vengeance—a "new Thorium remedy" for local application containing 35 per cent. by weight of free sulphuric acid and more than 60 per cent. of almost inert, insoluble sulphates to make it into a paste. It does not make much difference what else it contains beside 35 per cent. free sulphuric acid. The only part played by the solid ingredients is to hold the acid mechanically so that it will not all be free at once to attack tissues. As a matter of fact, the paste is so full of sulphuric acid that some of it separates as free liquid, and the directions advise careful mixing before application; otherwise one might readily apply liquid sulphuric acid—which, as a matter of fact, would not be much more active. The 35 per cent. free sulphuric acid in such a mixture will kill any living cells with which it comes in contact so quickly that no other therapeutic agent will have time to affect them. Only fire can easily beat sulphuric acid in quickness of destruction of living tissues. If we had enough pure radium sulphate to make a thick paste with 35 per cent. sulphuric acid, the sulphuric acid would kill tissues so rapidly that there would be no time for the radium to produce any effect on the tissues to which the paste was directly applied.

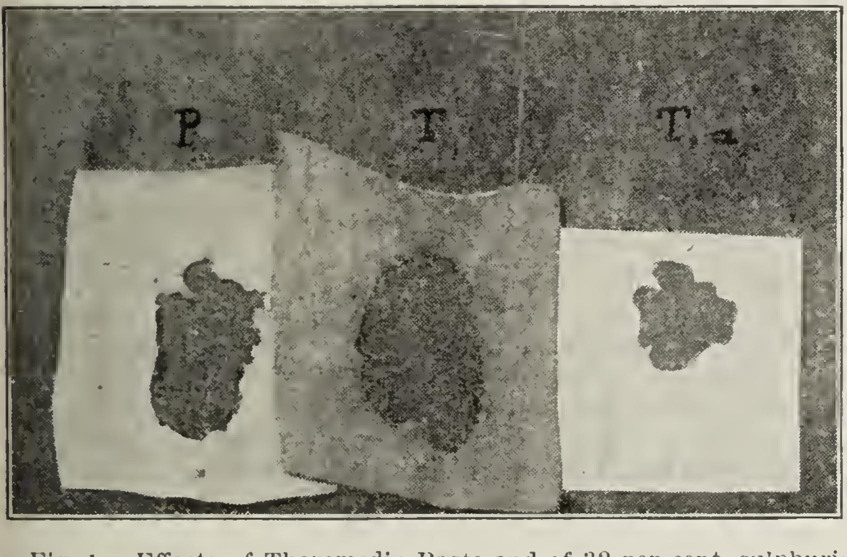

Fig. 1.—Effects of Thoremedin Paste and of 32 per cent. sulphuric acid paste left over night on chamois skin and paper. P indicates hole made by my paste (32 per cent. sulphuric acid) on chamois skin; T indicates hole made by Thoremedin Paste on chamois skin; T.a indicates hole made by Thoremedin on paper after eating the hole in chamois skin. Half natural size.

According to *Squibb's Memoranda*, "the manufacture of Thoremedin is by no means simple; on the contrary the product is difficult to produce in a perfected and satisfactory state." I made a paste of practically the same physical characteristics as Thoremedin Paste by the following formula:

Sulphuric acid	32 per cent.
Calcium sulphate	12 per cent.
Thorium nitrate	4 per cent.
Lead sulphate	52 per cent.

In this I used 10 per cent. calcium sulphate—plaster of Paris—because my lead sulphate was not in the form of a sufficiently light powder to give the same consistency as Thoremedin with the same percentage of lead sulphate. I believe it might just as well be all gypsum or all lead sulphate. The only essential thing, in order to get a paste that will destroy tissues in the same way, is to mix sulphuric acid with an insoluble powder into a thick paste, with just enough sulphuric acid to have a small excess free—not held by the powder. Of course the only powders practically available for this purpose are lead, barium and calcium sulphates; no other familiar powder is insoluble in sulphuric acid. The only apparatus necessary to make my paste is a pestle and mortar, a pair of scales and a vial or two; and, aside from the thorium nitrate, which costs about 50 cents an ounce and is a useless ingredient, the cost is a few cents.

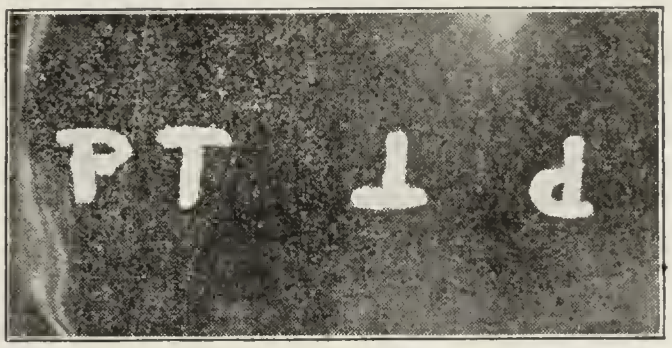

Fig. 2.—Sheet aluminum etched by Thoremedin Paste and a 32 per cent. sulphuric acid paste. The letters P were etched by my paste (32 per cent. sulphuric acid); the letters T, by Thoremedin Paste. One-quarter natural size.

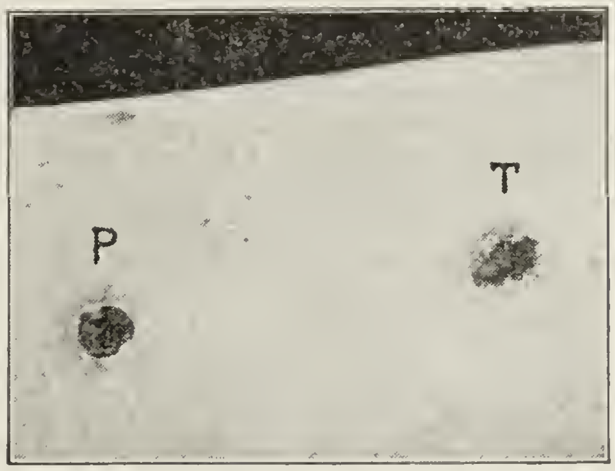

Fig. 3.—Sloughs produced on my arm by Thoremedin Paste and 32 per cent. sulphuric acid paste, respectively. Application of forty minutes. P indicates ulcer made by paste (32 per cent. sulphuric acid); T, ulcer from Thoremedin Paste. Three-quarter natural size. This picture was taken two hours after application.

The action of my paste and of Thoremedin Paste were practically identical on sheet lead, sheet aluminum, chamois skin, and the skin of my arm, and I have no doubt that the therapeutic efficacy of my sulphuric acid paste would be fully equal to that of Thoremedin Paste—but I would not recommend my paste for any therapeutic purpose; sulphuric acid is not generally a favorite escharotic among dermatologists. Thoremedin Paste will etch lead and aluminum. A piece of it, the size of a hazel-nut kernel, was left in a fold of chamois skin; when I examined it fifteen hours later it had eaten a hole the size of a silver half-dollar through the chamois skin, eaten a smaller hole through a sheet of paper underneath and etched a sheet of aluminum lying beneath that. I applied a drop of the well-mixed paste, the size of the end of a slate-pencil, to my forearm, and a moment later a similar drop of my 32 per cent. sulphuric acid paste. The effects of the two were identical. They were the effects of sulphuric acid—somewhat less intense than that of pure sulphuric acid. In a few seconds the familiar burning sensation of a strong mineral acid began; this continued during the application of the paste. A hyperemic halo soon developed around the sites of application. Forty minutes after applying the pastes, I removed them; over the area covered by either paste the skin was yellowish white, bloodless, apparently depressed and evidently dead; around this central area was a slightly elevated white edematous collar one-sixteenth or one-thirty-second of an inch wide; and around the whole there was a pink erythema fading out gradually into normal color at about three-quarters of an inch from the central lesion. The effects were identical in character with those produced by the application of sulphuric acid. The burning sensation ceased in about twenty minutes after removal of the pastes and at the same time in both lesions, leaving in both a feeling of soreness. At the next observations, twelve hours later, both lesions showed a yellowish-white area of necrotic skin, corresponding to the sites of application of the pastes, surrounded by a narrow inflammatory border. Now, six days after the applications, each lesion shows a dry yellow necrotic center corresponding to the areas of application of the pastes, surrounded by a narrow inflammatory border. These lesions are not abrasions of the skin. They are sloughs going through the epidermis and well down into the connective tissue structure of the skin. The two sloughs show no differences in degree or other characteristic. There have been exhibited no variations between my paste and Thoremedin Paste in any of the experiments I made with them. Doubtless the future course of either lesion will be as follows: The necrotic area will gradually form a dry eschar, which in the course of about four weeks will separate, leaving a depressed scar.

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[2] The analysis follows this article.

THERAPEUTIC CLAIMS

What, now, are the action and therapeutic applications suggested for this "new Thorium Remedy"? The following statements are all taken from a section referring to the action of "Pasta Thoremedin". "*According to the quality applied*, its effects are antiseptic, disinfectant, dermatostimulant, epidermoplastic, and escharotic."

It is antiseptic; free sulphuric acid will destroy any living cell—bacterial or other—with which it comes in contact. In effectiveness and in freedom from selectiveness in action it compares in this respect with fire.

By the same token it is a disinfectant; it will destroy a garbage-heap as effectively as a garbage-burner—and the garbage can as well.

It is a dermatostimulant—if its application is measured in seconds. In rapidity of action it almost compares in this respect with the actual cautery. But as a dermatostimulant I venture to believe it is useless.

That it is, even theoretically, an epidermoplastic agent—assuming that term to mean an agent promoting the formation of horny epidermis over a denuded surface—I believe is not true.

It is an escharotic; with that claim I can make no quarrel. It will destroy any animal or vegetable tissue and all other substances except those of the strongest chemical resistance. It is an escharotic due to free sulphuric acid, and I believe I correctly state the position of most dermatologists when I say that sulphuric acid as an escharotic for therapeutic purposes has been long since discarded for various reasons in favor of less drastic and equally effective agents.

Again: "It also induces a strong inhibitive action on the formation of pathogenic cells." It will do more; it will kill any living cell, normal or "pathogenic," with which it comes in contact—skin, muscle, nerve, fascia, horn, or bone; it knows no selection in its destruction of animal cells.

And again: "Its destructive power can be entirely controlled by the physician in every respect; a thing that cannot be done in the case of arsenic, *concentrated mineral acid*," [Heaven save the mark!] "and strong alkalies.' Its destructive action can be controlled; in one way, for example, by the application of an excess of water—so can a fire's. The statement that its action is more easily controlled than that of the other caustics enumerated is, I believe, not true.

Again: "Moreover, it is considerably more powerful than silver nitrate and other similar substances, while its toxicity is nil." It is more powerful than silver nitrate; in destructiveness to tissue silver nitrate compares with it somewhat in the same way that a road-scraper does with a steam shovel.

It is non-toxic, because it immediately surrounds itself with a wall of dead tissues that prevents absorption. So is arsenious acid over areas as large as the maximum recommended for Thoremedin if used in a paste sufficiently strong to destroy tissue quickly.

What are some of the conditions for which Thoremedin or Thoradin Paste is recommended? "Skin epithelioma [no qualifications.—W. A. P.] lupus (vulgaris and erythemat.), papules, cysts, moles, molluscum, nevi and angiomata. Apply Pasta Thoremedin, etc."

In all the foregoing list, moles are the only lesions for which such a caustic paste is perhaps as good a method of treatment as ordinary methods in use, and even in them I believe it falls far below recognized methods.

Of course the recommendation in "papules," "cysts," and "molluscum" is too indefinite to be analyzed. "Papules" mean small solid elevations in the skin, such as for example, the beginning eruption of small-pox, and I suppose neither Squibb nor Semerak intends to recommend Pasta Thoremedin for that condition, and yet such a use would not be more ignorant or mischievous than the use of Pasta Thoremedin in many other papular eruptions.

Imagine, in this year of our Lord, 1912, recommending a sulphuric acid caustic paste as a method of election for the treatment of cysts in the skin—a large sebaceous cyst for example! Could anything be cruder?

A VICIOUS RECOMMENDATION

Stronger criticism can be made against the recommendation of it in "nevi and angiomata" without qualification. Some flat nevi might be so treated with fair results, but what scarring will follow and how great will be the disfigurement from the use of such a treatment in large angiomata? How much danger will there be of hemorrhage from the sloughing of even a small cavernous angioma to which a 35 per cent. sulphuric acid paste has been applied? What man who knew what he was doing would go off and leave a paste, containing a large quantity of free sulphuric acid, over a mass of cavernous angioma to eat its way until the acid had neutralized itself?

To recommend a 35 per cent. sulphuric acid paste in erythematous lupus is as bad. If I should use such a method of treatment in that condition, I should regard myself as deserving a charge of malpractice.

We have seen that Mr. Semerak has said over his signature that "in "many hundreds of patients, including cases of lupus . . . I have not found more than from 3 to 4 per cent. fall short of a good result. These failures were all cases of epitheliomata . . ." That is tantamount to saying that he has had no failures in his attempts to treat lupus. Presumably he means lupus vulgaris, but whether he means lupus vulgaris or lupus erythematosus, the statement is worthy of no more consideration than a claim to have an invariably successful treatment for pneumonia or typhoid fever. That the treatment is one that would compare in efficiency with methods now in use in lupus vulgaris is not, in my opinion, worthy of discussion.

That the paste can be used to destroy many epitheliomata I do not doubt, but that it has any superiority over "arsenic, concentrated mineral acids, and strong alkalies" I do not believe. Sulphuric acid is not new as a caustic, and as a result of long experience dermatologists who use caustics have for the most part come to the conclusion that the preferable ones for use in epithelioma are arsenious acid, chlorid of zinc, caustic potash, and acid nitrate of mercury. I know of no dermatologist—or even "cancer specialist" for that matter—who prefers sulphuric acid.

These are only examples of the conditions for which Thoremedin Paste is recommended. They recommend that this paste, which will produce a slough in the skin that takes two or three weeks to separate and that will be followed by a scar, be applied "lightly" to the indurated lesions of acne, and they minutely describe how it should be applied over the surface exposed after the excision of a cancer.

WHAT DOES IT ALL MEAN?

There would, however, be no reason for criticizing anything more than their judgment if Squibb and Sons offered their paste as a sulphuric acid paste for the treatment of epithelioma and other things. As a matter of fact, Squibb's acid nitrate of mercury is well known as an agent for the treatment of epitheliomata, which has been long recommended and used with great effectiveness by Dr. Samuel Sherrill in particular. But what shall we think of E. R. Squibb and Sons offering a 35 per cent. sulphuric acid paste as a "new Thorium Remedy" for the treatment of epitheliomas and birthmarks and Heaven knows what ("papules", "molluscum," etc.), and as a substitute for "postoperative radium treatment" and for "*x*-rays in postoperative treatment for neoplasms." What has come over the house? The firm had a reputation for anybody to cherish with pride. E. R. Squibb is really a great name, and for half a century the firm of Squibb held the unquestioned confidence of the medical and pharmaceutical world. Have all of the traditions of the firm been suddenly thrown to the winds? Have its members determined all at once to embark on a career of exploitation of proprietary remedies under misleading names and of mischievous properties, whose composition it is not for the good of us of the profession to know, instead of zealously pursuing, as of old, the business of manufacturing drugs and chemicals of known composition and of unquestioned "Purity and Reliability"? Has the result of sixty years of experience with the medical profession been so poor as only to lead to the conclusion that the old policy is not profitable or not worth while? As a matter of fact, is there a drop of the old Squibb blood in the firm? These are not useless questions and the medical profession has a right to raise them.

ANALYSIS OF THORADIN (THOREMEDIN)

The following is a summary of the report of the Chemical Laboratory of the American Medical Association on the substance discussed by Dr. Pusey in the preceding article. The details of analysis will appear in the Annual Reports of the Chemical Laboratory. It will be noticed that the package analyzed bore the name Thoradin, whereas Dr. Pusey refers to it as Thoremedin. This is explained by the fact that, as announced by E. R. Squibb & Sons, they have recently changed the name of the product.

An original package of Squibb's Thoradin was purchased on the open market and analyzed in the Association's laboratory, with the following results:

Thoradin is a white odorless semiliquid mixture which on standing settles, showing a clear liquid in the upper part of the bottle. On account of the small amount of material and the difficulty of mixing thoroughly, the entire content of the bottle was washed out with water, filtered and the insoluble matter thoroughly washed, dried and weighed, and the filtrate made up to a definite volume. In this way Thoradin was divided into two parts, soluble and insoluble.

The insoluble matter was found to constitute 61.82 per cent. of the whole, and of this 61.09 per cent. was found to be lead sulphate. The difference, or 0.73 per cent., consisted of a substance which responded to tests for thorium or related metals.

The soluble portion responded to tests for sulphuric acid, but only faintly to tests for hydrochloric and nitric acids. By titration and sulphate determinations, the sulphuric acid content of Thoradin was found to be equivalent to 33.06 per cent. absolute, or 35.58 per cent. sulphuric acid, U. S. P. The residue left on evaporating some of the solution of the soluble part, after gentle ignition was found to be about 0.90 per cent. of the whole; of this a small part was lead sulphate. This residue responded also to tests for thorium or related metals.

Assuming that all of that part of the insoluble matter which responded to thorium tests and all the soluble matter not proved to be lead sulphate was entirely sulphates of thorium or related metals, the total content of these constituents could not be more than about 1.63 per cent.

Since the work of Professor Gale, on the radioactivity of Thoradin, indicated less than 2.5 per cent. of thorium salt, and the results of the chemical examination indicated at most 1.63 per cent. thorium salt, it was not considered of sufficient importance to isolate and determine separately thorium, or other related metals.

From the above examination we conclude the composition of Thoradin to be essentially the following:

Sulphuric acid, U. S. P.	35.58	per cent.
Lead sulphate	61.09	per cent.
Sulphate of thorium or related metals not over	1.63	per cent.
Hydrochloric acid	trace	
Nitric acid	trace	
Water (by difference)	1.70	per cent.
Total	100.00	per cent.

SULPHURRO

Another Liquid Sulphur Humbug on the Market as a Panacea

Sulphurro is the name of a cure-all sold by the C. M. C. Stewart Sulphur Company, Inc., Seattle, Wash. It is a brownish-yellow liquid having the odor of rotten eggs and decayed cabbage. It is to be used, so the manufacturer says, in such conditions as rheumatism, asthma, goiter, eczema, dyspepsia and all diseases of the stomach, bowels, kidneys, skin and blood. It may also be used as a rectal enema, a vaginal douche or as an eye wash. A specimen of this nostrum was sent by Dr. A. E. Hillis, LaMoure, N. D., and a cursory examination of the stuff was made by the Association's chemists. They reported as follows:

> "Chemical examination shows that Sulphurro is essentially similar to Sulphume. That is to say, it is a solution of calcium sulphid and responds to tests for calcium, sulphid, polysulphid and hydroxid. Like Sulphume then, it is evidently a solution such as is obtained when lime, sulphur and water are boiled together."

Our readers will remember that Sulphume was dealt with in The Journal, Dec. 2, 1911. Sulphurro is not worth a more extended notice. Of course, it will not cure rheumatism, asthma, eczema or any of the other hundred-and-one diseases for which it is recommended. There is little doubt, however, that it will find a ready sale among those who believe that the therapeutic value of a remedy is in direct ratio to the vileness of its odor.

THE ELIGIBILITY OF NON-PROPRIETARY MIXTURES

Physicians and publishers of journals who wish to adhere to the recommendations of the Council on Pharmacy and Chemistry are herewith reminded that non-proprietary mixtures are deemed by the Council as eligible for prescribing and advertising, without the necessity of being admitted to New and Nonofficial Remedies.

Strictly non-proprietary mixtures of official substances, etc., (for instance, morphin and atropin tablets) are generally sold without any special claims which would make them subject to investigation by the Council; while the number of these combinations listed by the various manufacturers is so great that even their mere enumeration in New and Nonofficial Remedies would be practically impossible. The intelligent physician is the best judge of the advisability of prescribing ready-made non-proprietary mixtures of this type. The danger is that he may not always be able to discriminate clearly, on the one hand, between these non-proprietary mixtures that are not listed in New and Nonofficial Remedies because their admission would be superfluous, and on the other hand, the proprietary mixtures which do not appear in New and Nonofficial Remedies because they have been refused admission. The appended definition of "proprietary mixtures" shows where the line is drawn by the Council.

Proprietary Mixtures.—A mixture will be considered as proprietary, and therefore requiring consideration by the Council and admission to the book or appendix, if it contains any proprietary article, if it is marketed under a name which is in any way protected or if its manufacturer claims for it any unusual therapeutic qualities.

All mixtures to which this definition applies are deemed proprietary and will be listed by name in New and Nonofficial Remedies, if they comply with the rules of the Council.

In all doubtful cases, the secretary of the Council will gladly supply specific information.

W. A. Puckner,
Secretary of the Council on Pharmacy and Chemistry.
535 Dearborn Avenue, Chicago.

Correspondence

The Management of Normal Labor

To the Editor:—In all the discussion regarding the deplorable status of obstetrics in this country only a few of the factors in the problem have been touched. Specialists, like Dr. Williams (The Journal, Jan. 6., 1912, p. 1), with hospital facilities, trained assistants, a laboratory and absolute control of patients may make invidious comparisons but that does nothing to elucidate the subject. Obviously only a small percentage of the parturient women of the country can or will avail themselves of the benefits of a hospital or trained accoucheur. The general practitioner has the knowledge his college was capable of imparting, plus what he has added in practice. To his credit be it said, he usually makes the most of it. His equipment is generally greater than his compensation warrants. Moreover, he has his living to make and cannot be too insistent with his patient over whom, usually, he has no control. His case may be miles in the country with bad roads or a blizzard prevailing and he may have no knowledge of the presumptive nature of the case until he sees it. How is he to know what meddlesome woman had made a prior digital examination or what dope had been given? Frequently the patient's bed is "made" with the soiled family laundry or the chronology of births in the family is written in the stains on the mattress. He is always called in a crisis and usually at the last moment.

Manifestly we cannot all have hospitals or if we had we could not induce our patients to enter them. And what are we to do with those who will not employ a doctor except in a critical case? Neither can we take to our cases an operating equipment and trained assistants.

Granting that we were all educated in obstetrics according to Dr. Williams' standard, pray, where is this education to end? A prior contributor to The Journal takes the profession to task for lack of expert knowledge on sanitation, and so we might have to go all down the line and get specialists' training to be competent country doctors.

J. H. Mackay, Norfolk, Neb.

To the Editor:—I have been practicing in the country for seven years, and during this time have had enough obstetric experience to enable me to say that I have never found (and I may say that I do not believe there exist) any of the exigencies to which you refer (The Journal, February 10, p. 428) that cannot be met and handled just as capably by the country physician as by anyone else. Women have babies just the same way in and out of city practice, and apart from the fact that hospital facilities are not so easily had in the country, there is no reason why methods of management should not be quite the same in one locality as in another. It should be remembered, too, that the article in question dealt with normal labor; not with difficult cases. I am a member of the State Board of Medical Examiners for Louisiana, and we refuse to pass applicants in the midwifery examination who deliver the placenta by pulling on the cord.

Espy M. Williams, Patterson, La.

To the Editor:—I will admit that some of us who practice in the country do lose ourselves to the outside world to a great extent in following those precepts laid down by the masters of twenty or more years ago, but I will not admit that this is the rule. I have seen more medical men vegetating right in the midst of medical activity, research and achievement, than in the country districts. It is my candid belief that there is a greater percentage of medical men in this part of the country who are capable of doing, and are doing, the most modern analytical work in urinary, blood, stomach and culture diagnoses than can usually be found in the cities, and the reason is exceedingly simple. They have no specialists to do this work for them and are thus pushed into reliance on their own efficiency in interpreting the best works obtainable on the work in hand, or allowing it to go by default, and this, the country physician is usually loth to do. It is my opinion that if that bolt of inefficiency was fired at the country practitioner, it was not only an unjust shot, but a very bad one, for it went wide of the mark.

My own experience has extended over a period of nearly twenty-one years; I have never had septicemia result from my method of handling these cases in well over a thousand deliveries, and never more than a partial rupture of the perineum; I have never lost a parturient woman, and only two babies, both of which died from asphyxiation *in utero*, and I have yet to shave the pubes. Rubber gloves, a Kelly pad, surgical gowns and cap, antiseptics and good soap, are always to be found in my obstetric bag. I always give a hypodermatic of an ergot preparation following the birth, see that the babe is properly dressed, and then express the placenta if it has not already been delivered, order a 1-to-2,000 bichlorid douche to be used twice daily after the first day, for three days, and then, once a day for four or five days. I have never encountered a serious post-partum hemorrhage or even a flow approaching the dignity of a hemorrhage, following this practice, and I nearly always make slight traction on the cord.

The results enumerated above have been obtained among patients ranging from the high-class, really intelligent ranchwomen, with every necessity at hand or means to obtain them, down to the squalid full-blooded Sioux who never have any of the necessaries, but an overabundance of the undesirable. Sometimes, it has been a pleasure to attend such cases, but usually, the careful physician is obliged to stand guard over his patient with a club to prevent the interference of some old "Granny Quack" or "prairie midwife" ("trained nurse," she calls herself), who is usually so grossly ignorant that asepsis has no meaning for her and ordinary cleanliness is a waste of time—a neighborhood dopester, whose clothing is so saturated with desiccated perspiration that the odor is positively sickening. She is a teratologist of no mean ability, and an impressionist, with an array of statistics at her tongue's end that would convince the most skeptical.

Is the country practitioner so far behind the times when he can successfully combat these obstacles? We admit that the world rarely hears of our victories, but the reason is obvious: we have no daily press to subsidize and could not ethically make use of it if we had; the blare of a trumpet would be answered by the howl of a coyote, and our bulletin boards would seldom be scanned by human eyes. As to the advice offered, we are very like the tenant whom the landlady pressed to eat some rhubarb tart. "Mony thanks, mem, but I dinna need it."

F. W. MacManus, M.D., Buford, N. D.

The Army Canteen

To the Editor:—The canteen seems to be a live topic. It is well that it should be, for the discipline of the army depends in time of peace on the post canteen and its accessories, and discipline in times of peace predetermines effectiveness in actual service, and these, in the last analysis, determine the weal or woe, the eventual perpetuity of the government.

Several times have I been tempted to join in the discussion but as often have deferred because public opinion, I believe, however created, has little influence with Congress in general legislation. The party or individuals with the "pull" in the congressman's district just prior to election determines the member's vote when safe in his seat; the same is true of the senator.

Actual experience gained by observation is far superior to the wisest theory. During the war with Spain and subsequently I was detailed at a Southern frontier post and during nearly two years had ample opportunity to witness operations of the army canteen. About midway of my service the canteen was abolished at my post as it was concurrently at all the others.

By the law that created it the surgeon of the post is manager of the canteen, with two other commissioned officers as an advisory board, and therefore my opportunity for observation was ample. During the first half of my service, when the canteen plan was in operation, I do not now remember that any soldier was ever committed to the guard house, nor do I remember seeing one intoxicated on the reservation or elsewhere. The post at different times was occupied by both white and colored troops, for during two years, more or less, there was much movement of troops till matters settled down to a normal military condition. During the time the canteen was in order discipline was easily maintained and an earnest, contented military atmosphere pervaded the routine duties of the day. The tidy appearance of everything connected with the post, the neat and soldierly demeanor of the men would attract attention of all visitors. On pay-day the members of the hospital corps seldom drew 50 per cent. of what was due, the balance remaining in the hands of the pay master, to be refunded to the soldier when he should be discharged from the army. The amount retained was entered to the soldier's credit in a pass-book similar to the deposit book commonly used by banks over the country.

I believe that the government paid 4 per cent. on the soldier's deposit, which, on his final discharge, often amounted to a snug sum. I remember several who were able to buy one or more of the government's bonds that were offered at that time for the prosecution of the war. The profits derived from the canteen enabled the soldier in his barracks to live like a gentleman, for that was the purpose, and to maintain a library, gymnasium and billiard-room; in fact the canteen was the soldier's club where beer and light drinks were dispensed under the watchful care of a non-commissioned officer. The soldier was always respectful to his superior and on his good behavior, and seldom needed a reprimand. I always enjoyed a visit to the canteen to watch the boys quietly when they were engaged at cards, or playing billiards, or taking a turn at the gymnasium, writing home to wife, or mother, or maybe to sweetheart, reading a book or magazine or newspaper (all paid for by profits of the canteen), and everyone speaking in a low tone of voice. I never heard of a case of gambling. When there chanced to be no soldiers in the bowling alley or gymnasium the officers off duty would warm up for an hour there themselves. There always seemed to be a pleasant understanding between men and officers, and a spirit of contentment and refinement was the order of the day. This picture is not overdrawn; every word is true.

One day an order came from Washington to suspend the canteen, to store the billiard-tables and other impedimenta away, and to vacate the rooms. The soldier's club-house was vacated and he was to all intents and purposes turned out of doors. A great change seemed suddenly to come over the scene. Old rookeries outside the reservation long abandoned were rehabilitated with low humanity and the vilest rot-gut whisky, and the government had no power to restrain them. Two days after the canteen had been vacated I had to send the hospital ambulance out to the degenerate settlement to bring in a soldier who had been fatally hurt in a drunken brawl. And this often occurred thereafter. Then the wards were soon filled with the cases of syphilis and gonorrhea and other avoidable diseases. A feeling of unrest among the soldiers and of apprehension among the officers had taken the place of contentment and peace. The paymaster's pass-book was no longer required and the old mother back in the distant home and the sweetheart were forgotten. And this picture is not overdrawn, either, or half told.

I myself believe in absolute prohibition if it were practicable, but I have told truthfully how abolition of the canteen worked under my observation where I was stationed.

A. S. Condon, M.D., Ogden, Utah,
Late A. A. Surgeon, U. S. A.

The Amendment to the Owen Bill

To the Editor:—In The Journal, Dec. 23, 1911, you published, under the caption "Senator Owen Amends His Bill," what purported to be a copy of the amendment as offered by its author, along with what appear as editorial comments on both the bill and your statement of its amendment by its author. You have omitted from the amendment in question the following words: "including the head of the department." They should appear as a clause, set off by commas, between the words "department" and "shall," near the close of your rendition of this document. I respectfully request that I be informed at your earliest convenience about this grave omission, whose importance to the medical profession of the whole country I forbear to descant on now.

W. F. Arnold, M.D., Bowling Green, Ky.

[Comment: Comparison of the amendment as sent us with the amendment as printed in The Journal shows that the words referred to were omitted. The error occurred in making a copy of the amendment for the printer. A later amendment eliminates the word "department" and substitutes the word "bureau"; so that the omitted portion would read "including the head of the bureau." The latest revision of the bill appears correctly in the *Bulletin of the American Medical Association.* These amendments are not as yet actual amendments, the bill now pending before the Senate being technically as originally introduced. They are, rather, proposed amendments which the committee has agreed to make or which it has under consideration.—Editor.]

Cocain not Decomposed by Heat

To the Editor:—The statement is frequently made that cocain in solution is decomposed by heat, and therefore it is not feasible to sterilize such solutions by boiling.

This is one of the errors that mysteriously creep into literature and are perpetuated by succeeding compilers, and in the comprehensive article on therapeutics of coca in The Journal, February 17, page 481, the error is given further sanction.

It is well known to chemists that neutral solutions of cocain hydrochlorid are quite stable; cocain certainly cannot be decomposed to an appreciable extent during a brief exposure to 100 C. I have demonstrated this by boiling a 2 per cent. solution for five minutes and then extracting the cocain as alkaloid. This is probably about five times as long as solutions are usually boiled. Different experiments showed a loss ranging from 1 to 1.7 per cent. of the cocain employed, and this loss is within the limit of experimental error. It would certainly be negligible from a medical standpoint.

By long-continued boiling, part of the cocain might be saponified to benzoyl-ecgonin. Stockman finds that benzoyl-ecgonin acts like caffein, but less powerfully, and does not paralyze the sensory nerves. (U. S. Dispensatory, Ed. 19.)

If a trace of cocain were decomposed by boiling, it would be replaced by a trace of benzoyl-ecgonin, therefore the utmost harm that could follow would be an inappreciable reduction of the dose.

D. M. Holbrook, Suffern, N. Y.

[Comment: Mr. Holbrook, who is the consulting chemist of Schieffelin & Company, has for many years been in charge of the manufacture of cocain for that firm and hence may be regarded as an authority on the subject.—Ed.]

Public School Children and Optometrists

To the Editor:—In the *Optical Journal and Review of Optometry*, Feb. 15, 1912, the following appeared:

"Dr. William Ravine, chief medical inspector in the public schools, has great faith in optometrists. He sends many of the children suffering from defective eyesight to the various optometrists."

Permit me through the columns of The Journal to deny the above statement as absolutely false and without foundation. I have never expressed any faith in optometrists, nor have I ever sent any child suffering from defective eyesight to any oculist. Children in the public schools suffering from defective eyesight are referred to their family physicians. If careful investigation reveals the fact that they are unable to employ a physician, they are referred to the various clinics, which in turn give them prescriptions for glasses, which are filled by the various oculists in our city.

Investigation disclosed the fact that the article was written by a Mr. Benson, a *Times-Star* reporter, who retracted the statements in the article to Dr. John Landis, health officer.

William Ravine, M.D., Cincinnati.
Chief Medical Inspector of Schools.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE TRUSS IN INGUINAL HERNIA

To the Editor:—I am looking for literature which will give me statistics as to the relative merits and demerits of the use of the truss for inguinal hernia as against the operative treatment. Of course, I realize that operation is the best treatment, but I want some figures to show the morbidity and the mortality rates of the truss. Clyde F. Ross, Anderson, S. C.

Answer.—It is impossible to give absolute figures concerning the morbidity and mortality rate of inguinal hernia treated with trusses. Hernia is a common affliction; carefully made estimates indicate that about one individual in twenty-five has a hernia, 75 per cent. being males, and that inguinal hernia forms about 80 per cent. of the total number. What percentage of these patients wear trusses it is impossible to say, but judging from the enormous number of trusses sold, it must be very large.

Men will be found who have inguinal hernias and who are doing all kinds of hard work, which shows that the average inguinal hernia does not interfere materially with a man's working capacity, but men with large irreducible or uncontrollable hernias are certainly very much incapacitated. The great danger to which an individual with a hernia is subject is, of course, strangulation, and while the hernia itself, if properly cared for, may not interfere with the person's ability to work, the particular work which he may be doing may greatly increase the chances of strangulation.

It is difficult to estimate the frequency with which strangulation takes place, but some general idea may be gained from the number of strangulated hernias operated on in the large hospitals. Sultan was able to collect from seven German clinics reports of 1,429 strangulated hernias operated on with 296 deaths, or a mortality of 20.7 per cent. The mortality following the radical operation for hernia is practically *nil*—less than 0.5 per cent. Taking into consideration the great frequency of hernia, the number of operations for strangulation, the high mortality of operations under these conditions and the very low, or practically no, mortality of operations for the radical cure, it has been estimated that the average person with a hernia runs about three times the risk of dying from his hernia by not having it operated on that he does by having it operated on and cured, to say nothing of the annoyance of constantly wearing a truss.

HYPODERMIC INJECTIONS OF IRON IN ANEMIA

To the Editor:—Some time ago I received from a physician in New Jersey a reprint of a paper on persistent anemia in which the hyopdermatic use of a form of iron was recommended. I have lost that paper and forgotten the name of the author. Possibly he is known at your office. Also, please refer me to articles on this sub-
John M. Wampler, Richmond, Ind.

Answer.—Perhaps the article you wish is one by Dr. G. K. Dickinson, Jersey City, on "Anemia: Its Pathogeny and Hypodermic Treatment," in the *Medical Record*, New York, Sept. 3, 1910. The following are some other articles on the subject:

Bullock, E. S., and Peters, L. S.: The Use of Hypodermics of Citrate of Iron in the Secondary Anemia of Tuberculosis, The Journal, Oct. 28, 1911, p. 1428.

Morse, J. L.: Treatment of Anemia in Infancy with Citrate of Iron Administered Subcutaneously, The Journal, July 10, 1909, p. 107.

Peters, L. S.: Treatment of Secondary Anemia of Tuberculosis with Hypodermics of Iron, *Med. Rec.*, New York, Oct. 10, 1908.

PICRIC ACID AS AN ANTISEPTIC

To the Editor:—The statement is made (The Journal, Dec. 16, 1911, p. 2028, abstract 5) that "picric acid is about four times as efficient as phenol as a local antiseptic," and the use of a 4 per cent. alcoholic solution of picric acid as a disinfectant of skin, forty-eight hours after vaccination, is advocated. How was this efficiency of picric acid demonstrated? Also refer me to a description of Gräupner's test for early cardiac fatigue.

Charles Howard Miller, San Leandro, Cal.

Answer.—In the original article by Schamberg and Kolmer (*Lancet*, Nov. 18, 1911), the method of determining the bactericidal power is described. The test organisms employed were the *Bacillus typhosus* and the *Staphylococcus albus*. These were subcultured in bouillon at least three times before being used. Twenty-four-hour old cultures were well shaken and filtered through sterile filter paper and 0.1 cm. of each was used as a dose. The standard of germicidal power was that employed by Anderson and McClintic, which is known as the Hygienic Laboratory phenol coefficient. The experiments were carefully performed, so that the results are presumably reliable.

A description of Gräupner's method, with probably a reference to the original, is given in an article by Cabot and Bruce in the *Am. Jour. Med. Sc.*, October, 1907.

OXIEN TABLETS

To the Editor:—Please give the composition of Oxien Tablets.
John Esser, M.D., Perham, Minn.

Answer.—The composition of Oxien Tablets is given in "Nostrums and Quackery," page 450. It is there stated that one analysis of this nostrum showed that the tablets were "a mixture of milk-sugar, cane-sugar, corn-starch, oil of sassafras, oil of wintergreen and a bitter principle. The tablets were colored red with eosin."

ALCOHOLISM AND SURGERY

To the Editor:—A man who had been a hard drinker since he was 12 years old, and who is now 36, says that he has been cured of alcoholism by a surgical operation performed on his appendix and gall-bladder in the summer of 1911. He says that he now has no desire for alcohol. I have never observed a similar case and I am desirous to know if such cases have been observed by any readers of The Journal. J. H. Bush, Sterling, Colo.

The Public Service

Medical Department, U. S. Army

Changes for the week ended March 2, 1912.

Beeuwkes, Henry, lieut., February 23, ordered to the Army Medical School, Washington, D. C.; March 10, 1912, to act as instructor in the course of radiography; on completion of this duty to return to his station.

Wells, Francis M., first lieut., M.R.C., February 24, resignation accepted, to take effect April 10, 1912.

Grubbs, Robert B., major, February 24, granted thirty days' leave of absence on surgeon's certificate of disability.

Stayer, Morrison C., lieut., February 26, ordered to report at San Francisco for examination for promotion.

Millikin, John D., C.D.S., February 26, ordered to proceed to his home for annulment of contract.

Chamberlain, W. P., major, February 26, granted leave of absence for one month and fifteen days, to take effect on completion of his duty in London, England.

By special orders No. 47, War Department, Feb. 26, 1912, each of the following named officers of the medical department, on his arrival at San Francisco, will proceed to the post specified after his name and report in person to the commanding officer thereof for duty and by letter to the commanding general of the division indicated:

First Lieut. William R. Dear, Medical Corps, Fort Robinson, Neb., central division.

First Lieut. Clarence A. Treuholtz, Medical Corps, the presidio of Monterey, Cal., western division.

First. Lieut. Frederick S. Wright, Medical Corps, Fort Adams, R. I., eastern division.

First Lieut. Lee R. Duubar, Medical Corps, Fort Douglas, Utah., western division.

First Lieut. Addison D. Davis, Medical Corps, Fort Riley, Kan., central division.

First Lieut. Elsworth Wilson, Medical Reserve Corps, Fort Huachuca, Ariz., western division.

First Lieut. Henry. F Philips, Medical Reserve Corps, Fort Bliss, Tex., central division.

First Lieut. Robert Lemmon, Medical Reserve Corps, Fort Hancock, N. J., eastern division.

First Lieut. Oswald F. Henuing, Medical Reserve Corps, Fort Stevens, Ore., western division.

First Lieut. William M. Archor, Jr., Medical Reserve Corps, Fort Riley, Kan., central division.

Crampton, Louis W., colonel, February 27, ordered to proceed to his home to await retirement.

Treibly, Charles E., M.R.C., resignation accepted Feb. 27, 1912.

Feely, James F., A.D.S., February 29, reported for temporary duty at Fort Wood, N. Y.

Fisk, Owen C., lieut., February 29, left Walter Reed General Hospital, Takoma Park, D. C., on six months' sick leave.

Medical Corps, U. S. Navy

Changes during the week ended March 2, 1912.

Payne, J. H., A. A. surgeon, detached from the marine recruiting station, Norfolk, Va., and ordered to the marine recruiting station, Baltimore.

Wilson, G. B., medical inspector, detached from duty as fleet surgeon of the Asiatic fleet and ordered home to await orders.

Taylor, J. L., P. A. surgeon, transferred to the retired list from Feb. 19, 1912.

Duhigg, J. T., asst. surgeon, ordered to treatment at the naval hospital, Washington, D. C.

Treibly, C. E., A. A. surgeon, appointed an acting assistant surgeon from Feb. 24, 1912.

Miscellany

Epidemic Cerebrospinal Meningitis in Texas

The history of the epidemic of cerebrospinal meningitis in Texas for 1911-12 begins with the cases reported in Dallas, one case in October and nine cases in November, increasing in December and January, and averaging in January about seven new cases a day. In Waco the first nine cases were reported on December 20, after which cases were reported for the remainder of the month, on the average, about five new cases a day; for January the report of new cases averaged three each day. In Fort Worth the four cases reported for December occurred between Dec. 20 and 31, 1911, and the average report of new cases in January, 1912, was about three a day. In Houston the first case was reported January 1, and the average number of new cases was about one a day. A few cases were reported during the latter part of January in Galveston. At other points in Texas cases of the disease were reported in January, San Antonio being the only large city apparently free from the disease.

It was reported that the weather conditions for the northern part of the state had been unusual. During the past three years a drought had occurred so that drinking-water had to be shipped into Dallas. The present winter season was unusual, in that for six weeks, between December and January, continuous rains had occurred, and severe cold weather also prevailed. It was also reported that an epizootic of "blind staggers" had prevailed among horses about the time this epidemic started.

The occurrence of more than one case in a family has been comparatively rare. The disease prevailed chiefly among the poorer classes living under insanitary conditions, but others were also affected. The disease affected males more than females, and the mortality was slightly less among the females.

The extremes in ages were 8 weeks and 80 years. From the statistics of 302 cases in which the ages were given, fifty-five occurred in children less than 5 years; fifty-four between 5 and 10 years; twenty-four between 10 and 15 years; forty-four between 15 and 20 years; fifty-four between 20 and 30 years; twenty-five between 30 and 40 years; twenty-seven between 40 and 50 years; and nineteen for persons over 50 years of age. This gives a total of 177 cases, or 58.6 per cent., occurring in persons less than 20 years of age; and 125, or 41.4 per cent., of the cases in those over 20 years of age.

The people in the infected cities seemed to be in perfect accord with the city health authorities in their endeavors to control the spread of infection. The following measures were found practical of enforcement:

1. Placarding and quarantining of a house.
2. Establishment of an isolation hospital for the care, and treatment with specific serum, of cerebrospinal meningitis cases only.
3. For detecting carriers: Bacteriologic examinations of nose and throat secretions of all persons quarantined in houses where cases occurred.
4. Medical inspection service and board of diagnosis.
5. Distribution of circulars advising (*a*) use of an antiseptic spray for nose and throat; (*b*) careful attention to personal hygiene—mainly cleanliness—avoid chilling of body and maintain good health; (*c*) avoidance of public gatherings and close contact with persons; (*d*) cleaning of premises and free ventilation of houses; (*e*) that the disease is infectious and that healthy persons may innocently transmit it to others by disseminating germs, which may be in their nose and throat, by coughing, sneezing, kissing, etc.; (*f*) that the disease is not carried by clothing, merchandise, food, etc.

It was impossible to trace the source of infection from one case to another, nor was it practicable to determine what factor was necessary in causing the development of the disease in one person and not in another known to be intimately in contact with the disease.

There were a number of towns throughout Texas which quarantined places where the disease had made its appearance. As this was impracticable and gave a false sense of security, owing to the widespread infection and large number of healthy carriers, it was advised that quarantine was ineffective and simply interfered with commerce.—Report of Passed Asst. Surg. R. H. von Ezdorf, *Pub. Health Rep.*, Feb. 23, 1912.

Operability of Uterine Cancer.—Of the eighteen cancer of the uterus patients subjected to a radical abdominal operation by F. J. Taussig (*Journal Missouri State Med. Assn.*), seven died as a result of the operation. Five succumbed within the first four days after operation; one died two weeks afterward; and in one patient death resulted from extensive suppuration of the pelvic connective tissue four weeks after the laparotomy. This operative mortality of over 38 per cent. Taussig says would, under ordinary circumstances, be most appalling. If it is remembered, however, that Wertheim's primary mortality was 48 per cent. in his first fourteen cases, these figures are correspondingly not so bad. Dividing these eighteen cases into three groups, the early ones, the advanced ones and the far advanced ones, further light is thrown on this operative mortality. Group 1. Three early cases in which the disease did not extend beyond the uterus. All the patients recovered from the operation and are at present free of recurrence. Group 2. The advanced cases in which the disease had extended to the parametrium and vagina but did not yet occlude the ureters or deeply invade the bladder wall numbered seven. Five patients recovered and two died. Group 3. The far advanced cases showed deeper involvement of the bladder wall or occlusion of one ureter, or extensive infiltration of the vagina and paravaginal tissues. They numbered eight, and five of these patients died. Of the three who recovered from the operation, two died of a recurrence within one year and Taussig will be much surprised if the third case does not likewise terminate fatally. In view of this experience Taussig feels that the cases of Group 3 should really have been considered inoperable. Figuring only the certainly operable cases of Groups 1 and 2, numbering ten cases in all, the operative mortality is 20 per cent. That, with increased experience, the operator will reduce his primary mortality considerably is generally conceded by all who have done this operation.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

Amer. Assn. of Pathologists and Bacteriologists, Philadelphia, Apr. 5-6.
American Urological Association, New York City, April 2-4.
Mississippi State Medical Association, Jackson, April 9-11.
Missouri Valley Medical Society, Colfax Springs, Ia., Mar. 21-22.
Tennessee State Medical Association, Chattanooga, April 9-11.

THE AMERICAN MEDICAL ASSOCIATION'S CONFERENCES ON MEDICAL EDUCATION, MEDICAL LEGISLATION AND PUBLIC HEALTH*

Held in Chicago, Feb. 26-27, 1912

(Continued from page 656)

The Conjoint Board of England

Mr. Frederic G. Hallett, London, England, described the organization and the system of examinations of the Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England. This address and the discussion thereon will be published in THE JOURNAL next week.

The Relation of the Medical School to the Intern or Hospital Year

REUBEN PETERSON, M.D., professor of obstetrics and gynecology, University of Michigan, Ann Arbor: As a matter of fact, the fifth clinical year in medical education is already in existence. Already a certain number of each graduating class take a year or more of hospital training and this tendency is increasing rather than diminishing. In other words a majority of students are insisting on more than the medical school requires. This hospital training has never been systematically considered by the medical school since many more fundamental problems needing immediate solution have confronted medical educators during the last two decades. Now that this pioneer work has been done, however, it is time for the medical school to take hold seriously of the hospital year and make it an integral part of the medical course. Those who have guided the student for four years will not be content to turn him over to others during this most valuable and important part of his preparatory work.

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* The full reports of the conference will appear in the *Bulletin* of the American Medical Association in two or three weeks. A copy will be sent to any one interested on receipt of a 2-cent stamp.

Every medical school worthy of the name should add the hospital year to its curriculum, if it can do so, and it should be to the advantage of the student, the hospital and the medical school. One school is making an attempt to solve the problem and no doubt other schools are busy with the same task. Plans may differ but this will result in a free discussion of the project and will show the best mode of procedure.

Last May the whole subject of hospital internships and appointments by faculty of the University of Michigan medical school was placed in the hands of a committee of three. Dissatisfaction had been expressed with the lack of system in vogue and the confusion arising from lack of cooperation on the part of various members of the faculty. Hospitals wanting to secure students about to graduate wrote to individual members of the faculty who secured the best men they knew for the positions, to find out later that the students had failed to keep their agreements with other members of the faculty who had assigned them to other positions. Again, students asked for recommendations for positions not particularly approved of by the faculty. In short, the entire intern problem was in such a state of confusion that something had to be done.

The committee, consisting of Dean Vaughan, Dr. A. Walter Hewlett and myself, has worked on the plan that a compulsory fifth clinical year eventually be added to the medical curriculum, but not till after the medical school had obtained first hand knowledge of the best hospitals throughout the country to which its students were eligible. To eliminate confusion it was planned that all appointments to hospital positions or for particular positions be made by this committee. The mutual obligations of student and hospital were to be set forth so that each might be benefited by active cooperation. A circular letter together with a questionnaire was sent to all general hospitals having a hundred beds or over setting forth the avowed policy of the University of Michigan medical school to add eventually a fifth hospital year to its present four-year course, and stating that the faculty wanted cooperation with the very best hospitals since it was willing to stand sponsor for the students it recommended. All hospitals willing to cooperate in systematizing the intern question were requested to fill out and return the questionnaire which called for information regarding the number of beds; the number of interns; their manner of appointment; the nature of examinations; length and nature of service of the intern and his relation to clinical laboratories. Inquiry was also made regarding the pathologic department, the out-patient service, library facilities and the accommodations for and authority over interns.

These letters and questionnaires were sent to 155 hospitals and responses were received from ninety-two. Ten were parts of certain medical schools and their internships were reserved for their own graduates. Eighty-two hospitals, and as was to be expected the very best hospitals, took pains to answer the questions fully. Some questionnaires were so carelessly attended to as at once to determine the standard of the hospital. Sixty-three hospitals were placed on an approved list, although undoubtedly mistakes were made both in approving and in rejecting hospitals. The method of avoiding such mistakes will be referred to later.

A short résumé of the salient facts relating to the hospitals on the approved list was arranged alphabetically according to states, in a small, twenty-four page, vest-pocket booklet and given to members of the junior and senior classes. For more detailed information the students were referred to the chairman of the committee who personally interviewed each member of the class regarding the relative merits of the hospitals on the approved list and recorded the choice of hospitals on blanks provided for that purpose. This was done as early as possible so that those not securing hospital appointments would be at liberty to take competitive examinations if such were necessary.

The eagerness with which the students sought this information showed how handicapped they had been in judging of the value of a hospital as regards its internships and how negligent the faculty had been in not considering this question systematically before.

The committee will secure frequent reports from the student in regard to his service, whether he is being given opportunities for learning, in what the service is lacking, etc. The hospital, in turn, will be asked to report on the conduct of the intern, whether he is faithful to his duty or lazy and careless, etc. In this way the committee will endeavor to stand behind both intern and hospital and see that each fulfils his contract, that any differences may be amicably adjusted and that both hospital and intern may be benefited.

The work has progressed far enough to show the difficulties underlying any plan carried out by a single school working by itself; therefore we ask your full discussion of a proposal to make this movement of a fifth hospital year national in scope.

It is high time that an extensive report be made of the hospitals in the country which make use of interns. This report on hospitals would doubtless show many institutions consuming the intern's time without adequate return. For the young graduate gives during his intern service a year or more of the most receptive period in his life. Not that hospitals deliberately cheat the student, but their conception of what is best for him may do him more harm than good. Eager to put his theoretic knowledge into practice, the young intern willingly accepts at first all the routine practical work which can be loaded on him. Later he may realize that his golden opportunities for studying disease in a broad way, in all its aspects, have been wasted. This is all wrong and the hospital allowing such a system is to be criticized.

The development of the highest types of hospital internist, surgeon and specialist requires the employment of many paid assistants whom the hospital chief brings into the hospital with him. They are paid to take accurate histories, make minute examinations, assist at operations and do careful pathologic work. It pays the hospital chief to keep one or more assistants a number of years and they in turn are only too willing to serve their apprenticeships not only for the salaries obtained but also for the experience which they consider of more value. Although this system makes for high, first-class scientific medicine and surgery, the fact remains that the intern, even in the highest type hospital, is crowded out and in some hospitals acts merely as an orderly except that occasionally in an emergency he may be allowed to prescribe for a patient. This picture may be overdrawn but that it is true in some hospitals is undeniable. Another movement militating against the proper education of the intern is the doing away with the mixed service. The chief and his assistants object to breaking in a new man every six months since just as he becomes valuable he leaves for another service. But most interns are unable to determine when they enter the hospital just what branch of medicine or surgery they will be most interested in and this intern year should not be confined to studying one phase of medicine or surgery but should embrace a number of subjects. In the interests of the intern, therefore, a hospital should either continue or restore the mixed service.

On the other hand, the intern is apt to break his contract, leaving the hospital in the lurch if his interests can be improved or in other ways his conduct may be a disappointment.

Much could be gained, therefore, by a thorough inspection of our hospitals under the auspices of the Council on Medical Education of the American Medical Association. Hospitals of certain standards could be placed in Class A, those of a lower grade in Class B, and so on. It would not be difficult to classify the hospitals thus, through a personal visit and inspection of each institution. This inspection and report would be preliminary to a general agreement among schools and hospitals, or perhaps between the Class A hospitals and the Class A medical schools. A medical school of the first class would be entitled to have its students in a Class A hospital. The hospital certainly would agree to this, for it is to its advantage to obtain the best educated and best equipped students for interns. The Class B or C medical schools, on the other hand, would have to be content to see its students enter Class B or C hospitals. This certainly is just and right. Whenever a Class B school is dissatisfied it has the privilege of so improving its conditions as to place it in Class A. If a student rebels at the thought that being in a Class B medical school shuts him out from a Class A hospital, it is his privilege at any time to change to a Class A medical school.

The same reasoning will apply to a Class B hospital. The way is open to it at any time to change its status and secure better educated and, therefore as a rule, more desirable interns.

The carrying out of such a plan, no doubt, would call forth many protests from certain hospitals to learn that as far as medical education is concerned they are not entitled to be in Class A. Such an institution might say that it cared nothing for such a report or classification. But if the report was made with the single object of improving medical education, a hospital entitled as far as its beds and equipment go to be in Class A would be chagrined to find itself in a lower class. If the medical staff were indifferent the managers of the hospital, ever sensitive to criticism, would be sure to take the initiative. Hospitals may assume an independent attitude, but, after all, they are quite dependent on the eager, enthusiastic and hard-working intern, and even the most arrogant members of a hospital staff would not long stand against a systematized and fair demand for improvement of existing conditions. Very little thought has been given to the intern question. Volumes have been written about the four medical college years, but after the student receives his diploma he is left to shift for himself. And he cannot do much to better his condition. If he rebels it is necessary for the maintenance of hospital discipline that he be suppressed. Far different would it be if the proper education of the intern be adjudicated between the hospital on the one hand and a national organization on the other hand.

The fifth or intern year as a part of the medical school curriculum must come sooner or later. It is a part of the ideal plan just outlined. The withholding of a diploma until the fifth or clinical year is satisfactorily completed is essential to good discipline and efficient work, and until it is a part of the curriculum medical educators will not take as vital an interest in it as in the first four years of the course. Let it be an integral part of the course, and then it will be developed and its greatest efficiency secured.

The fifth year cannot with any fairness be made compulsory, however, until the medical schools are better informed regarding existing hospital intern conditions. As soon as the hospital end of the problem has been systematized, then it will be just and advisable to compel students to take the additional hospital year.

Substitutions should be allowed for the clinical year. Some men unfitted for clinical work may prefer laboratory work and should have opportunity for perfecting themselves along that line. Again, there will be students who, although entitled to diplomas, are not fitted to care for the sick. But even for these a way should be provided.

Whether students should obtain their hospital positions by faculty appointment or by competitive examinations is a mere matter of detail. Some hospitals believe they secure better interns by leaving the selection to the faculty who have known the students for four years. But competitive examination may be a better system. Through organization written examinations for different hospitals could be held at the different colleges, and only the successful be obliged to go to the expense of traveling long distances for the oral examinations.

These, again, are mere details which can be worked out as the plan is developed and perfected.

An interesting feature worthy of discussion will be the desirability of urging the student to take his clinical year in some distant hospital where he could absorb new ideas and see what others are doing. This would mean a broader education without impairing his loyalty to his own institution. Thus it would be possible to adopt one of the good features of German medical education, in the place where in America it rightly belongs, in the fifth or clinical year. Efforts to adopt this system during the first four years of the medical course have not up to the present time proved very satisfactory.

In conclusion, allow me to say that of one thing I am certain: if the hospitals be shown the way they will be glad to follow, for above everything else they desire good interns. On the other hand, the latter desire good hospitals and the medical school is vitally interested in both.

DISCUSSION ON THE PAPER OF DR. PETERSON

Dr. John B. Murphy, Chicago: It should be written in every medical school of the present day in our zeal for science, *Do not forget the patient.* Medicine is not an art and it is not a science, but it is an art to which science is applied. The purpose of medical education is to prepare men to treat patients. The patient is the unit around which the medical universe revolves. These are basic principles that have been lost sight of in our modern trend of education. Why? Just look over the division of the student's time. As a student he devotes a certain number of hours to laboratory work, to experimental work, to dissections and clinical work, then ask yourselves: How are the best practical men produced? "By their fruits ye shall know them." The medical school has been put first. The medical school has asked for endowment, the medical school has been the pinnacle of aim of the medical profession more in this country than in Europe. The center around which every item of medical education should revolve is the hospital, and the first thing to ask for in medical education is the hospital. What produced the great men of England in the last two centuries? *The hospital.* And the science which we all admire and love and which is essential must be taught as an applied science, turned to a good purpose in the hospital. The practical in medical education receives too little attention. Why will men be untrained in such a vast science as medicine? Because too little time must of necessity be devoted to the preparatory work for the practice of medicine, but we must send out men to meet the requirements of practice. Every member of this body should be imbued with enthusiasm in order that we can give better medical men to a most deserving and confiding public.

Dr. Victor C. Vaughan, Ann Arbor, Mich.: Medicine consists of facts gathered from the various sciences which can be utilized in the prevention or cure of disease. First of all, a man who is going to study medicine must show that he has some foundation in general education which will enable him to master those facts. Second, he must have special instruction in those branches of the science, the facts of which are utilized in the prevention and cure of disease. In this country our best medical schools have done very well with the first and second parts of medical education. We require as much as we should require for admission to medical schools; we are giving two years of as thorough scientific work as is given in any of the medical schools in the world. The medical student to-day in the best medical schools in this country gets just as good instruction in physiologic chemistry, in bacteriology, in pathology and in the fundamental branches as the German or French student does, or any student in the world. But we are somewhat behind in the study of the application of these facts, and the next thing for us to do is to develop hospital training, and we should strive to make of all of our best hospitals educational institutions.

Dr. William J. Means, Columbus, Ohio: We should now do something practical in the way of establishing a fifth year and do less in the way of advancing the entrance requirements. In other words, what we need to-day is an additional year of medical education. If we are going to give this additional year which is so much needed, we must add it to the medical course and not as a part of the entrance requirements. There can be no question as to the necessity of a clinical year, and I want to commend the University of Michigan for the initiative step it has taken in the practical solution of this question. To carry out this matter properly it will be necessary for the medical college, in my judgment, to withhold the degree of M.D. until after the hospital year has been completed; in other words, to require a five-year course. In order to do this we will have to standardize hospitals.

Dr. Samuel W. Lambert, New York City: In the Columbia University College of Physicians and Surgeons we have already devoted a certain amount of time to intern work prior to graduation. It is a part of the four-year course. During five months of the last year in the school each student spends his whole time in one of the New York City hospitals as an intern. We call him a clinical clerk. He devotes his time between clinical medicine, surgery, obstetrics, etc. I would welcome a fifth year which will allow of a spreading out of the present curriculum more thinly and will allow of subsequent training as an intern, whereas now students only get a short training as interns in the four-year course. The training, however, should be under supervision. That is absolutely essential. It is not right to increase the amount of intern work that is being done without training and without supervision. The student must be required in this year not only to look into the literature, but to use the laboratory and to be hauled up and make reports to some junior officer of the attending staff.

Before an intern year can be brought about the hospital should be approved by some central body, such as this council, if these students are really to be interns and not slaves of the institution. This means that the hospital trustees have got to undergo a severe and a very exacting course of education themselves.

Dr. Edward Jackson, Denver: We must consider the question of specialization in medical practice from all points of view before we can lay down a general curriculum for the fifth year. In this country more than anywhere else in the world we have been influenced by a sort of fetich worship of the idea that a man must have had five or six years in general practice before he finds out the special line of work he wants to do. There was reason for that when the idea was promulgated a generation ago. The reason does not exist to-day, and in the consideration of the fifth year for the practical training of medical men I plead for a careful consideration of specialization in that year.

Dr. Egbert Lefevre, New York City: We have been looking too much toward the purely laboratory side of medicine. I agree with Dr. Vaughan that the subjects taught in the laboratory are basic in every sense, but it is unnecessary for the medical school to turn out a finished physiologic chemist or bacteriologist. We must teach men the essentials of these branches so that they are able to read literature intelligently and apply to the practical branches that knowledge which they have gained in the laboratory. The laboratory man is too apt to look on his work purely from the scientific standpoint and not appreciate the part that it bears to the other courses of the medical curriculum. I think it would be well for the state to demand for license that there shall be one year of hospital training, but it must not be thrown on the college. The college cannot demand it any more definitely than it can evaluate the preliminary entrance requirements; it must be done by some central body. Colleges have not at the present time control over hospitals.

Dr. Isadore Dyer, New Orleans: For quite a few years fully 25 per cent. of the graduating classes at Tulane have served one or two years in a hospital as interns, having earned such positions by competitive examination. New Orleans is not unlike other large cities in the limitation of intern positions available. There are probably no cities and no medical colleges with any number of students where all of the senior classes can be housed as interns. It is a serious question, then, how a required intern year can be satisfied. Even where the college owns the hospital, only a limited number of interns can be provided for at one time; in city hospitals it might be more difficult to place a large number of interns, especially if they are undergraduates, and without responsibility. Some states even have legislated so as to require of the intending intern a license to practice before he may be allowed to qualify. As undergraduate interns in a hospital not owned or controlled by the college, the amount of experience must be discounted by the fact that such interns cannot have either the responsibility or the opportunities of graduated physicians. The latter are, therefore, in most places preferred.

While the hospital year is ideal, then, it is not possible for all colleges to provide the opportunities for the adequate fulfilment, and if the hospital year is to be in a sixth year, further delaying the graduation of the student, it will tend to limit the educational opportunities in medicine to those who are independent in worldly goods or who are resourceful enough to get through.

Dr. Henry Schwarz, St. Louis: For years our graduates have taken the fifth year voluntarily, and there are great difficulties in the way of making it compulsory, especially on account of the attitude of the state which forces us to have registered physicians as interns. Students should be graduated after the fourth year and should be given the right to serve as interns, and their privilege to engage in private practice should be dependent on furnishing evidence satisfactory to the State Board that they have served one year as interns in a hospital or have taken some special line of work as indicated by Dr. Jackson. For some years our students have been thrown in contact with patients from the junior year on.

At the conclusion of the discussion, Dr. William J. Means offered the following resolution, which was adopted:

Resolved, It is the consensus of opinion of this body that a fifth year of hospital instruction is desirable as a requirement for the completion of the medical course, and in order to lay the foundation for the adoption of such a course in the fifth year, the Council on Medical Education is requested to inaugurate an inspection of the hospitals of the country as to their facilities for giving instruction to interns and to publish the data thus obtained as it now does of the medical schools.

Medical Education in the South

President Edwin B. Craighead, Tulane University, New Orleans: Mr. Abraham Flexner's report on medical education in the United States and Canada revealed a shocking condition of affairs in the medical colleges of the South. Not even the most mercenary business colleges, apparently, have fallen quite so low as the worst of our cheap and proprietary medical schools. If any large part of the medical fraternity had read this report they would have called for the reorganization of medical education in the South. This report did indeed show medical education in the South at a very low ebb, but not lower, however, than in some other parts of the country, such as in Illinois.

The Flexner treatment is nothing less than heroic, since he thinks six schools are sufficient to meet the needs of the South. It is noteworthy that since the publication of this report, two years ago, five colleges have disappeared.

There is no place in the South or elsewhere for the cheap proprietary medical school. Without endowment, no independent medical school may hope long to survive. Medical colleges having good locations, such as Birmingham, Memphis, Atlanta, Richmond or Little Rock, should appeal to men of wealth for endowment. It is lamentable that not until recently has anything whatever been given for the endowment of medical colleges or chairs of medicine. During the past seventy-five years hundreds of millions of dollars have been given for the endowment of universities and colleges, and of technical schools, but how trifling and miserable the sum given for the endowment of the colleges on which the very life and health and happiness of millions of people depend. The authorities of unendowed medical schools that have no support from the state should announce to the public that without proper support they will be compelled to abandon the work of medical education. When investigations have proved that it costs easily $10,000 per year to conduct any one of the scientific departments of the first two years of medical education in satisfactory fashion, and that it requires $50,000 to $60,000 per year to maintain the work of the first two years, we are forced to believe that the ten medical colleges in the South now having a combined annual income of $26,285, or an average of $2,628 each, have little hope of securing adequate funds, and they should retire from the field of medical education. For the same reasons, seven other colleges, which in 1910 had combined annual incomes of only $56,415, an average of $8,059 a school, should either close their doors or enter at once on a campaign for funds for endowment and equipment.

The University of the State of New York will not grant a charter to the unendowed academic college—but why make exception in favor of the medical college? For medical education of the right sort is far more costly than academic. It may be true that a college having a small endowment may do better work than another college having an endowment of a million or more, but it is equally true that no college can permanently maintain a good faculty and provide teaching facilities without something like adequate endowment. The adoption of such a requirement by this council would cut from recognition the hopelessly bad schools and would prove the best possible incentive to every really promising and aspiring school of medicine.

Permit me now to turn to the problem of entrance requirements in the South. There is, to quote President Pritchett, "no excuse whatsoever for the almost utter absence of standards which is characteristic of that section. Inasmuch as standards in medical education are necessarily tied up with the general educational system, the feasible standard in the southern states for entrance into the medical schools is the same as that for entrance to the academic department; that is to say, high school preparation. From this point progress may be gradual, but it will be inevitable. I venture to point out also that the enforcement of even this standard in the South will bring about the extinction of most existing superfluous schools."

Although the South would warmly welcome any proffer of help for her colleges from the right men of the North, and although such philanthropy would bring in the largest returns, I plead no special consideration for the South in the matter of entrance requirements for her medical schools. We are, moreover, no longer a poor, down-trodden, war-wasted people. The South is growing richer at the rate of $2,000,000 a day. If the present rate of development in the high schools of the South is kept up for a decade longer, we shall find there the best high schools in the country.

The medical colleges of the South should cease to ask special consideration; they should begin very shortly to demand for entrance both a four-year high school course and one of college work. Why not? Is life to them so dear that it must be purchased at the price of dishonor to all high educational ideals, at the price of the betrayal in the interest of private concerns, of the highest welfare of our people, their lives, their health, their happiness? I trust, therefore, that this council will no longer recognize as a reputable medical school any institution in the North or in the South, in the East or in the West, that does not enforce honestly the very reasonable entrance requirements of one year of college work in chemistry, physics and biology, based on a four-year high school education. I venture to believe, moreover, that I am voicing the sentiment of the great mass of the real educators of the South.

Another movement which argues well for the future of medical education in the South is the consolidation of medical colleges. There is no city in the South big enough or rich enough to maintain two good medical colleges. To build, equip and maintain a first-class medical college, in a great city, at least $5,000,000 are needed; in a small city, a much larger sum, perhaps $10,000,000 would be required.

Another indication of an immense forward movement in medical education in the South is the growth of public opinion, favoring on the one hand state aid for medical colleges, and appealing on the other to men of wealth for endowment. Men in the South are giving and will continue to give generously to the support of worthy medical colleges. It is regrettable, however, that none of the independent colleges has secured money for endowment, without which it is difficult, if not impossible, either to maintain high standards, to provide adequate equipment or support for laboratories, or to engage and retain the services of full-time professors.

It is to state aid that we must look for any adequate development of medical colleges in the South. Medical education is not merely a matter of private concern. It touches the welfare of all the people. The bad, the fraudulent medical college is a standing menace to society, more dangerous than an organized band of thieves. The good medical college searching for the cause and the cure of disease, sending out year after year competent physicians and expert sanitarians, is a positive contribution to civilization and deserves the support of philanthropic men. The problem of medical education, however, has grown too vast and complicated, too vital to the high interests of the state, of the nation and of humanity itself to be left to private interests to solve. It is a problem of the state and of the nation—in fact, it is a world problem. No state, no nation, is big enough to wrestle with this gigantic problem. Only organized forces of the whole civilized world are strong enough to vindicate the bold declaration of Pasteur: "It is within the power of man to rid himself of his parasitic disease."

It is not enough to exterminate the bubonic plague in San Francisco, or yellow fever in New Orleans, or cholera in New York, or small-pox in Baltimore, or typhoid in Washington, or tuberculosis in Chicago. These diseases and others must be everywhere exterminated so that the whole habitable earth may become a decent abode for man. It could easily be accomplished if international arbitration in the settlement of disputes between nations could be substituted for war; if the energy, the heroism, the money now consumed in maintaining armies and building navies could be turned to the promotion of science and the conquest of disease.

An international congress of educators and scientists should be brought together to frame national and international programs for the promotion of the hope, the health, the happiness of mankind. Professional politicians, political theorists, representatives of special interests, ignorant and intolerant reformers seeking by legislation to make wicked men angels, misguided enthusiasts and faddists with medical and social panaceas, Chauvinists screaming ever for bigger standing armies and more powerful navies—these are they who for ages have sought and still seek to shape legislation and to make their voices heard in the councils of mankind. But a new era is dawning. Slowly but surely the demagogue, the hired attorney, the charlatan, is being relegated to the rear, and the voice of Science and the message of Reason are being heard even in the halls of legislation and in the congresses of mankind.

A hundred and sixty million dollars for pensions for war "veterans," many of whom have never smelt the smoke of battle; a hundred millions for battleships to defend ourselves against the far-distant Jap, and not even one million to protect ourselves against preventable diseases that sweep away annually six hundred thousands of our people! Ten million for a single dreadnaught and nothing whatever from the national government for the support of medical colleges or the training of sanitarians! Millions for the cure and prevention of disease among hogs and horses and chickens and cattle, and nothing for the prevention of diseases that mercilessly destroy helpless children! These conditions are too serious to endure in an enlightened age. Let us drive from the halls of Congress those representatives who belong to antediluvian ages, and put in their places scientists like Welch, Dock, Wiley and university men of wide knowledge, like Woodrow Wilson. Philosophers, lovers of truth, scientists, investigators—men like Liebig and Pasteur and Helmholtz—the really great men of the world who have enlarged the boundaries of knowledge and extended man's dominion over the earth; these are they to whom, in the main, progressive governments must and will look for counsel in their efforts to solve the vast and complex problems of civilization and democracy.

(To be continued)

Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

COMBINED OFFICE AND RESIDENCE

N. Albert York, M.D.

LISBON, IA.

During my first few years of practice I rented office rooms upstairs in a business block, and had my residence in another part of town. This arrangement I found to be anything but satisfactory. I was obliged to maintain two telephones, heat my home and my office with two heating systems, keep office help or allow my office to go unattended in my absence, sometimes for many hours. My horses when not in use were in the barn at my residence, and when I was called in the country during the day it became necessary to carry my grips and whatever I needed to my residence, or make a stop at the office for them after the team was hitched, with the necessary delay. I found, also, that night callers often found me short of things which they really needed, and of which I had plenty at the office.

But the objection that was greater than all the others combined was the fact that I had become merely a boarder at my home, and that my wife was compelled to remain there most of the time to care for our three children and attend to the various household duties, rearing the family with the very scant assistance I could give her, as I found it necessary to be at my office in the evenings.

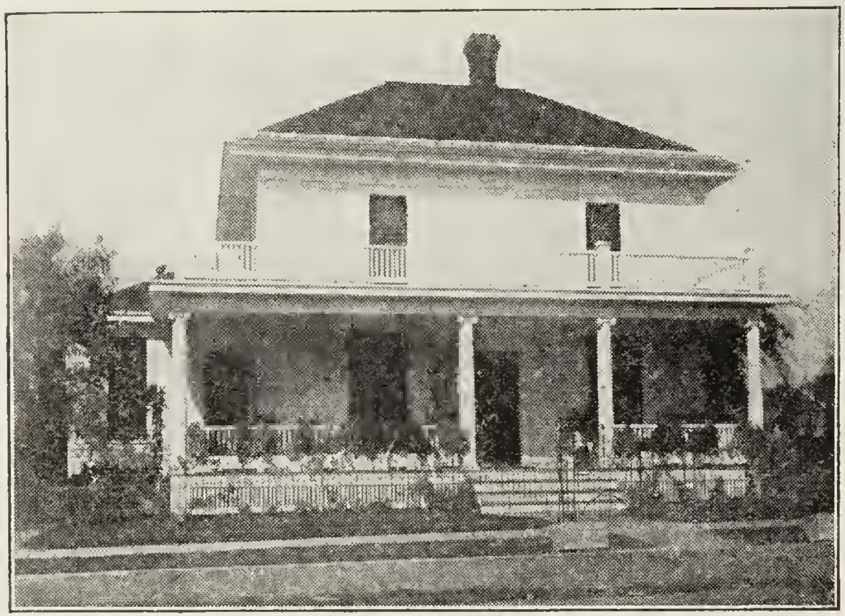

Fig. 1.—The office and residence of Dr. York.

In addition to these household cares, I frequently found it necessary to call on her to assist me at the office, in operative and gynecologic work, as well as difficult obstetric cases in the country, until increasing contact with and interest in the work has made of her an invaluable assistant.

I sought advice from my best friends, most of whom said it was inadvisable to try to combine home and office; but in the face of their strenuous objections and predictions of failure, I purchased my present location, remodeled it to suit my convenience, added much to it, and have for the past ten years proved very conclusively to my own satisfaction, and to that of my friends, that such an arrangement for a doctor's family in a small town is very close to ideal. The house is large enough for an ordinary family apart from office rooms. Hot water is always easily obtained from the kitchen range tank, and instruments are readily sterilized by boiling over the kitchen fire. A neat medicine cabinet is located in the north end of the operating-room. Ample light is admitted by two large windows in the west.

Entrance to other rooms by way of vestibule and to second floor by wide open stair. The entire house and office is heated by furnace of ample capacity, and lighted by a twenty-four-hour electric light system. The front rooms are joined by wide openings and colonnades. The interior finish is in oak, with oak floors. Ceilings are 9 feet 6 inches high.

The interior arrangement insures good ventilation, and consequently I am seldom called on to prescribe for the family. I have two telephones on the same circuit, one in the office and a desk telephone on a stand at my bedside, so that night messages may be answered without the inconvenience of even turning over in bed. The office telephone is located near the vestibule so that it can be readily heard and reached from the adjoining rooms by any member of the family, one of whom is always on duty to answer the telephone, or meet a patient in my absence when the ring of the automatic electric office door bell announces that someone has entered the waiting room.

I keep a comprehensive card index system, in which each prescription is recorded.

I think that it is true that those suffering from venereal diseases prefer the secluded office of the doctor who bids for that kind of practice, and as far as I am concerned I would much rather they did so, as their presence in one's reception room is usually obnoxious to the more sensitive and very much more desirable class of gynecologic patients.

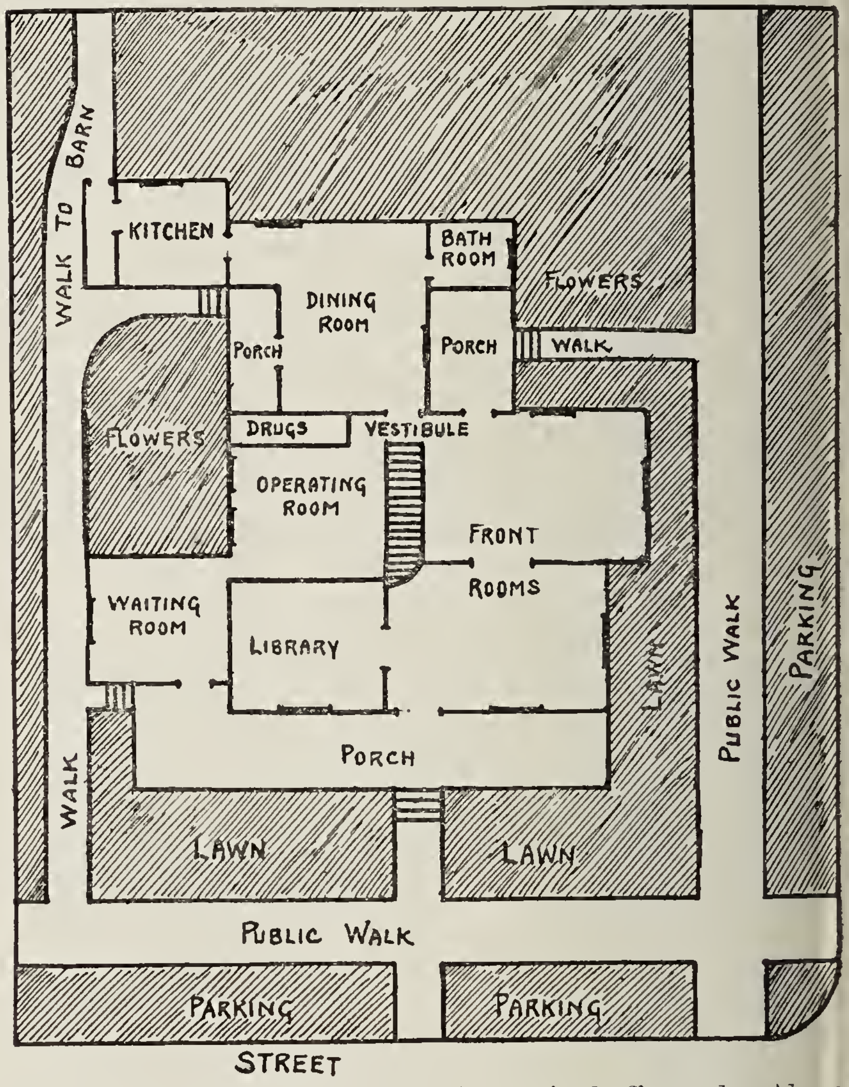

Fig. 2.—First floor plan of Dr. York's combined office and residence.

There is one change I could make in the accompanying plan which would improve the office apartments, and that would be to make a wide opening between the operating-room and library, throwing the two rooms together and thus give an abundance of room for laboratory and office appliances.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Seventh Month—Third Weekly Meeting

Diseases Due to Pregnancy

Toxemia[1]

Sources of Poison: Infections from air passages, intestines, endometrium, urinary tract.

Symptoms: Malaise, dizziness, headache, nausea, vomiting, edema.

Treatment: Rest, diet, elimination.

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[1] Ewing: Am. Jour. of Obstetrics, 1905, li, 145. Edgar: New York Medical Journal, May 5, 1906.

Emesis[2]

egrees of vomiting, frequency.

ARIETIES: Toxic, reflex and neurotic.

AUSES: 1. Increased sensitiveness of nerve centers, with splanchnic congestion. 2. Peripheral irritation: Uterus; malpositions, inflammations, tumors. Gastro-intestinal tract. Hysteria.

REATMENT: Preventive.

ILD CASES: Prophylaxis, diet, medicinal.

YPEREMESIS: Diet, rest, careful nursing. Rectal saline solution, nutritive enemata. Hypodermoclysis. Gastric lavage. Medicinal treatment. Induction of abortion.

Eclampsia[3]

requency.

ONTRIBUTING CAUSES: Primiparity, twin pregnancy, hydramnios, constipation, heredity, epidemic influence.

MMEDIATE CAUSES: Metabolic and fermentative poisons. Placental and fetal poisons. Injury to liver and kidney from placental emboli. Significance of albumin and diminished urea.[4]

LINICAL HISTORY: Preeclamptic period, onset, convulsions.

REATMENT:[5] Threatened eclampsia.

ONVULSIONS: Antepartum, intrapartum, postpartum. Saline solution, sweating, purgation, bleeding. Physiological action and use of (a) morphin, (b) veratrum viride, (c) chloroform. Abdominal or vaginal section.

Medical Diseases Complicating Pregnancy[6]

EART DISEASE: Frequency. Effect of pregnancy, effect on pregnancy, effect of labor, of puerperium. Prognosis. Treatment: (a) pregnancy, (b) labor.

ULMONARY TUBERCULOSIS:[7] Effect on pregnancy. Effect of pregnancy. Management. Question of marriage.

EPHRITIS: Dangers of pregnancy.

euralgias and Neuritis.

ONORRHEA: Acute and chronic, effect on child, on puerperium. Symptoms. Treatment.

YPHILIS: Infection (a) before conception, (b) at time of conception, (c) after conception, (d) paternal infection. Treatment in each case.

Surgical and Gynecologic Affections Complicating Pregnancy

ernia and Appendicitis. Traumatisms. Surgical infections. terine retrodisplacements. Prolapse. Antefixation. Cancer of cervix. Fibromyomata of uterus.[8] Ovarian tumors.

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[2] Williams: Am. Jour. Med. Sciences, 1906, cxxxii, 343-354. illiams: Surgery, Gynecology and Obstetrics, July, 1905.

[3] Hirst: Proceedings Phila. Co. Med. Society, Dec. 31, 1903, nd Feb. 29, 1904. Holland: Jour. Obstetrics and Gynecology of he British Empire, October, November and December, 1909. Welch: HE JOURNAL A. M. A., Oct. 23, 1909.

[4] Ewing and Wolf: Am. Jour. of Obstetrics, 1907, lv, 289-336. tewart: Am. Jour. of Obstetrics and Diseases of Women, January, 905.

[5] Berkeley: Jour. Obstet. and Gyn. of British Empire, March, 904.

[6] French: British Medical Journal, May 2, 9 and 16, 1908. ameron: Am. Jour. of Obstetrics, September, 1908.

[7] Bacon: THE JOURNAL A. M. A., Oct. 7, 1905, p. 1067.

[8] Routh: British Medical Journal, Oct. 3, 1903; Progressive ledicine, September, 1904. Smyley: British Medical Journal, Jan. 3, 1909.

Duration of Anaphylaxis.—The duration of the anaphylactic tate, that is, the state of hypersensitiveness, may be xtremely long. It has been found by Rosenau and Anderson o persist in guinea-pigs for more than three years; in fact, n these animals it would appear that once developed it lasts or the rest of the animal's lifetime. A somewhat similar henomenon is seen in men in connection with tuberculosis ith regard to the cuti-reaction. A patient who has had a ubercuIous infection, though mild and transient, may give cuti-reaction with tuberculin for years, perhaps for the rest f his life. We have no definite evidence as to the length of ime for which serum anaphylaxis may persist in man.—mery in *Brit. Med. Jour.*

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CONNECTICUT: Regular, City Hall, New Haven, March 12-15. Sec., Dr. Charles A. Tuttle; Homeopathic, Grace Hospital, New Haven, March 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Grace, New Haven, March 12. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

MAINE: City Council Rooms, Portland, March 12-13. Sec., Dr. Frank W. Searle, 776 Congress Street.

MASSACHUSETTS: State House, Boston, March 12-14. Sec., Dr. Edwin B. Harvey, Room 159, State House.

WYOMING: Riverton, March 13-15. Sec., Dr. Albert B. Tonkin.

Higher Standards and Better Physicians

The problems of medical education and licensure are dealt with at length in the last report of Mr. Andrew S. Draper, commissioner of education to the New York Board of Regents. A part of this report has already been commented on.[1] The report shows that in its attempt to solve these problems New York is pursuing a sound policy, namely, that medical practice laws are made to protect the people against incompetent doctors and not to provide special privileges or special educational standards for any particular medical sects or systems of healing.

Mr. Draper says that the responsibility for the educational requirements for admission to the medical profession rests with the Board of Regents.

> "The interests of any individual, of any medical institution, or of any school or cult in medical practice, have little to do with the matter. It is a matter of protecting and aiding society at large, and every member of it in particular, just so far as that can be done. It will not do to say that people may employ such physicians as they will; the state certifies the character and competency of physicians. Ordinarily people cannot know about the intricacies of medical procedure, and the state is bound to exercise its superior knowledge and power to protect everyone against fallacy and greed. It will not do to say that the poor cannot expect the service of the most highly educated and experienced physicians; none is so poor that he may not expect us to set up standards and procedure which will make certain that every certificated physician has a firm grasp on the sciences that are now fundamental in medicine. We might be patient if it were only a matter of the ignorance of a former generation passing away, but we cannot be unaware of the fact that there are serious loopholes in our system for educating and admitting physicians to practice, and that there are managers of schools and leaders of cults, as well as endless numbers seeking admission to the profession, who will take advantage of every opportunity for admission without reference to the moral soundness and professional knowledge of the novitiate or the repute and honor of the guild."

Thus Mr. Draper speaks with conviction against one of the most glaring defects in our present methods of licensure—that of providing special privileges for certain medical cults, thus opening the flood-gates so that hoards of illiterate and untrained doctors may secure the right to practice medicine. He clearly answers the arguments so frequently advanced against one portal of entry to the medical profession and shows that "a firm grasp on the sciences that are now fundamental in medicine" is the sine qua non for all practitioners alike.

Amalgamation of Leland Stanford Junior University and Cooper Medical College

Dr. R. L. Wilbur, dean of the Department of Medicine of Leland Stanford Junior University, states that Cooper Medical College has transferred all of its property holdings in San Francisco and elsewhere in California to Leland Stanford Junior University, of which it will hereafter be a part. The Leland Stanford Junior University brought a friendly suit before the Superior Court recently against Cooper Medical College for the sole purpose of clearing any defect there might be in the titles of the college to the properties. On the showing that no one else asserted claim to the lands, the judgment of the court decreed Leland Stanford Junior University the rightful owner. The judgment includes the following: lots at Sacramento and Webster streets, where the college has been located for years, lot at Buchanan and Clay streets, lot at Folsom and Main streets, and 2,560 acres of land near Fresno, Cal. Stanford University now owns the Lane Hospital, the Nurses' Home, the Clinical Building and the new Lane Library which is being built, at an expense of about $125,000, on land immediately adjoining the other buildings. The lot at Buchanan and Clay streets will probably be used for a maternity hospital, while the lot on Folsom street and the lands near Fresno, together with certain bonds that have been previously transferred to Stanford, will form part of the endowment of the Lane Library.

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[1] THE JOURNAL A. M. A., Feb. 24, 1912, p. 582.

Illinois July and October Reports

Dr. James A. Egan, secretary of the Illinois State Board of Health, reports the written examinations held in Chicago, July 25-27 and October 26-28, 1911. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. At the examination held July 25-27, the total number of candidates examined was 106, of whom 59 passed, 42 failed, and one withdrew. Four candidates did not complete the examination. The following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined.
Bennett Medical College	(1911)	1
Chicago College of Medicine and Surgery	(1911)	4
Hahnemann Med. College and Hospital, Chicago	(1911)	2
Jenner Medical College	(1911)	1
Northwestern University Medical School	(1911)	20
Rush Medical College	(1910, 1) (1911, 12)	13
College of P. and S., Chicago	(1898, 1) (1908, 1) (1910, 1) (1911, 9)	12
Harvard Medical School	(1911)	1
Univ. of Mich., Dept. of Med. and Surg.	(1910)	1
Barnes Medical College	(1911)	1
St. Louis University	(1911)	1
Cleveland College of Physicians and Surgeons	(1911)	1
University of Texas	(1910)	1

FAILED

College	Year Grad.	Total No. Examined.
Bennett Medical College	(1910, 2) (1911, 4)	6
Chicago College of Medicine and Surgery	(1911)	6
Coll. of Med. and Surg., P.-M., Chicago	(1908) (1911)	2
Hahnemann Med. Coll. and Hospital. Chicago	(1910, 1) (1911, 3)	4
Jenner Medical College	(1911)	2
Northwestern University Medical School	(1911)	6
Coll. of P. & S., Chicago	(1909, 1) (1910, 2) (1911, 3)	6
Reliance Medical College	(1911)	1
Rush Medical College	(1911)	1
Keokuk Med. Coll., Coll. of P. and S.	(1908)	1
Hospital College of Medicine, Louisville	(1904)	1
University of Louisville	(1908) (1911)	2
Barnes Medical College	(1910)	1
St. Louis College of Physicians and Surgeons	(1910)	1
St. Louis University	(1907)	1
University of Athens, Greece	(1891)	1

At the examination held October 26-28, the total number of candidates examined was 136, of whom 80 passed and 53 failed. Two candidates did not complete the examination. The following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined.
Bennett Medical College	(1911)	7
Chicago College of Medicine and Surgery	(1911)	10
College of Medicine and Surgery, Physio-Medical, Chicago	(1910) (1911)	2
Hahnemann Med. College and Hospital, Chicago	(1911)	3
Hering Medical College	(1910)	1
Illinois Medical College	(1910)	1
Jenner Medical College	(1910, 1) (1911, 2)	3
Northwestern University Medical School	(1910, 2) (1911, 14)	16
College of Physicians and Surgeons, Chicago	(1910, 2) (1911, 9)	11
Reliance Medical College	(1909) (1911)	2
Rush Medical College	(1911)	7
University of Louisville	(1907) (1911)	2
Detroit College of Medicine	(1890)	1
Univ. of Minn., Coll. of M. and S.	(1901)	1
Barnes Medical College	(1910, 1) (1911, 3)	4
St. Louis University	(1911)	1
Albany Medical College	(1911)	1
University and Bellevue Hospital Med. College	(1911)	1
Woman's Medical College of Pennsylvania	(1907)	1
Meharry Medical College	(1909)	1
Queen's University, Kingston, Ontario	(1909)	1
Royal University of Catania, Italy	(1901)	1
University of Toronto, Ontario	(1910)	2

FAILED

College	Year Grad.	Total No. Examined.
Bennett Medical College	(1910, 2) (1911)	3
Chicago College of Med. and Surg.	(1910, 1) (1911, 9)	10
College of Medicine and Surgery, Physio-Medical, Chicago	(1905, 1) (1908, 1) (1910, 1) (1911, 2)	5
Hahnemann Med. College and Hospital, Chicago	(1911)	1
Hering Medical College	(1910) (1911)	2
Illinois Medical College	(1908) (1910)	2
Jenner Medical College	(1905) (1911)	2
National Medical University, Chicago	(1909) (1910)	2
Northwestern University Medical School	(1911)	3
College of Physicians and Surgeons, Chicago	(1910, 2) (1911, 2)	4
Reliance Medical College	(1911)	2
Rush Medical College	(1911)	1
Indiana University	(1910)	1
Keokuk Med. Coll., Coll. of P. and S.	(1908)	1
Sioux City College of Medicine	(1906)	1
Hospital College of Medicine, Louisville	(1904) (1908)	2
Louisville National Medical College	(1909)	1
University of Louisville	(1908)	1
Ensworth Medical College	(1909)	1
Barnes Medical College	(1910, 1) (1911, 2)	3
St. Louis College of Physicians and Surgeons	(1910)	1
St. Louis University	(1907)	1
University Medical College, Kansas City	(1911)	1
Eclectic Medical College, Cincinnati	(1911)	1
University of Pennsylvania	(1869)	1

Book Notices

Untersuchungen über die Struktur der Blutzellen. Von Dr. Alfred v. Decastello, Assistent, und Dr. Alexander Krjukoff (Moskau) derzeit Hospitant der medizinischen Klinik in Innsbruck. Paper. Price, $4. Pp. 119, with illustrations. Berlin: Urban and Schwarzenberg, 1911 (New York: Rebman Co.)

This monograph is the result of the personal hemocytologic studies of the authors, on which much time and care have been expended. Although the conclusions may not be universally accepted, they are deserving of much consideration The method of staining used by these workers is a combination of the Jenner and Giemsa stains, a method advocated by Pappenheim and one giving extremely panoptic results Control studies were made with a variety of other staining methods. This work is especially commended to those who are interested in the histology of the blood-cells. It is only through such isolated investigations as these that our knowledge may be rounded into that complete whole which is so necessary before the direct application may be made to the solving of the problems of the pathologic variations in the blood-cells. The style of presentation is clear, concise and convincing. The illustrations are excellent.

A Text-Book of Materia Medica for Nurses. Including Therapeutics and Toxicology. By George P. Paul, M.D., Town Health Officer, Round Lake, New York. Second Edition. Cloth. Price $1.50 net. Pp. 282. Philadelphia: W. B. Saunders Co., 1911.

In this book the drugs are arranged alphabetically. There is a brief description of each drug, with dosage, method of administration, action, therapeutic indications, toxic action if any, and antidotes. In this edition a chapter has been added on practical therapeutics, which includes baths, hypodermoclysis, gastric lavage, hypodermic medication, antiseptics and disinfectants, disinfection and topical medication. Antitoxins, serums and vaccines are also briefly discussed. Especially valuable are the tables of equivalents and solution percentages, the lists of synonyms and the formulas for lotions and solutions in every-day use. The book is well adapted to the use of nurses.

A Manual of Fevers. By Claude Buchanan Ker, M.D., F.R.C.P. Medical Superintendent, City Hospital, Edinburgh. Cloth. Price $2.50. Pp. 314, with illustrations. New York: Oxford University Press, 1911.

This manual is especially intended as a preliminary course of reading for students about to take the required course of "Fevers" at a British isolation hospital. It is therefore of necessity somewhat elementary. The clinical history of the various exanthemata is briefly described and some suggestions as to treatment are added. It is interesting to note that the infective character of the scales in scarlet fever is regarded of decidedly minor importance. The information in this little book is thoroughly up to date, and it will well repay perusal by those who wish to refresh their knowledge of these subjects

Medicolegal

Duty of Carriers as to Protecting Passengers Against Contagious Diseases

(Bogard's Administrator vs. Illinois Central Railroad Co. (Ky.), 139 S. W. R. 855)

The Court of Appeals of Kentucky affirms a judgment for the defendant company in this case, which was brought to recover damages for the death of a child from measles, alleged to have been contracted from another passenger on one of the defendant's trains. The evidence tended to show that a man entered the car and took a seat next to and in the rear of that occupied by the child and its mother; that his fact manifested an eruption much like measles, and that he leaned forward with his head resting much of the time on the back of their seat; also, that the conductor when he took up the man's ticket raised his hat as if to see his face. But, if the man had the measles, it did not appear from the evidence that the conductor discovered it. It was true that the inference of such knowledge, arising from his lifting the hat of the passenger as his head rested on the back of the seat in front of him, might be indulged. But it was equally as reasonable, the court says, to infer that the conductor supposed the passenger was asleep, and raised his hat for the purpose of awakening him, that he might take up his ticket; and, if so, a cursory view of his face under the circumstances might not have enabled the conductor, unskilled as he was in diagnosing diseases, to discover that its appearance was unusual, or indicative of his being affected with measles.

The trial judge instructed the jury, in substance, that, although they might believe from the evidence that the child died of measles contracted from a fellow passenger on the defendant's train, they should nevertheless find for the defendant, unless they further believed from the evidence that the conductor in charge of the train knew or discovered that such passenger was afflicted with the measles, in time, and by the use of ordinary care, to have prevented the child from contracting the disease, and at the same time protect, as far as the use of ordinary care would enable it to do, the health of the passenger afflicted with the measles. In the Supreme Court's opinion, the instructions correctly stated the law.

No liability should be made to attach to a railroad company in a case like this, in the absence of proof that the officers or servants in charge of its train, on which the person claiming to have been injured was being carried as a passenger, had some knowledge or notice that a passenger thereon was afflicted with a contagious disease and then failed to promptly exercise ordinary care to prevent contagion to other passengers on the train, such as the circumstances would admit of, considering the duty of the railroad company, both to the passenger afflicted with the contagious disease and the passenger entitled to protection against contagion therefrom.

The question here was: When did it become the duty of the defendant's conductor to protect the child from the injury complained of? Obviously, the moment the conductor discovered there was a passenger aboard the train afflicted with the measles, a contagious disease, calculated to endanger human life or health. Adoption by the courts of the rule of diligence contended for by the plaintiff's counsel would require all carriers of passengers to keep on each of its trains, or at each of its passenger stations, a skilled physician to examine every person obtaining or demanding transportation, to avoid the possibility of receiving a passenger affected with a contagious disease. Neither innkeepers, proprietors of theaters, schools, nor churches, have ever been subjected to such an unreasonable rule of diligence, and no sound reason is perceived for applying it to carriers of passengers.

A common carrier, independently of the contractual relation, is under a general obligation to receive and carry on its trains all proper persons who apply for transportation and offer to pay the regular fare for such service. By the term "proper persons" is meant persons whose status or condition apparently entitle them to be carried as passengers. On the other hand, the carrier has the right to refuse to receive or carry as passengers, improper persons; that is, persons whose condition or conduct is such, from intoxication, disorderly conduct, contagious diseases, or other things, as to make their presence on the train dangerous to the lives or health of other passengers. Likewise, if the condition or conduct of a person, after being received as a passenger, becomes such as to endanger the lives or health of other passengers, or to unreasonably annoy or offend them, it is the right and duty of the carrier's servants in charge of the train, on receiving notice thereof, to eject such offending person from the train; but in doing so they must also exercise due care to protect his health and person from danger or unnecessary discomfort. In such a case the carrier is bound to exercise a reasonable discretion, according to conditions as they reasonably appear at the time.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

February, IX, No. 2, pp. 129-272

1 *Studies of Malaria in Panama: III. The Etiology of Erythrolytic Hemoglobinuric Type of Blackwater Fever. W. V. Brem, Los Angeles.
2 *Rôle of Acidosis of Tissues as Factor in Production of Attack in Paroxysmal Hemoglobinuria. O. Berghausen, Cincinnati.
3 *Observations on Fluid Contents of Cyst Occupying Epigastric Region of Abdomen. H. A. Christian, Boston.
4 *New Method of Determining Venous Blood-Pressure. A. A. Howell, Philadelphia.
5 Subacute and Chronic Nephritis as Found in One Thousand Unselected Necropsies. W. Ophüls, San Francisco.
6 *Pneumographic Study of Respiratory Irregularities in Meningitis. L. A. Conner and R. G. Stillman, New York.
7 *Study of Streptococcus Antibodies in Scarlet Fever, with Special Reference to Complement Fixation Reactions. J. A. Kolmer, Philadelphia.
8 Osseo-Albumoid as Possible Precursor of Bence Jones Protein. J. Rosenbloom, New York.
9 Spontaneously Precipitated Bence Jones Protein in Urine. J. Rosenbloom, New York.
10 *Simple Instrument for Determining Coagulation-Time of Blood. W. W. Duke, Kansas City, Mo.
11 Neuroserologic Findings in Tabes, General Paresis, Cerebrospinal Syphilis and Other Nervous and Mental Diseases. D. M. Kaplan and L. Casamajor, New York.

1. **Malaria in Panama.**—Brem has studied twenty-seven cases of pernicious malaria with reference to hemoglobinuria. In twenty-two of these hemoglobinuria was demonstrable. In eight instances there were traces only of hemoglobin in the urine; in seven the gross appearance of the urine suggested the probability of hemoglobin; in the other seven cases the hemoglobinuria was of blackwater intensity. Four of the five patients without hemoglobinuria were comatose with but few parasites in the peripheral blood; two died and at autopsy the brain capillaries were found to be thrombosed and contained numerous parasites, while there were but few in the spleen and bone marrow. The fifth patient had a heavy peripheral infection, about 9 per cent. of the corpuscles containing parasites. He was very ill, but did not become comatose and no hemoglobin could be demonstrated in his urine. A consideration of pernicious malaria with hemoglobinuria, and the transition cases between it and erythrolytic hemoglobinuria, strongly inclines Brem to believe that both forms are due directly to an hemolysin produced by the malarial parasite. The estivo-autumnal organism is nearly always the one concerned. The mechanisms of the production of the two types are, it is thought, essentially the same, but differ markedly, as a rule, in degree. The small amount of experimental evidence so far collected tends to confirm the above views. One of two explanations may account for the irregularity and infrequency of hemoglobinuria in malarial infections:

A. Different strains of parasites may generate hemolysin that varies in quantity or intensity with the strain, or with environment that is inimical to the parasites, such as quinin or relative immunity to malaria resulting from previous infections.

B. An antihemolysin may be formed, as a rule, during the incubation period of malarial infections, when gradually increasing doses of parasitic hemolysin are presumably being liberated. In this case quinin, exhaustion, exposure, etc., may inhibit the production of antihemolysin, especially in debilitated persons who have suffered from previous malaria. In pernicious infections, antihemolysin formation may be good, but the production of hemolysin by enormous numbers of parasites may be sufficient to more than neutralize it.

2. **Acidosis of Tissues and Production of Paroxysmal Hemoglobinuria.**—In their experiments the authors noticed that the corpuscles of patients suffering from paroxysmal hemoglobinuria were somewhat less resistant to an atmosphere of carbonic-acid gas, as compared with corpuscles from a normal individual. This difference was not very marked, however. The chief difference lies in the blood-serum of the patient. Contrary to the findings of Hymans, it was found that normal corpuscles in normal salt-water suspension were also, although more slowly, hemolyzed in an atmosphere of carbonic-acid gas. Sodium citrate solution, strength 1.5 per cent., was sufficient to prevent hemolysis of both the patient's and normal human corpuscles in an atmosphere of carbonic-acid gas at room temperature. Apparently the salt concentration of the blood-serum is the factor which determines whether the corpuscles shall be hemolyzed or not. Normal serum has sufficient salt dissolved to prevent hemolysis of both the patient's and normal corpuscles in an atmosphere of CO_2 at room temperature. The paroxysmal attacks have been variously ascribed to the action of cold, congestion and trauma, locally or remotely produced. It would appear that changes locally in the tissues must be necessary before a state of hemoglobinemia or hemoglobinuria can be produced. In view of the fact that cold, trauma and passive congestion may all lead to an attack, and since the three conditions are associated with the production of an excessive acidity of the tissues, it is not unreasonable to suppose that the organic acids thus formed play some part directly in the production of the attacks. The corpuscles may be less resistant, they may be subject to the action of a specific hemolysin, and yet an additional factor acting locally in the tissues seems necessary for an attack to be produced. In the presence of the proper salt concentration, the corpuscles are protected against the hemolytic action of any organic acids. This naturally suggests the giving of neutral salts as a therapeutic agent, to prevent the onset of attacks in patients suffering from paroxysmal hemoglobinuria.

3. **Fluid Contents of Cyst of Epigastric Region of Abdomen.**—Fluid was withdrawn by Christian from a cyst occupying the epigastric region in a man aged 42, which had developed as follows: Twelve months previous to admission in the hospital ascites appeared and a simple ascitic fluid was withdrawn on three occasions during a period of two months. Following the tappings a constant gnawing pain with occasional sharp exacerbations developed in his upper abdomen. Four months before admission to the hospital a tumor mass appeared in his upper abdomen, to disappear after a month and a half. Five weeks before admission this mass reappeared and persisted. On admission there was found a large bulging tumor extending from beneath the ribs to 1½ inches above the umbilicus, elastic, smooth, moving slightly with respiration, apparently a cyst crowding the stomach up and the transverse colon down. At operation this was found filled with a slightly viscid fluid, dark brownish-black in color, containing changed blood. The wall of the cyst showed granulation tissue and no epithelium.

The fluid from the cyst was slightly alkaline, and did not reduce Fehling's solution. It gave no trypsin reaction, and did not digest coagulated egg albumin at body temperature, either as it came from the cyst or after the addition of scrapings from the duodenum. In the thermostat at body temperature at the end of twenty-four hours it had acquired the power of reducing Fehling's solution, and previous boiling did not prevent this reducing substance from appearing. In the thermostat, however, at 60 C. no such reducing substance appeared. The addition of yeast to the fluid caused fermentation with the production of gas. Preservation at a temperature slightly above freezing for one month had no appreciable effect on the reactions of the fluid. Until the fluid was placed in the thermostat at 37.5 C it still did not reduce Fehling's solution. At the end of three and a half months at a temperature slightly above freezing the fluid had acquired a slightly foul odor and still did not reduce Fehling's solution, and now when placed in the thermostat at 37.5 C. there was but a slight production of a reducing substance.

4. **Determining Venous Blood-Pressure.**—A way to determine the first increase in the volume of the forearm was in Howell's opinion the real problem to be solved. This he has done by devising a special cuff, similar in general to the cuff of the arterial sphygmomanometer, but differing in that it is patterned to fit the tapering forearm, and in that it is made of light rubber dam with a light inelastic covering.

6. **Respiratory Irregularities in Meningitis.**—Irregularities in the respiratory rhythm were observed by Conner and Stillman at some time in the course of the disease in all of the thirty-two cases of tuberculous meningitis and in all but two of the eleven non-tuberculous cases. They claim that these irregularities often appear early in the disease and in most cases are to be seen much of the time throughout the course of the illness. Toward the end of life, however, the breathing is apt to become very rapid and quite regular. The respiratory irregularities could be grouped into three fairly distinct classes, although intermediate forms were often met with. The three classes are: (a) The type of Cheyne-Stokes; (b) Biot's meningitic type, and (c) an undulatory type.

Cheyne-Stokes breathing was seen in 53 per cent. of all the cases, and in 63 per cent. of the cases in children. It was of more frequent occurrence among the cases of tuberculous meningitis than among the nontuberculous ones.

Biot's breathing was observed in 27 per cent. of the forty-three cases. Its incidence among the adults and among the nontuberculous cases was considerably greater than among the children and the tuberculous cases. It was seen at all stages of the disease and occasionally was met in cases which at other times showed the Cheyne-Stokes type.

The third group of respiratory irregularities, designated as the undulatory type, showed no apneic pauses, but was characterized by undulatory and more or less rhythmical variations in the rhythm and force of the respirations and in the tonicity of the respiratory muscles. This form of respiratory disturbance was seen at some time in the course of almost every case.

No distinct relationship could be detected between the presence of respiratory irregularities and irregularities in the pulse; nor were the respiratory arhythmias dependent on any special mental state such as stupor or coma. The diagnostic significance of respiratory irregularities varies with the type. Biot's breathing, when it occurs, may be regarded as almost pathognomonic of meningitis. The Cheyne-Stokes type has little or no diagnostic value in adults, but in children it is seen much more frequently in meningitis than in any other condition, and, if associated with other suggestive symptoms, should always arouse grave suspicion of that disease. The undulatory type of irregularities is found too often in other diseases to be of much value in the diagnosis of meningitis.

7. **Streptococcus Antibodies in Scarlet Fever.**—Kolmer found it possible to raise the streptococco-opsonic index by the injection of organisms killed by an exposure to 60 C. for one hour. This increase is very slight with three or less administrations and becomes apparent only after a relatively large number of injections.

The increase in the quantity of opsonin after three injections is so slight as to make the likelihood of establishing an immunity against streptococcic infection very dubious.

The opsonins were more or less specific toward the strains used in the process of immunization.

Streptococcus agglutinins are produced slowly by experimental immunization and the quantity is quite variable.

These agglutinins are apparently non-specific in character and of no value in differentiating streptococci.

They were demonstrated in 12.5 per cent. of scarlet fever patients but only in comparatively low dilutions of serum.

There was no relation between agglutination and complement fixation antibodies or betwen agglutinins and opsonins.

10. **Instrument for Determining Coagulation-Time of Blood.**—Duke's instrument consists of a slide on which are mounted,

vith balsam, two glass disks 5 mm. in diameter. With this nstrument, he says the coagulation-time can be determined omparatively; that is, blood from a patient can be taken up n one disk, blood from a normal individual on the other; he two coagulation-times can then be determined simultaneously and the results compared.

Virginia Medical Semi-Monthly

February 9, XVI, No. 21, pp. 521-548

12 Waste. C. Thompson, Jacksonville, N. C.
13 Surgical Conditions of Childhood J. T. Buxton, Newport News.
14 Rational Treatment of Post-Partum Hemorrhage Based on Its Mechanism. G. T. Harrison, Charlottesville.
15 Association of Transitory Physical Signs in Lungs with Incipient Tuberculosis. M. E. Lapham, Highlands, N. C.
16 Value of Vinegar in Obstetric Work. L. Ellot, Washington, D. C.
17 Congenital Foramen in Mesentery. F. P. Smart, University.
18 Vaccine Therapy in Children. J. W. White, Norfolk.
19 Typhoid. R. T. Akers, Alum Ridge.

Journal of Nervous and Mental Disease, Lancaster, Pa.

February, XXXIX, No. 2, pp. 73-143

20 *New Symptom-Complex Due to Lesion of Cerebellum and Cerebello-Rubro-Thalamic System. C. K. Mills, Philadelphia.
21 Leontiasis Ossea-Acromegaly and Sexual Infantilism. H. H. Hoppe, Cincinnati.
22 Sensory Tract in Relation to Inner Capsule. W. G. Spiller and C. D. Camp, Philadelphia.
23 *Tumor of Corpora Quadrigemina. H. H. Hoppe, Cincinnati.

20. **New Symptom Complex.**—A summary of an examination nade by Mills, October 8, 1911, about three weeks before the atient's death gives the special symptom-complex from which his patient suffered for more than four years, this not changing durnig all that time. The syndrome was clear cut and ery definite. In the left upper extremity ataxia was very narked as shown for instance by the finger-to-nose test. As the hand approached the face in the test the movements ecame very jerky and it was scarcely possible for the patient to touch his nose. In the left lower extremity ataxia was lso marked, as shown by the heel-to-knee test. Power in both pper and lower limbs was, however, preserved. Careful tests howed that sensation in all its forms was fully retained on he entire left half of the body, but was lost to pain, extreme eat and extreme cold on the right half of the body—face, runk, upper and lower extremities. Tactile discrimination vas also greatly impaired as shown by the compass test. Light touch was preserved. The senses of deep pressure and f position and passive movement were normal on both sides nd the patient showed no astereognosis in either the right r the left hand. Deafness in the right ear was complete. Voluntary movements in the face were entirely preserved, as lemonstrated by such usual tests as wrinkling the forehead, losing the eyes, drawing up the face first to one side and hen to the other, and then on both sides as in showing the eeth. In laughing, as had been shown in many other examinations and by the moving picture method, the patient's face ailed to move on the right side. The patient died Oct. 31, 1911. The brain closely examined by the naked eye showed a smallness of the branches of the left superior cerebellar artery nd a depression over the left dentate nucleus, but nothing lse externally, at least nothing of importance as regards the symptomatology above described. The brain was sectioned in several places with care so as not to interfere with subsequent nicroscopic investigations by serial sections. The cuts revealed destructive lesion involving the left dentate nucleus and the erebellum above this nucleus, including also the superior cerebellar peduncle. Degeneration was also evident to the naked ye in the right nucleus ruber, which body was much smaller han the left nucleus ruber. Many sections since made, show well-marked destructive lesion and secondary degeneration nvolving not only the dentate nucleus and neighboring cerebellar substance, but also the left superior cerebellar peduncle, o and including the nucleus ruber of the opposite side.

23. **Tumor of Corpora Quadrigemina.**—The chief symptoms nd signs in Hoppe's case were: Double vision, staggering ait, falling to the right, gradual loss of vision, ending in hree to four months in total blindness, sudden attack of igidity in all muscles, falling to ground, without loss of conciousness, equal pupils, atrophy of optic nerves, no light response in pupils, all movement lost in left eye, except downward movement, all movement lost in right eye, except inward and downward movement, slight ptosis of both lids, normal hearing, extreme static atazia with retropulsion, so that patient was finally unable to walk at all, motion and sensation and reflexes not affected. There were at no time forced position or forced movements. A richly cellular, infiltrating glioma, approximately 2 by 4 cm. in its diameters, relatively scant in fibril production and containing numerous giant cells, involved the corpora quadrigemina almost symmetrically and the floor of the Sylvian aqueduct.

Military Surgeon, Washington, D. C.

February, XXX, No. 2, pp. 125-248

24 "Internationale Hygiene Ausstellung, Dresden, 1911." H. G. Beyer, U. S. N.
25 Mission of Ambulance Company. M. Ashford, U. S. A.
26 Foot and Foot Wear. F. W. Weed, U. S. A.
27 Immediate Clinical Results of Use of Salvarsan in Army. H. J. Nichols, U. S. A.
28 Some Dangers of Salvarsan. M. A. Reasoner and R. W. Matson, U. S. A.
29 Modification of Von Bergmann's Operation for Hydrocele. P. A. Surgeon, U. S. N.

Kentucky Medical Journal, Bowling Green

January 15, X, No. 2, pp. 57-90

30 *Few Reasons Why Drugs Do Not Cure Indigestion. H. N. Leavell, Louisville.
31 Arteriosclerosis. J. M. Morris, Louisville.
32 *Use of Vaccines in Treatment of Genito-Urinary Conditions. H. Bronner, Louisville.
33 Factors Which Contribute to Success in Modern Surgery. J. R. Wathen, Louisville.

30. **Why Drugs Do Not Cure Indigestion.**—Having no drugs by which we can stimulate normal cell activity, and no drugs by which we can influence the secretion of one organ except to the detriment of another, or the production of a pathologic lesion in the organ which is stimulated, Leavell says it can safely be asserted that medicines must necessarily play a minor rôle in the cure of indigestion. So far as pathologic lesions are concerned, they can have absoltuely no effect, for the reason that a lesion which is sufficient to cause enlargement of an organ may sooner or later, by metastasis, affect other organs, or by throwing out numberless adhesions, may produce acute intestinal obstruction.

32. **Vaccines in Genito-Urinary Conditions.**—After rather wide use of vaccines, Bronner has come to the conclusion that, in many suppurative conditions of the genito-urinary tract due to bacteria other than the gonococcus and the tubercle bacillus, where there is not a definite abscess formation, or where there is not some obstructive intervention, either sure or marked amelioration may be expected from vaccine therapy. These infections will include those due chiefly to the colon group, the staphylococcus and streptococcus.

Journal Medical Society of New Jersey, Orange

February, VIII, No. 9, pp. 449-502

34 Erysipelas in New-Born Infant. G. T. Welch, Passaic.
35 Urgent Conditions in Abdominal Surgery. J. W. Kennedy, Philadelphia.
36 Cancer of Breast. W. P. Glendon, Cedarville.
37 Our Duty to School Children. A. M. Heron, Lakewood.
38 Intravenous Injection of Salvarsan. F. A. Roberts, Newark.
39 Infantile Paralysis. F. F. Bowyer, Jersey City.
40 Symptomatology and Diagnosis of Infantile Paralysis. C. H. Finke, Jersey City.
41 Treatment of Infantile Paralysis. H. J. Bogardus, Jersey City.

Therapeutic Gazette, Detroit

February, XXVIII, No. 2, pp. 77-152

42 Treatment of Melena Neonatorum by Human Blood-Serum. W. R. Nicholson, Philadelphia.
43 *Normal Human Blood-Serum Injections in Melena Neonatorum and Other Conditions. J. E. Welch, New York.
44 Injuries of Shoulder and Their Relation to Some Conditions of Upper Extremity of Obscure Origin. T. T. Thomas, Philadelphia.
45 Factors Concerned in Process of Clotting of Blood. W. H. Howell, Baltimore.
46 Supplementary Home Treatment of Septic Wounds in Dispensary Work. S. W. Moorhead, Philadelphia.

43. **Treatment of Melena Neonatorum.**—As a forlorn hope, in fact without any real belief that any good would result, Nicholson determined to try the injection of normal human blood serum in his case. The father was used as the donor for the first injection. A little more than 20 c.c. was injected

into the tissue of the back. The next day 18 c.c. was injected in the morning and 10 c.c. at night. On the next day there was vaginal bleeding, but only 6 c.c. was injected, as the supply was temporarily low. The following day the cord separated in a perfectly normal manner; there had been no bleeding externally during the night, but the neck was discolored and swollen. Two doses were given on this day, the morning measuring 18 c.c. and the evening 14 c.c. On this same day a small swelling, which he believed to be a cephalhematoma, made its appearance. The next day the first normal stool was passed. The baby was evidently improving, and but 6 c.c. of serum was administered. A supply was kept in readiness for a couple of days, but was not used, as the child was free from any sign of active bleeding and the hematoma was decreasing in size. The weight was also increasing, and the temperature remained normal.

Northwest Medicine, Seattle, Wash.

February, IV, No. 2, pp. 35-68

47 Congenital Idiopathic Dilatation of Colon, Hirschsprung's Disease. J. F. Critchlow, Salt Lake City.
48 Lane's Kink; Report of Cases. M. M. Patton, Spokane, Wash.
49 Erosions of Stomach. N. W. Jones, Portland, Ore.
50 Diagnosis and Prognosis of Gastric Ulcer. W. O. Spencer, Portland, Ore.
51 Duodenal Ulcer. O. F. Lamson, Seattle, Wash.
52 Diagnostic Importance of Ocular Manifestations of Syphilis. E. E. Maxey, Boise, Idaho.
53 Treatment of Syphilis of Central Nervous System. W. T. Williamson, Portland, Ore.

New York Medical Journal

February 17, XCV, No. 7, pp. 313-364

54 *Indiscriminate Drug Taking. A. Lambert, New York.
55 Some Useful Household Medicaments. S. Solis-Cohen, Philadelphia.
56 Masturbation in Adult Male. M. Hühner, New York.
57 Crile's Researches in Regard to Shock. W. P. Carr, Washington, D. C.
58 Local Anesthesia in Major Surgery. A. S. Morrow, New York.
59 Matas Operation in Treatment of Traumatic Aneurysm. W. C. G. Kirchner, St. Louis.
60 Artificial Sterilization by Active Immunity with Spermatozoon from Same Species. L. K. Hirshberg, Baltimore.
61 Chronic Urethral Pruritus. G. Greenberg, New York.
62 *Acute Poliomyelitis with Unusual Manifestations. M. Greenwald, Jersey City.
63 Interstitial Ectopic Pregnancy. C. R. Robins, Richmond, Va.

54. **Indiscriminate Drug Taking.**—The danger of the formation of the habit of continually turning to some drug at the slightest pain, in the endeavor to benumb that pain, instead of finding out what caused it to arise, and taking the proper measures to remove the cause, Lambert rightly emphasizes as being a very great one. What we call diseases are really variations or perversions of the normal processes going on in the body and one or more of these processes may become perverted or changed, so that the resulting condition brought about in the body is vastly different from the normal condition and becomes harmful, and the resulting symptoms are what we designate as a disease. Consider for example, headaches, and the numerous remedies advertised, bought and taken for them; consider the many causes which give rise to headache; a disturbed digestion, sluggish circulation, tired out and overwrought nervous system, carelessness in personal hygiene permitting constipation, and various sicknesses or little ailments that constantly arise. If we remove the cause, the headaches will cease, and the great danger we have in turning to headache remedies is, that as the pain ceases we forget the cause, believing ourselves better, and go on permitting the morbid processes which caused the headache to persist in the body, until we have really allowed a little thing to run along until it may have become a serious condition. Beside the dangers to the blood from various of these aniline drugs, the incessant use is not without its dangers in habit formation.

Another cause which has brought about a wide-spread use of drugs is that of insomnia—and the hypnotics or sleep producers are probably the most abundantly used of all. The dangers of indiscriminate drugging are summed up as follows: It is often harmful, and usually unintelligently useless. The drugs in themselves frequently do harm, to say nothing of the waste involved in pouring in enormous quantities of these remedies to no purpose, since the reasons for which they are taken are often incorrect. Many of these remedies do harm, in that they actually injure and pervert the normal processes of the body. All narcotic drugs, those which benumb pain and the like, have the danger of real habit formation connected with their use, and when once a person is addicted to these drugs, the condition in which he finds himself is worse than the previous one for which they are taken. It is an old, trite saying of the medical profession that he who diagnosticates well will cure well, and this applies to each and every individual, whether he has taken a degree in medicine, or whether he has not, and certainly the indiscriminate drugging to which the human race is to so great an extent addicted to-day is not based on principles of good sense and intelligence.

62. **Acute Poliomyelitis.**—In Greenwald's case the infant was lying on its bed, deeply imbedded in pillows, with its head retracted and the spine arched backward, giving the impression of opisthotonos, but as he lifted the baby from the pillow, he found the head swaying laterally and anteroposteriorly, representing the typical "head drop" as illustrated by Sheffield.

Journal-Lancet, Minneapolis

February 15, XXXII, No. 4, pp. 85-110

64 Laboratory Methods in Syphilis: Wassermann Reaction. N. L. Linneman, Duluth, Minn.
65 Contribution of Spinal Fluid to Diagnosis of Syphilitic Diseases of Nervous System. C. R. Ball, St. Paul.
66 The New Public Health: Control of Infectious Diseases. H. W. Hill, Minneapolis.
67 Tubal Pregnancy: Report of Two Cases. W. H. Godfrey, Russell, N. Dak.

Interstate Medical Journal, St. Louis

February, XIX, No. 2, pp. 93-170

68 Chronic Infectious Endocarditis, with Early History Like Splenic Anemia. Sir W. Osler, London.
69 Vaccine Virus and Results of Vaccination in Public Schools of St. Louis, 1912. G. Dock and D. L. Harris, St. Louis.
70 Iodin in Surgery. H. A. Baldwin, Columbus, Ohio.
71 Hormonal in Intestinal Stasis. G. H. Hoxie, Kansas City, Mo.
72 *New Reflex Phenomenon in Hand: Wrist-Sign. C. G. Chaddock, St. Louis.
73 Transduodenal Choledochotomy. J. H. Fobes, New York.
74 *Hemorrhagic Infarct of Small Intestine. L. H. Hempelmann, St. Louis.

72. **Wrist-Sign.**—The area on the wrist which seemed to Chaddock to correspond anatomically with the external malleolar skin-area is located on the palmar surface of the wrist at the junction of the palm with the wrist, and just at the ulnar side of the tendon of the flexor carpi radialis and the tendon of the palmaris longus, evident as a groove or depression when the hand and fingers are in moderate flexion. His experiments have seemed to show that from the skin of this groove, as far distally as the base of the thenar eminence in the palm and proximally an inch or so up the bend of the wrist, a peculiar reflex movement can be excited in case of disease of the corresponding pyramidal tract at a level higher than related spinal centers in the cervical enlargement of the cord. Indeed, in a few instances, irritation of almost any area of the skin of the forearm, as high as the elbow on the ulnar side, has induced the movement described. The form of irritation Chaddock has used is scratching with a dull-pointed orangewood stick, or with a dull-pointed nail-file. In a few cases, pressure with the point of the instrument, without scratching, has proved effective. The movement observed consists of flexion of the wrist and simultaneous extension and separation of all the digits. In certain cases this movement occurs slowly and the resulting attitude is maintained for a few moments while the stimulus is continued; in other cases, it occurs very quickly and sharply, even occasionally with observable nervous tremor. In addition to this movement there is frequently, if not invariably, a simultaneous contraction of the triceps muscle, limited to a few of its middle fibers, as a rule, but in some cases amounting to a decided bulging of the whole muscle. There is here a certain correspondence with the movement of thigh-muscles excitable from the sole and external malleolar skin-area; and also that the induction of this movement, in some cases, from a wide area of the skin of the forearm, is analogous to abnormal toe-signs excitable from extensive skin-areas of the lower extremities. It seems to be due to active reflex contraction of the flexors of the wrist (with excitation of the triceps), while the separation

and extension of the digits is apparently often a passive mechanical result. However, in some cases there has been evidence of some active contraction of the extensors of the digits, shown most clearly in wide separation of them, especially of thumb and little finger. There is in this movement no action of the interossei or lumbricales.

74. **Infarct of Small Intestine.**—While the diagnosis of mesenteric thrombosis is always difficult and in many cases impossible, Hempelmann regards the following points as rather suggestive: 1. Sudden abdominal pain occurring in a patient beyond the third decade, the pain being either very violent from the very beginning or becoming progressively worse for several days. 2. The intense suffering of the patient often associated with writhing on the bed and nervous symptoms remotely suggesting hysteria combined with lack of rigidity and distention and a comparatively normal pulse and temperature. 3. Bloody vomiting and stools. 4. Demonstration of a source from which an embolus may have been derived, viz., endocarditis, phlebitis, etc. The treatment is surgical.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

February, XIV, No. 2, pp. 65-139

75 Kidney Infections Complicating Pregnancy. J. M. Tompkins, Richmond.
76 The Rest Treatment. B. R. Tucker, Richmond.
77 Nitrous Oxid-Oxygen Anesthesia. M. J. Alexander, Richmond.
78 Diagnosis of Poliomyelitis with Misleading Symptoms. T. A. Williams, Washington, D. C.

Annals of Surgery, Philadelphia

February, LV, No. 2. pp. 185-328

79 Parathyroids and Their Surgical Relation to Goiter. C. H. Mayo and B. F. McGrath, Rochester, Minn.
80 *Arteriovenous Anastomosis. Reversal of Circulation, as Preventive of Gangrene of Extremities. B. M. Bernheim, Baltimore.
81 Technic of Suturing Blood-Vessels with a New Instrument. J. S. Horsley, Richmond, Va.
82 *Division and Circular Suture of Aorta in Pregnant Cats. W. M. Boothby and A. Ehrenfried, Boston.
83 *Observations on Series of Forty-Three Laminectomies. C. A. Elsberg, New York.
84 Prophylaxis and Treatment of Epithelioma of Lower Lip. D. W. Montgomery and G. D. Culver, San Francisco.
85 *Acute, Spontaneous Perforation of Biliary System into Free Peritoneal Cavity. C. A. McWilliams, New York.
86 Error of Overlooking Ureteral or Renal Calculus Under Diagnosis of Appendicitis. M. H. Richardson, Boston.
87 Surgical Treatment of Diverticula of Urinary Bladder. W. Lerche, St. Paul, Minn.
88 *Primary Tuberculosis of Penis. G. H. Wilson and A. S. Warthin, Ann Arbor, Mich.
89 Mesotheliomata (So-Called Hypernephromata) of Kidney. L. B. Wilson, Rochester, Minn.

80. **Arteriovenous Anastomosis.**—Six cases are cited by Bernheim and forty-six recorded in the literature are reviewed. In studying these fifty-two cases, Bernheim found that thirty-eight were done on males, ten on females and in four the sex was not stated. The ages varied all the way from 20 to 80 years. Fifteen out of the fifty-two cases must be considered successful ones; that is, cases in which the reversal, as far as one can judge, actually saved the limb from real or threatened gangrene, a percentage of 30 per cent. Among the failures there were thirteen deaths; two from shock and eleven from senility and erysipelas. Most of these patients were in a desperate condition physically at the time of operation, thus rendering an operative procedure precarious to say the least. In the remaining twenty-two cases the course of disease was uninfluenced by the reversal, although there was a temporary improvement in several cases. Amputation was performed in each instance. The operation was done twice in the upper extremity, once for thrombus and threatened gangrene, once for threatened gangrene, both times successfully. The remaining cases were in the leg, the operation being done four times for Raynaud's disease, once for sarcoma of the popliteal space, which necessitated removal of about 4 inches of the popliteal artery and vein, once for gun-shot wound and the remainder for real or threatened gangrene. As to methods of operation, the end-to-end suture of Carrel and Stich was done twenty-three times with eight successes, lateral anastomosis twelve times with four successes, invagination (end of artery into end of vein) twice with one success, and the intubation of Wieting (end of artery into side of vein) nine times with two successes. The method was not stated twice and one of these operations was successful.

82. **Division and Circular Suture of Aorta in Pregnant Cats.**—The authors were able to interrupt completely the circulation of the abdominal aorta in a pregnant cat for fifteen minutes, divide the aorta, perform a circular suture thereof, and reestablish the circulation without interfering with the course of the pregnancy.

83. **Series of Laminectomies.**—Among forty-three consecutive operations on the spine during the past two years, done mostly by the authors, laminectomy for tumor was performed in thirteen patients. Of the thirteen cases, nine were extramedullary and four were intramedullary growths. Of the extramedullary, the bone and muscles were involved in addition to the meninges in two patients, while in seven the tumor was entirely intradural. Of the latter, two were in the dorsal or lumbar cord, five involved the conus and the roots of the cauda equina. There were in all thirty-six primary laminectomies and seven secondary operations. In addition to the thirteen patients with spinal tumor, there was one with a collection of fluid (arachnoid cyst?). Posterior root section was done ten times; extirpation of diseased bone pressing on the cord twice; a peculiar disease of the posterior nerve-roots was encountered in one patient; two patients had an acute osteomyelitis of the vertebræ; one, a fracture dislocation; there were eight exploratory operations.

85. **Spontaneous Perforation of Biliary System.**—In 3,180 operations on the biliary system, acute spontaneous perforation into the free peritoneal cavity occurred twenty-nine times, or 0.9 per cent. In ninety cases of perforation, eighty-two of them, or 91 per cent., occurred in the gall-bladder, three, or 3.3 per cent., perforated through the cystic duct, four, or 4.4 per cent., through the common duct, while but one, or 1.1 per cent., perforated through the hepatic duct. Calculi are a great factor in causing perforation, for in eighty out of 108 cases, or 74 per cent., stones were found at the time of the operations. In fourteen cases, or 13 per cent., it was found that no stones were present after adequate search. In the fourteen remaining cases, or 13 per cent., stones may or may not have been present as no mention is made of them. In but nine cases is it distinctly stated that gangrene was present. Of ninety-nine patients whose ages are given, the average was 50 years. Before 50 years, there were forty-four cases with 63 per cent. of recoveries, while beyond 50 years there were fifty-five cases with 46 per cent. of recoveries. Between 50 and 60 years, there were thirty-five cases with but fourteen recoveries. Sixty-two of the cases occurred in women, or 60 per cent., and they stand the disease better than men, the mortality in women being 44 per cent. as against 54 per cent. in men. Of 108 patients operated on, fifty-six recovered, or 51 per cent., while fifty-two died, or 48 per cent. Early operation, McWilliams says, as in all forms of peritonitis, is the best guarantee of success; thus, of seven patients operated on within twelve hours of the perforation six, or 85 per cent. recovered; of fifteen operated on within one day of the perforation, ten, or 66 per cent., recovered; of fourteen within two days, seven recovered, or 50 per cent.; of sixteen operated on within three days of the perforation, eight recovered, or 50 per cent.; while of ten patients that had gone four days before operation only two recovered, or 20 per cent. Suture of the perforation is to be unhesitatingly condemned. Four out of five patients thus treated died. Simple incision of the abdomen with drainage of the biliary region gave 47 per cent. of recoveries. With cholecystectomy 48 per cent. recovered. The best results were obtained with cholecystostomy, with which 61 per cent. recovered.

88. **Tuberculosis of Penis.**—It is pointed out by the authors that though primary tuberculosis of the penis is comparatively rare, it is probably more common than might be judged from the literature. It is possible that many cases of primary tuberculosis of the penis have been mistaken for syphilis, chancroid and cancer. Tuberculosis following ritual circumcision is less common at the present time than formerly, and no doubt due to changes in the ritual, the practice of suction having been abolished. The two cases which Wilson reports are due to unclean surgery. The tubercle bacilli were evi-

dently carried from the patient who had been operated on just previously to the wounds of both circumcised patients by unclean hands or improperly sterilized instruments or other articles used in the operation. Both cases are examples of wound-infection by the tubercle bacilli. That both boys were well and had at no time shown any symptoms or signs of tuberculosis up to the time of operation; that the parents were both well; that the operations were performed by the same surgeon, at the same place and time; and that preceding the operations a tuberculous patient had been operated on, leave no room for doubt concerning this mode of infection. A case of primary tuberculosis of foreskin is also reported.

Illinois Medical Journal, Springfield

February, XXI, No. 2, pp. 123-260

90 Therapeutic Application of Solid Carbon Dioxid. W. A. Pusey, Chicago.
91 Skiagraphy in Urologic Diagnosis. R. D. Carman, St. Louis.
92 Skin Sensitization. E. L. McEwen, Chicago.
93 Bilirubinuria: Clinical Choluria. B. G. R. Williams, Paris.
94 Fistula of Rectum. C. J. Drueck, Chicago.
95 Internal Secretions, with Special Reference to Islets of Langerhans of Pancreas. G. B. Schwachtgen, Aurora.
96 Treatment of Compound Fractures. C. Beck, Chicago.
97 Rupture of Parturient Uterus. H. M. Stowe, Chicago.
98 Treatment of Diffuse Suppurative Peritonitis. O. M. Steffenson, Chicago.
99 Intestinal Strangulation: Report of Cases. J. E. Miller, Pittsfield.
100 Poliomyelitis. L. B. Russell, Hoopeston.
101 Why Lack of Interest in Obstetrics? E. A. Cook, Alton.

Southern Medical Journal, Nashville, Tenn.

February, V, No. 1, pp. 1-68

102 *Vaccine Therapy in Typhoid. J. B. Elliott, New Orleans.
103 *Stokes-Adams Syndrome. J. G. Gaither, Oxford, Miss.
104 Sanitation in Southern Cities. C. A. Mohr, Mobile, Ala.
105 Dispensary Work in Mississippi. W. S. Leathers, University, Miss.
106 Training of Specialist. M. M. Cullom, Nashville.
107 Congenital Morphinism, with Report of Cases. G. E. Pettey, Memphis, Tenn.
108 Two Cases of Foreign Body in Right Bronchus Removed by Superior Bronchoscopy. C. A. Thigpen, Montgomery, Ala.
109 Technic for Compression of Lung in Pulmonary Tuberculosis. M. E. Lapham, Highlands, N. C.
110 End-Result of Operation in Exophthalmic Goiter. G. W. Crile, Cleveland.
111 Surgery of Intestines: Report of Seventeen Cases with Recovery. E. M. Prince, Birmingham, Ala.
112 Plea for Use of Nitrous Oxid in Short Operations. G. S. Foster, Manchester, N. H.
113 *Case of Congenital Gangrene of Right Forearm, with Successful Amputation, in Infant Five Days Old. R. Winslow, Baltimore.
114 Important Factors in Prophylaxis of Malarial Fevers. C. F. Craig, Washington, D. C.

102 and 103. Abstracted in The Journal, Dec. 2, 1911, pp. 1860 and 1861.

113. **Congenital Gangrene of Right Forearm.**—The labor in Winslow's case was natural and of twelve hours duration: position of the child in utero L. O. A. Labor was unimpeded and the cord was not wrapped around the neck or arm; neither were any amniotic or other bands noticed. The head was born and the arm followed normally; the child was not cyanosed and cried lustily. The right arm was gangrenous almost up to the elbow, with a distinct line of demarcation already formed. There was no sign of cord pressure or of pressure of any kind. The child's weight at birth was 5½ pounds. When five days old there was complete moist gangrene of the hand and forearm, which were considerably swollen, and a somewhat irregular line of demarcation had formed a short distance below the right elbow. It was not judged safe to administer an anesthetic and the amputation was made at the elbow joint without any anesthesia. The child cried some, but bore the operation very well, and became quiet when supplied with a bottle full of milk. He was sent back home on the next train, a distance of forty miles. He did well, gained weight rapidly, and the stump had entirely healed in three weeks. Unfortunately, he died when two months of age of cholera infantum.

Louisville Monthly Journal of Medicine and Surgery, Ky.

February, XVIII, No. 9, pp. 257-288

115 Deafness, Its Cause and Newest Treatment. H. E. Cook, New York.
116 Colon, Sigmoid and Rectum. G. S. Hanes, Louisville.
117 Postpartum Hemorrhage. R. J. Estill, Lexington.
118 Plea for More Practical Laboratory Research. F. E. Sondern, New York.
119 Secret Division of Fees. E. F. Smith, New York.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 10, I, No. 2667, pp. 285-344

1 Prognosis. T. F. Gardner.
2 Early Diagnosis of Pulmonary Tuberculosis. F. W. Price.
3 Influence of Strong, Prevalent, Rain-Bearing Winds on Course of Phthisis. W. Gordon.
4 *Prevention and Treatment of Pulmonary Tuberculosis. W. M. Crofton.
5 Clinical Trials with Marmorek's Antituberculosis Serum. J. P. Mitchell.
6 Nature of Parasites of Leprosy and Tuberculosis. A. G. R. Foulerton.
7 Case of Actinomycosis of Lung. F. Nicholson.

4. **Treatment of Pulmonary Tuberculosis.**—Crofton has for years been using iodoform in the treatment of tuberculosis, giving it intravenously, intramuscularly and by the mouth. The intravenous method, he says, is by far the most potent. It is given in quantities of ¼ to 1 grain dissolved in ether, with a little liquid paraffin added, two to five times a week. The veins usually selected are those of the antecubital fossa. The little operation is a simple one. There is no pain or inconvenience to the patient, except a certain amount of coughing. Even in advanced cases with large involvement, Crofton says he has succeeded in getting the temperature normal, greatly reducing and sometimes abolishing the expectoration and improving the cough. He thinks that one of its chief actions is the well-known action of iodin in converting toxin into toxoid, which is not poisonous, but acts as an excellent stimulant and for the formation of antitoxin. The power that an injection of iodoform has in abolishing a reaction after an injection of tuberculin would tend to confirm this hypothesis. He regards it as essential, before ending the treatment of a case, to give a series of injections of tuberculin, in order to increase the patient's immunity and if possible to leave him with, at any rate, the mechanism for producing specific antibodies with ease. Otherwise the patient has no guarantee that he will be able to resist the reinfection that he is almost certain to get. He usually gives it combined with iodoform, the latter being given with the idea of reducing the reaction. It is a very powerful preparation, the initial dose being a millionth of a milligram and the largest dose used is a thousandth of a milligram. That the iodoform does reduce reaction he has proved by giving a patient several doses of the combination without a reaction and then giving it without the iodoform, when a reaction occurred.

Lancet, London

February 10, I, No. 4, pp. 343-412

8 Certain Chronic Glandular Enlargements. W. K. Hunter.
9 Amputation for Diabetic Gangrene. C. B. Lockwood.
10 *Treatment of Puerperal Infection by Bacterial Vaccines. G. T. Western.
11 *Vaccine Treatment of Simple Goiter. R. McCarrison.
12 Fate of Appendix After Abscess Formation. A. P. Dodds-Parker.
13 *Case of Tuberculosis with Special Involvement of Heart. P. Bahr and G. C. Low.
14 Examination of Medical Provisions of National Insurance Act. W. A. Brend.

10. **Bacterial Vaccines in Puerperal Infection.**—Out of 100 cases studied by Western, twenty-five followed on miscarriage. In only two of these was a history obtained of criminal interference. Blood cultures were made in almost every case. Eight to ten cc. of blood is obtained by venipuncture and inoculated into tubes of ordinary glycerin and glucose broth. These are incubated at 37.6 C. for four days before being reported as negative. In ninety-six cases in which the blood was examined a positive result was obtained in thirty-nine, or 40 per cent. Of the thirty-nine positive results, thirty-six contained streptococci and of these all but two were grown aerobically. Two cases grew *Staphylococcus aureus* and one case grew a Gram-negative coccus which failed to grow in subculture. The two *Staphylococcus aureus* cases were both following abortion, in one instance criminally induced. Cultures were taken from the uterus in forty-three cases in this series. In thirty-one instances streptococci were grown in pure culture. Twice streptococci grew in large numbers, together with a few colonies of coliform bacilli, which were no doubt contaminations from the vagina or cervix. On one

occasion *Staphylococcus albus* alone grew and on one occasion the cultures were noted contaminated. In only seven cases were the results completely negative and there is reason to believe that in some instances this was due to faulty technic. It will be seen, therefore, that streptococci occurred in 80 per cent. of the cases examined and in 76 per cent. in pure culture.

Forty-four patients in this series were not treated by vaccines. Of the fifty-six patients so treated thirty-eight lived while eighteen died, giving a mortality of 32 per cent. Of the forty-four patients untreated twenty lived while twenty-four died, giving a mortality of 55 per cent. The cases are divided by Western into three groups: 1. Those which respond at once to an inoculation of a vaccine, the temperature falling to normal within forty-eight hours. 2. They may respond to each of a series of injections, the average of the six four-hourly temperatures falling a degree or so. 3. The temperature may steady until the daily maximum is not above 102. Further injections fail to reduce this. In these cases there is probably a local collection of pus which must be found and drained; the temperature will then quickly fall to normal.

Western concludes that the mortality among those patients with puerperal septicemia in which there is definite bacteriologic evidence of bacteria in the blood-stream is from 85 to 95 per cent. This mortality may, by inoculation with autogenous vaccines, be reduced to about 55 per cent. The mortality among notified cases of puerperal fever is about 60 per cent. This mortality may by inoculation with appropriate vaccines be reduced to about 30 per cent. In cases of puerperal sepsis, if it is decided to explore the uterine cavity the opportunity should not be lost of obtaining a culture at the same time. In the treatment of puerperal sepsis "stock" vaccines give inferior results and should only be used when an autogenous vaccine cannot be obtained.

11. **Treatment of Goiter.**—Having shown in the course of his researches on the etiology of endemic goiter that the infecting agent of this disease exists in the intestinal tract and that a plentiful amebic infection was present in this situation in the vast majority of all cases of goiter in Gilgit, McCarrison has been engaged in endeavoring to cultivate amebas from the feces of sufferers from this disease. During the course of this work he was struck with the constant character of the bacillary growths which appeared in the medium employed. This medium was that recommended by Musgrave for the cultivation of amebas. The vaccine employed was, therefore, a composite one and contained organisms capable of growth on an alkaline and feebly nitrogenous medium. This vaccine was administered in selected cases in doses of from 150,000,000 to 350,000,000; the inoculations were made at intervals of from seven to ten days. The results obtained were most gratifying.

McCarrison has treated thirty-three cases of simple goiter by means of vaccine. The cases were selected. The results observed may be summarized as follows: Of the four vaccines which were successfully employed the "composite" vaccine appears to be the best. An initial dose of 150,000,000 proved to be most suitable in the case of the composite vaccine and in the case of that prepared from the coliform bacillus found in the feces. There is usually some rise of temperature a few hours after the inoculation, but this is rarely of any severity if the initial dose does not exceed 150,000,000. Subsequent dosage can be readily regulated by the effect of the treatment on the enlarged thyroid. When the gland begins to soften and the skin over it to become lax the dose which has brought about the result will not need to be increased at the subsequent inoculations. McCarrison believes, also, that the volume of the vaccine inoculated should be small, and that it is better to introduce 150,000,000 of the bacteria in 5 minims of salt solution than in 1 c.c. of the same solution. The local reaction does not then appear to be so marked, and when the upper arm is selected as the site of inoculation the patient is usually able to follow his ordinary avocation with no more loss of time than that necessary to attend at the laboratory for the treatment. Cases vary considerably as to the number of inoculations which are necessary to effect a cure. As a general rule, the older the goiter the larger the number of inoculations which will be needed. As a rule, however, from four to seven inoculations were found to be necessary. This treatment is suitable for cases of recent parenchymatous goiter and its value is confined to such cases. It has little or no effect when the goiter is of long standing, that is to say, when the main part of the swelling is made up of adenomata or of cysts. In some cases a shrinking of the thyroid tissue around adenomatous or cystic masses is observed, but no diminution in the size of these masses has been noted to occur.

13. **Tuberculosis With Special Involvement of Heart.**—The left ventricle, perhaps more so than the other chambers of the heart, was, in the authors' case, greatly diminished in size owing to an enormous, more or less concentric, hypertrophy of the ventricular wall. The myocardium was replaced by caseous, cheesy masses of different sizes, these having produced the nodular or marble-like lumps seen on the outside of the heart during the necropsy. The wall at the base of the ventricle measured no less than 1¾ inches in thickness, this gradually tapering to ¾ inch at the apex. Practically no normal muscular tissue was left, the tubercular lesions having entirely replaced this. The right ventricle and both auricles were also affected, the cavity of the left auricle especially being surrounded and infiltrated by tubercular masses and thereby greatly obliterated. Remains of pericardium adherent and firmly bound to the auricles and great vessels at the base were easily found, but, as already mentioned, the pericardial membrane was, on the whole, quite free from tuberculous changes.

Practitioner, London

February, LXXXVIII, No. 2, pp. 217-352

15 Treatment of Primary Uterine Displacements. W. B. Bell.
16 Cellulitis of Hand. E. M. Corner.
17 Relation of Ductless Glands to Glycosuria. P. J. Cammidge.
18 Peribronchial Phthisis. A. C. Jordan.
19 Minor Operation of Gastrostomy. H. Upcott.
20 Nitroglycerin Poisoning. R. R. Pirrie.
21 Cause, Effect, Incidence and Prevention of Pneumokoniosis of Quartz Miners. J. S. Purdy.
22 Postoperative Treatment of Cancer. F. Hernaman-Johnson.
23 Retrospect of Otology, 1911. M. Yearsley.
24 Moral Factor in Physical Disease. A. J. Brock.
25 Hyoscin-Morphin Anesthesia in General Practice. A. Innes.
26 Diagnosis and Treatment of Mucous Colitis and Spastic Constipation. H. Higgins.
27 Pre-Operative Management of Acute Abdomen. C. H. Whiteford.
28 Case of Septicemia Cured by Vaccine. R. W. Mullock.
29 Ionization and Bier's Hyperemia in Treatment of Rheumatism. J. L. Timmins.

British Journal of Children's Diseases, London

February, IX, No. 98, pp. 49-96

30 *Observations on Nervous Manifestations in Rheumatism of Childhood. F. J. Poynton.
31 *Series of Manifestations of Acute Rheumatism in Boy of 10. R. B. Ness.

30. **Nervous Manifestations in Rheumatism.**—A series of 500 consecutive cases of rheumatism are analyzed by Poynton. In this series he has placed all cases of chorea that came to him during the period over which the investigation took place. He has taken all these cases of chorea as rheumatic and then critically examined the evidence for making such an assumption. Of the 500 cases of rheumatism, 225 came with chorea as one or the only symptom. None has been considered twice, although there were a considerable number of relapsing cases. In eight the notes were imperfect and useless, leaving only 217 for analysis; 122 of these patients had obvious heart disease and many of them other symptoms of rheumatism; twenty-eight more had no convincing signs of organic valvular disease, but were suffering from rheumatic arthritis and pains; 150 of the number are thus disposed of. The remaining sixty-seven cases came to the hospital with no gross heart disease, but twenty-two of them with what Poynton regarded as evidence of dilatation. They showed, however, no arthritis or other cardinal evidence of the rheumatic state.

In fifty-two of the sixty-seven cases, there was no history of fright or strain that the parents could discover. Seven, Poynton traced later as suffering from rheumatic heart disease and one of these who came originally for chorea, with absolutely no guide as to its cause, died three years later of rheumatic carditis. Another is now in the same hospital, in the last stage of chronic rheumatic heart disease; and another developed rheumatic arthritis in the hospital after admission. In ten of the cases chorea directly followed a sore throat. In one case the mother had suffered from chorea, which might be interpreted to suit any view if it had not been that two sisters had also suffered from chorea and one from rheumatic fever. In nineteen cases Poynton found a history of rheumatic fever in the family.

Eight of the fifteen ascribed to fright and shock were directly attributed to overstrain at school, and in one of them two attacks were looked on as the result of canings; but it was admitted that the boy had been troublesome and inattentive for some days beforehand. One case was supposed to result from the sight of two men fighting. One was ascribed to a fall in which the child injured an eye, but the chorea did not follow until twelve months later. One was attributed to a dog jumping up at the child, the chorea following some weeks later. One developed four days after the patient had seen her brother strike her father. It is noteworthy that the father had suffered from two attacks of rheumatic fever, and that some years later this child was treated for heart disease. One very suggestive case followed within a week the overturning by the patient of a perambulator with two small children in it. It must be added that a sister suffered from rheumatic fever. One case followed on a boy putting a penny into a machine in return for which he was rewarded with an electric shock. In the last case, a runaway horse came straight for a little girl and so frightened her that she was brought back in a "fit" and two days later developed chorea. This record supports what many authorities have long maintained, that the main cause of chorea is rheumatism and even reduced the question of fright and brain strain to the position of being interpreted as the active factor in producing the actually developed disease in tissues already unstable with rheumatism.

31. **Unusual Case of Acute Rheumatism.**—A boy, aged 10 years, was first admitted to the infirmary with a history of having suffered eight weeks previously from pain and swelling in his ankles, knees, shoulders, elbows and hands. The larger joints improved within a few days, but those of the hands remained affected for several weeks. Five weeks after the onset of the illness several little round nodules were felt on the back of the head, which persisted till the time of his admission to hospital. Previously he had not suffered from rheumatism. He had never had tonsillitis, chorea, or scarlet fever. The mother was said to suffer from rheumatism in her hands; otherwise the family history was unimportant.

What deserves special notice was the presence of numerous small subcutaneous fibroid nodules. These were most numerous and largest in the head, chiefly in the occipital region, though one or two could be felt also in the parietal regions. They were present, too, on the elbows over the condyles and on the olecranon processes; on the wrists over the ends of the ulna and radii and along the tendons of the flexor muscles; on the hands over the metacarpophalangeal points and to a less extent over the interphalangeal joints; on the legs they were found over the knees at the sides of the patella, and on the ankles over the internal and external malleoli. They were absent in other positions where such nodules are often found, for example, on the scapula, the spines of the vertebræ and the crests of the ilia. In the various situations first mentioned one or two or more nodules were to be found. In size they varied from that of small shot to that of split-peas; a few were even larger. They were subcutaneous and easily felt, but only distinctly seen when the skin was stretched over them as when a joint was flexed. They were firm and hard but not tender; nor was the overlying skin reddened or in any other way involved.

The various joints said to have been previously affected were neither swollen nor painful. The arthritis had practically disappeared. The patient also suffered from endocarditis leading to mitral regurgitation, with slight hypertrophy and dilatation of the chambers of the heart on both sides. These facts were of special importance in view of the later developments. The examination of the respiratory, digestive, nervous and genito-urinary systems revealed no abnormality of any importance. Under treatment the nodules gradually became smaller and were all gone before he was dismissed on March 31. He was readmitted to the hospital one month later with severe chorea. He had only been at the convalescent home a week when one evening he got a fright through the breaking of a window in his bedroom, after which he remained nervous and sleepless all night, thinking of robbers. When he went home a week later the mother says he was twitching all over and could not speak properly.

A fortnight after this he was again readmitted to the hospital. The choreiform movements were then very bad and affected the whole body. He could not speak and was very emotional. He was thinner and paler than when he left the hospital. The rheumatic nodules had reappeared. They were in the same situations as before, were quite as numerous and in some parts, e. g., the occiput, even larger. The cardiac condition was practically as before. The patient was treated by absolute rest and suitable diet. Chloral hydrate and ammonium bromid as sedatives were given as required, while acetosalicylic acid was given regularly in view of the rheumatic condition. By the end of three weeks the sedatives were stopped but the acetosalicylic acid was continued for two or three weeks longer, after which the syrups of iodid of iron and of lactophosphate of lime were substituted. By this time all trace of the chorea and nodules had gone. At the end of about eight weeks he complained of pain over the heart. Next day pericardial friction was detected so that another link, in the form of pericarditis, had to be added to the chain of rheumatic events. Shortly after the onset of the pericarditis the rheumatic nodules again appeared, but not to the same extent. Within four or five days signs of left pleural effusion were detected and the right border of cardiac dulness was found 2 inches to the right of the mid-line; this was ascribed to displacement of the heart. The signs of the effusion were more marked on the following day. This pleurisy was another link in the rheumatic series. The patient had two slight recurrences of the chorea. Rest in bed and acetosalicylic acid stopped the recurrences very promptly. When he was dismissed from the hospital he was very well except for the cardiac lesion.

Australian Medical Journal, Melbourne

December 23, I, No. 23, pp. 241-250

32 Artificial Hypospadias for Relief of Intractable Urethral Stricture. R. H. Russell.
33 Serum Sickness. W. R. Groves.
34 How Far Is Momburg's Aortic Tourniquet Applicable to Military Surgery? T. Fiaschi.
35 Management and Treatment of Early Insanity. M. H. Downey.
36 Some Results of Lacerated Uterine Cervix. T. Murphy.

December 30, I, No. 24, pp. 251-260

37 Surgical Treatment of Uterine Retrodisplacements with Results of Operation. A. N. McArthur.
38 District Midwifery Practice. E. Ludowici.

January 6, I, No. 25, pp. 261-272

39 Cause and Treatment of Summer Diarrhea in Children A. J. Wood.
40 Plea for Mongol. T. E. Green.

Journal of Tropical Medicine and Hygiene

February, XV, No. 3, pp. 33-48

41 Possible Etiologic Factors in Malarial Recurrences; Significance of Such Cases; Their Treatment. G. E. Henson.
42 Persistence of Eosinophilia and Persistence of Absence of Embryos in Peripheral Blood in Case of Filaria Loa Infection. G. C. Low.

Annales de Gynécologie et d'Obstétrique, Paris

January, XXXIX, No. 1, pp. 1-64

43 Mechanism of Spontaneous Delivery with Shoulder Presentation. (A propos des differents mécanismes de l'évolution spontanée dans la présentation de l'épaule.) Berthaut.
44 Lumbar Puncture in Treatment of Eclampsia; Three Cases; Recovery. (De la ponction lombaire comme moyen curatif de l'éclampsie.) T. Bataski.

Archives Générales de Chirurgie, Paris

January, VI, No. 1, pp. 1-124

45 Ligation of Thyroid Arteries for Exophthalmic Goiter. G. Michel.
46 Pancreatic Cyst. (Cas de kyste pancréatique.) Le Moniet.
47 Operative Treatment of Adhesive Pericarditis. (Le traitement chirurgical de la médiastino-péricardite adhésive.) A. Rives.
48 Appendicitic Inflammation of Psoas Iliacus. (L'iliopsoite appendiculaire.) P. Mauclaire and Amaudrut.

Archives Générales de Médecine, Paris

January, XCI, No. 1, pp. 1-96

49 Pleurisy Without Effusion in the Tuberculous. (Interlobites sèches et pleurites en bouton de chemise chez les phtisiques.) C. Sabourin.
50 *The Chest Measure and Tuberculosis. (Tour de poitrine et poitrinaires.) H. Mareou.
51 *Infection of the Rhinopharynx. (Les infections rhinopharyngiennes.) P. Gallois.

50. **The Chest Measure and Predisposition to Tuberculosis.**—Mareou has been examining the records of a large Russian life insurance society for the last twenty-five years to ascertain the later history of policy-holders with the so-called phthisical chest, and has found that they have not developed tuberculosis since their acceptance by the society any more than persons with broad chests; rather the reverse. He insists that the "phthisical chest" is the result of and does not precede the tuberculosis. The course of the disease modifies the shape of the chest so that the chest measure becomes reduced; what has been accepted hitherto as having of course existed before the tuberculosis, should be regarded as a consequence of the disease. He says that in the three types of chest, the long and narrow, the broad and the deep, the length or depth compensates for the lacking breadth, so that a long narrow chest may have more actual lung area than the broad chest. He regards the thin "longiform" applicants as better risks than the robust "latiforms," on the basis of the society records and his own observation. When tuberculosis is once installed, the muscles become weak and flabby generally, but especially the chest muscles, from a reflex mechanism similar to the atrophy of muscles with joint lesions. The atrophy of the muscles favors kyphosis, and the ribs sink in as the muscles and diaphragm become more and more atrophied, while the tendency to sclerosis of the lungs and pleura aids in the sinking in of the chest walls. The bones lose their firmness on account of the general demineralization of the organism. The entire chest grows slowly but surely smaller and smaller, until the chest measure may be 25 per cent. less than what it was before. Mareou declares that any one is liable to contract tuberculosis if he is overworked, badly fed, has drinking habits, or even if he is merely unhappy—whether his chest is broad or narrow. And if he becomes tuberculous, the shape of his chest will have no influence on the progress of his disease; the narrow-chested tuberculous are just as likely to throw off the disease and recover as the broad-chested.

51. **Infections in the Rhinopharynx.**—Gallois thinks that not enough attention has been paid to the rhinopharynx as the primary seat of disease. He seems to regard it as the "source of all evil," citing authorities to show that a primary infectious process in the rhinopharynx has been demonstrated in numbers of cases of acute articular and chronic rheumatism, endocarditis, nephritis, chorea, phlebitis, slow fevers, pulmonary, glandular and bone tuberculosis, etc. He has been looking over old records and has been impressed with the casual mention of a sore throat as having preceded the typhoid, the nephritis or other infection, although the writer at the time never noticed the connection between them. The infectious process in the rhinopharynx may induce actual septicemia; a chronic attenuated form may entail chronic lymphatism. One of his patients had a hypertrophic rhinitis which required cauterization occasionally, and each time this was followed by an attack of rheumatism. Another patient developed deforming rheumatism following a sinusitis of the antrum of Highmore. It is more usual, however, for the chronic rheumatism to develop in consequence of bronchitis, the connection suggesting actual metastasis. Attacks of gout are also liable to follow a grippal rhinopharyngitis. For these and other reasons he advocates systematic sterilization of the rhinopharynx at the first signs of trouble or in prophylaxis. He orders a spray of 1 per cent. phenol in the acute cases, following this with a spray of two parts each of phenol, sodium salicylate and sodium biborate in 500 parts water, and a 2 per cent. spray of boric acid or sodium biborate in the chronic cases. The main point is to spray through the nose, not the mouth, and the spray should be used daily, cleansing out the nasal passages as regularly as the face is washed. When the rhinopharyngitis is not accompanied by much secretion, but dry crusts form in the nose, he applies a salve, generally a mixture of 5 parts boric acid and 0.1 part balsam of Peru in 20 parts vaselin. He does not approve of menthol for the purpose, finding it too irritating. He has the salve applied on retiring at night or if it is for a child, possibly after the child is asleep. After any operation on the nose or throat, these measures are especially important and should be kept up systematically. Neglect of systematic sterilization of the rhinopharynx in this or some similar way explains the recurrence of adenoids, he is convinced. It is difficult to bring families to realize the necessity for continuing daily treatment when the child is well, but it should be impressed on them that this alone will ward off complications which it may be very difficult to cure.

Archives de Médecine des Enfants, Paris

February, XV, No. 2, pp. 81-160

52 Diuretic Action of Digitalin and Theobromin in Children. (Etude de l'action diurétique de la digitaline et de la théobromine chez l'enfant.) P. Nobécourt and G. Paisseau.
53 Purulent Pericarditis in Children. (De la péricardite purulente chez les enfants; péricardite traumatique.) V. Imervol.
54 Infant Welfare Organizations at Nice. (Création d'une Goutte de Lait par la Société protectrice de l'enfance de Nice.) A. Balestre and L. d'Oelsnitz.
55 Annular Livedo in Children. (La livedo annularis chez l'enfant.) Jourdanet.
56 Delirium in Children. (Les délires chez les enfants.) J. Comby.

Bulletin de l'Académie de Médecine, Paris

January 30, LXXVI, No. 5, pp. 101-111

57 *Treatment of Cerebrospinal Meningitis. (Contribution à l'étude du traitement de la méningite cérébrospinale.) Cantas and A. Netter.

57. **Serotherapy of Cerebrospinal Meningitis.**—Cantas found it impossible to inject the serum in the lumbar region, there being too much resistance to the needle, and the child having an attack of convulsions during the attempt. He had seen a child die under similar conditions, and he was convinced that there was some obstruction shutting off the lumbar region from the rest of the subarachnoid cavity. Consequently the next day he punctured at a higher point, between the first and second dorsal vertebræ, according to Jonnesco's technic for general spinal anesthesia. Cantas found it difficult to bend the child's head forward far enough, but finally succeeded, and then took ten minutes to inject 20 c.c. of the antimeningococcus serum. There was no spasmodic reaction, and the child began to improve the evening of the same day. Netter thinks that the difficulty in lumbar injection in these cases is the stratification of the purulent fluid, and that a difference in the composition of the fluid above and below does not imply a lack of communication between the canal at these parts. He makes a point of puncturing at the lowest feasible spot, reserving the usual puncture point in case the first puncture fails. He advocates puncture of the lateral ventricle in case of need, rather than the high dorsal puncture. In some cases when lumbar puncture only brought 2, 5 or 20 c.c., he obtained 40 to 120 c.c. from the ventricle, the chemical and histologic findings in each puncture fluid differing to such an extent as to confirm the lack of communication between the cavities.

Grèce Médicale, Syra, Greece

December, XIII, Nos. 23-24, pp. 45-48

58 Diphtheria Antitoxin in Treatment of Trachoma. (Sur un nouvel procédé au traitement du trachome.) G. M. Pachopos.
59 Phototherapy of Lupus. (La guérison du lupus par la lumière.) P. N. Divaris.

Journal de Chirurgie, Paris

December, VII, No. 12, pp. 653-782

60 Superiority of Remote Results of Transvesical Prostatectomy. (Les résultats éloignés de laparotomie dans l'hypertrophie de la prostate.) R. Proust.

Lyon Chirurgical, Lyons

February, VII, No. 2, pp. 121-240

61 Osteosarcoma of the Long Bones. (Deux cas de résection pour ostéosarcome présumé malin des os longs.) C. Guinard.
62 *Bladder Fistula from Impalement. (Empalement. - Fistule recto-urétrovésicale consécutive.—Guérison.) F. Gentil.

63 Primary Sporotrichosis of the Tibia with Necropsy. (A propos d'un cas de sporotrichose osseuse primitive suivi d'autopsie.) C. Lesieur and J. Marchand.
64 Catheterization of the Ureter in Girl of 7. (Cas de cathétérisme urétéral chez une fillette de 7 ans.) V. Rochet and J. Reynard.

62. **Impalement Accident.**—Gentil reports the case of a young man who fell from a revolving swing at an amusement park and was impaled on one of the pickets of the fence surrounding the concession. He was left with a chronic fistula into the urethra, bladder and rectum, but was finally cured by the end of the third year, after five operations.

Lyon Médical, Lyons

January 28, XLIV, No. 4, pp. 161-216

65 Negative Influence on Production of Milk of Subcutaneous Injections of Milk, According to Nolf. (Recherches sur l'influence dite galactogène des injections sous-cutanées de lait.) P. Chatin and R. Rendu.

Presse Médicale, Paris

January 31, XX, No. 9, pp. 93-100

66 Sporotrichosis of the Eye. (Sporotrichose oculaire.) F. de Lapersonne.
67 Research on Nephritis. (A propos d'un article sur les albuminuries leucopathiques.) J. Castaigne.
68 Hemoglobinuria. J. Camus and P. Pagniez.

February 3, No. 10, pp. 101-112

69 Direct Inspection of Interior of Stomach. (De l'examen gastroscopique; sa technique et sa valeur clinique.) E. J. Moure.
70 Angioneurotic Edema During Gonorrhea. (Oedème aigu angioneurotique au cours du rhumatisme blennorrhagique.) L. Gallavardin and Delachanal.

Revue Médicale de la Suisse Romande, Geneva

January, XXXII, No. 1, pp. 1-108

71 *Remote Results of Tuberculin in Treatment of Tuberculosis. Jaquerod.
72 Salvarsan in Syphilis; 282 Cases. (De la syphilis.) Dind.
73 Professional Secrecy (Le secret médical.) J. Morax. (Le secret médical en obstétrique et gynécologic.) M. Muret.

71. **Tuberculin Treatment of Tuberculosis.**—Jaquerod gave forty-six patients systematic courses of Koch's old tuberculin and states that the results were excellent in the chronic torpid and afebrile cases, the tuberculous affection in the second stage. Ten of the patients have been completely cured for more than seven years and ten for more than six. In six cases the tuberculin had no effect; in ten it seemed to do harm, but twenty-four of the patients entirely recovered and nine were essentially improved. His experience has taught him that any tendency to fever should be regarded as a strict contra-indication, and he thinks that the tuberculin is not needed and is superfluous in the first stage of tuberculosis.

Revue Mens. de Gyn. d'Obstétrique et de Pédiatrie, Paris

January, VII, No. 1, pp. 1-80

74 Effect on Uterus of Allowing Parturients to Get Up Early. (De la mobilisation précoce des accouchées et, en particulier, de son influence sur l'involution et sur la statique de l'utérus.) L. Pierra.
75 Disturbances and Findings with Tracheobronchial Lymphadenitis in Young Children. (Caractères des troubles respiratoires et des images radioscopiques dans l'adénopathie trachéo-bronchique de la première enfance.) L. d'Oelsnitz.
76 *Fatal Mercurial Poisoning from Intra-Uterine Injection. (Mort par intoxication mercurielle après un avortement criminel.) G. Baux and E. Roques.

76. **Fatal Mercurial Poisoning from Intra-Uterine Injection.**—In the case reported by Baux and Roques the woman had made the intra-uterine injection herself for criminal abortion, using a solution of mercuric chlorid of unknown strength, at about the third month of pregnancy. She died in ten days after a syndrome of mercurial poisoning, stomatitis, enteritis and anuria, and persisting singultus and tremor. The midwife called to the case the next day, the abortion having been induced, combated the hemorrhage by vaginal injection of a hot 1 per 4,000 mercurial solution, which probably added still further to the intoxication.

Semaine Médicale, Paris

February 7, XXXII, No. 6, pp. 61-72

77 Text of the New International Sanitary Convention. (Texte de la nouvelle Convention sanitaire internationale portant règlement pour prévenir l'invasion et la propagation de la peste, du choléra et de la fièvre jaune.) Commenced in No. 4. Concluded in No. 7
78 The Speech Center. (Démonstration anatomique de l'indépendance de la troisième circonvolution frontale gauche des centres du langage articulé.) R. Sand.

Arbeiten a. d. interacad. Zentralinst. f. Hirnforschung, Vienna

XIX, No. 2, pp. 133-326

79 *Congenital Myatonia. (Zur Klinik und Pathologie der Myatonia congenita—Oppenheim.) O. Marburg.
80 Influence of Resection of Various Parts of the Brain on Vestibular Eye Reflexes. (Einfluss der Ausschaltung verschiedener Hirnabschnitte auf die vestibulären Augenreflexe.) J. Bauer and R. Leidler.
81 Swelling of Nerve (Brain) Tissue Soaked in Acid or Alkaline Fluids. (Studien über Quellung von Nervengewebe. II.) J. Bauer and T. Ames.
82 Comparative Anatomy of Lissauer's Tract. (Vergleichend-anatomische Studie über die Lissauersche Randzone des Hinterhorns.) O. Leszlenyi.
83 The Spinal Ganglia in Children. (Die Spinalganglien im Kindesalter.) J. Zappert.

79. **Congenital Myatonia.**—Marburg reports two cases with necropsy findings in one and compares them with similar cases on record. Everything seems to suggest, he says, that the condition is the result of an acute poliomyelitis affecting the fetus and leaving its unmistakable traces. Among the arguments presented to sustain this view, besides the histologic findings, is the fact that poliomyelitis was epidemic in Vienna at the time one of the children was born; also the tendency to progressive improvement which distinguishes this form of myatonia; also that it occurs singly, not in a familial type; also that the hypotonia is generalized while the atrophy is not prominent and the tendon reflexes are lacking, and the muscles do not give the typical reaction of degeneration; the galvanic response may be normal.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXII, No. 1, pp. 1-96. Last indexed February 17, p. 521

84 Spastic Conditions and Degeneration of the Neck and Chest Muscles in Causation and Diagnosis of Intrathoracic Disease. (Muskelspasmus und -Degeneration. Ihre Bedeutung für die Diagnose intrathorazischer Entzündung und als Kausalfaktor bei der Produktion von Veränderungen des knöchernen Thorax und leichte Tastpalpation.) F. M. Pottenger (Monrovia, Cal.).
85 Tuberculin Treatment of Latent Tuberculosis and Incipient Phthisis in Children. (Das Endotin—Tuberculin. purum—bei latenter Tuberkulose und Phthisis incipiens im Alter von 10 Jahren an.) D. Kurdjumoff.

Berliner klinische Wochenschrift

January 29, XLIX, No. 5, pp. 193-240

86 *The Poisonings at the Berlin Municipal Shelter. (Ueber die in der Weihnachtszeit 1911 in Berlin vorgekommenen Massenvergiftungen.) E. Stadelmann and A. Magnus-Levy.
87 Diabetes Possibly Result of Injury of Pancreas from Acute Infections. (Weitere Beiträge zur Aetiologie des Diabetes.) F. Hirschfeld.
88 Reaction of Degeneration in Sensory Nerves. (Ueber die "Entartungsreaktion" der sensiblen Nerven.) A. Adamkiewicz.
89 *Unfavorable Experiences with Spengler's I. K. Method in Ten Cases of Tuberculosis. (Erfahrungen mit C. Spengler's I. K.) O. Baer.
90 *Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis. (Behandlung der Lungentuberkulose mit künstlichem Pneumothorax.) J. W. Samson. First part in No. 51, XLVIII.

86. **Methyl-Alcohol Poisoning.**—In this official report of the poisonings at the Berlin municipal shelter, Stadelmann emphasizes the strange latency of the syndrome in some cases, from one to three days having elapsed in some instances before any disturbance was felt, and then they might prove rapidly fatal. The eye findings were the most characteristic feature, the pupil being widely dilated and not reacting, accommodation impaired, and the patients complaining of scotoma and dimness or total loss of vision. When these eye findings were associated with extreme dyspnea, the patients generally rapidly succumbed. In the severer cases there were also intense cyanosis, convulsions, pain in stomach and abdomen and great restlessness. The patients did not smell of alcohol as a rule, and rebelled against taking any alcoholic stimulants. Motor disturbances were not noticed in any case; the temperature was always subnormal. Some of the patients developed extreme agitation or delirium twenty-four or thirty-six hours after the syndrome had apparently subsided. In treatment morphin seemed to give most relief, both subjectively and objectively, but the pupils did not contract under its influence; this occurred promptly, however, when eserin was instilled. Calomel given as a purge generally failed to act. See Berlin Letter, p. 358.

89. **Unfavorable Experiences with Spengler's I. K.**—Baer reports ten cases of pulmonary tuberculosis in which he applied the Spengler preparation, but with decidedly unfavorable results. The patients lost appetite and weight, the cough and expectoration increased and tubercle bacilli were found in the sputum after long absence under the old and tried measures. The urine contained albumin and formed elements, and the patients complained of lassitude, headache and gastric pain, vomiting and reactions in the skin. In one case a long latent tendency to epilepsy seemed to be revived and the patient died in an epileptic dazed condition.

90. **Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis.**—Samson gives the details of six cases. His conclusions from this experience were summarized in THE JOURNAL, January 20, page 231.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

January 13, XV, No. 1, pp. 1-40

91 *Present Status of Operative Treatment of General Suppurative Peritonitis. (Der gegenwärtige Stand der chirurgischen Behandlung der diffusen eitrigen Peritonitis.) D. G. Zesas.

91. **General Suppurative Peritonitis.**—Zesas bases his review on 292 articles from the literature, but remarks that he had 2,000 other articles on general peritonitis at his disposal. He sifts the various views and methods of operative treatment, showing how the Americans have led the way to better results, the principle for treatment now followed by the most successful surgeons being Dieulafoy's: "We never repent of having interfered too soon, but we often have to regret not having interfered sooner," and Murphy's, "Get in quickly, get out quicker." Piequé's remark that "surgery is for the sick, not for the dying," is losing its force, as operative measures now snatch patients from the very jaws of death, although, as Krogius declares, the position of the surgeon called in too late is "anything but enviable." Zesas cites Clairmont's experimental research, which confirms the danger of absorption in the diaphragm region, and hence the advantages of postural drainage, keeping the patient partly sitting up, both during and after the operation. Zesas also cites authorities to confirm the advantages of iodin disinfection of the skin, as it avoids the scrubbing and manipulations inevitable with other methods of preparing the field of operation, liable to spread the infection, besides other disadvantages. Most of the German surgeons are still adherents of the rinsing technic, but the consensus of opinion now is preponderantly in favor of the Murphy method of refraining from interfering with the natural defensive forces of the peritoneum. Among those who have become converted to this view Zesas mentions Gerster, Eisendrath, Conte, Syme, Ross, Davis, Cuff, Harris and others. Injection of camphorated oil to prevent absorption has been done in sixty-three cases, according to Lenormand's compilation, and forty-three of the patients recovered; the theory on which this is based fails to take into account that in advanced peritonitis the absorbing power is much reduced. Glass drains expose to danger of pressure necrosis, and simple smooth rubber drains are generally considered the best. Proctoclysis is proving the best means to combat thirst and promote diuresis and effusion into the peritoneum, thus flushing the peritoneum from within outward. Application of superheated air seemed to hasten the fatal termination in Danielsen's animal experimentation; the hyperemia induced probably hastens absorption. On the other hand, Iselin has applied superheated air systematically for two years and a half and regards it as very valuable. Zesas suggests that the difference between the results in animals and in the clinic may be due to the fact that Iselin thoroughly rinsed out the abdominal cavity before applying the heat. Zesas cites Henle and others in regard to the use of peristaltic hormone in postoperative intestinal paresis, saying about the same as Aaron in his recent article in THE JOURNAL, Feb. 10, 1912, page 407. Zesas remarks that the general trend of opinion seems to be that puncture of the distended intestine or enterostomy is not advisable: "It is better to wait for the subsidence of the peritonitic infection without puncture or the like; after its subsidence the peristalsis starts up at once." [Zesas does not refer to Kuhn's recent work with injection of a sugar solution, mentioned in these columns February 24, for which Kuhn pleads as the biologic method of treating peritonitis, merely reenforcing Nature, not opposing or acting counter to her efforts.]

Correspondenz-Blatt für Schweizer Aerzte, Basel

February 1, XLII, No. 4, pp. 113-144

92 *Whooping-Cough. (Zur Aetiologie und Pathologie des Keuchhustens.) E. Döbeli.

92. **Whooping-Cough.**—Döbeli presents arguments to sustain his idea that whooping-cough is an ordinary catarrh of the upper air passages plus an imitated nervous spasmodic coughing. No child will develop actual whooping-cough, he says unless it has heard and possibly seen another child in an attack. The psychic factor is the principal one, and by training a child to resist and conquer a tendency to cough, it might be possible to develop a psychic immunity to pertussis so that the child would escape the disease even when others in its environment are affected.

Deutsche medizinische Wochenschrift, Berlin

February 1, XXXVIII, No. 5, pp. 201-248

93 *To Prevent Anaphylaxis in Serotherapy. (Methode, grössere Mengen artfremden Serums bei überempfindlichen Individuen zu injizieren.) E. Friedberger and S. Mita.
94 Antistreptococcus Serum by the Mouth and Desiccated. (Anwendung von Antistreptokokkenserum—Höchst—per os und lokal in Pulverform.) G. Spiess.
95 *Electrocardiography in General Practice. (Der Elektrokardiograph als Hilfsmittel für Diagnostik des praktischen Arztes.) G. F. Nicolai. Commenced in No. 4.
96 *Bloodless Enlargement of Nasal Passages. (Die unblutige Erweiterung der Nasenhöhlen.) G. Killian.
97 *Ischemic Paresis. (Zur ischämischen Lähmung bei Verschluss der Extremitätenarterien.) T. Aoyagi.
98 *Teleangiectatic Granuloma. (Das Granuloma teleangiectodes europeum, eine Protozoenkrankheit.) H. Schridde.
99 *Diagnosis of Chronic Gonorrhea in Women. (Zur Diagnose der chronischen Gonorrhoe des äusseren Urogenitale beim Weibe.) Dufaux.
100 Subjective Prophylaxis of Seasickness. (Technik der Seekrankheitstherapie.) E. Peters.
101 Venereal Disease in Brunswick. (Die Geschlechtskrankheiten im Herzogtum Braunschweig.) A. Grünspan.
102 System for Sociology. (Eine systematische Soziologie.) K. Müller-Lyer.

93. **To Avoid Anaphylaxis in Serotherapy.**—Friedberger and Mita found it possible to avoid all symptoms of anaphylaxis in experimental serotherapy with guinea-pigs by injecting the serum extremely slowly. They have devised a combination of three jars, containing paraffin and mercury, which permits very slow, drop intravenous injection. They found that the animals thus treated were able to tolerate far beyond the ordinary lethal dose.

95. **Electrocardiography.**—Nicolai is assistant at the second medical clinic at the Berlin Charité, and he has devised a comparatively simple apparatus for taking electrocardiograms. He expatiates here on the numerous new and important points which have been learned by this means, and commends it to the general practitioner and gives a number of tracings to show the standard types.

96. **Bloodless Enlarging of the Nasal Passages.**—Killian has been much pleased with the results of his method of infraction of the inferior turbinated bone. Until recently he always combined it with resection of the mucosa over the bone. The effect of this combined method has been most excellent, but in some cases it is unwise to do any cutting operation, and he has found that the infraction alone will answer the purpose almost as well, while the patients can be up and about as usual. By this means persons with heart or kidney disease, hemophilia and the elderly can be freed from their disturbances or materially relieved in the simplest and quickest manner. Under cocain-epinephrin local anesthesia, he forces the inferior turbinate outward, applying at various points the Luc forceps or a little spatula, of which he gives an illustration. A slight cracking noise is heard, and if the mucosa is crushed too hard there may be a few droplets of blood. A deviated nasal septum can be thus straightened, if there are no complications, and the infraction of the septum can be combined with infraction of both inferior turbinates. It is possible in this way at one sitting to open the passages and allow ample intake of air.

97. **Ischemic Paralysis from Obstruction of Arteries in the Limbs.**—Aoyagi reports a case of mitral stenosis with embol-

ism in the left femoral artery, and compares it with similar cases on record and others of postoperative ischemic paralysis. In the former the nerves seemed to be most injured, in the latter the muscles; and contracture develops early.

98. **Teleangiectatic Granuloma.**—Schridde reports a case with microscopic examination of the amputated finger, the findings sustaining the assumption that the lesion is the work of protozoa and is analogous to Oriental sore and Peruvian verruga.

99. **Diagnosis of Chronic Gonorrhea in Women.**—Dufaux refers especially to a gonorrheal process lurking in the urethra and external genitals, especially in the endo-urethral glands and the numerous glands opening into the vulva, when the affection has been apparently cured. In these minute glands and crypts the gonococci may still lurk until aroused by some special local hyperemia, menstruation or pregnancy. It is necessary to squeeze out the contents of the glands, and he has devised a little instrument for the purpose; it is shaped like a finger and answers the same purpose in forcing the contents out of the glands, while the back is hollowed out to catch the droplet of secretion expressed.

Medizinische Klinik, Berlin

January 28, VIII, No. 4, pp. 133-176 and Supplement

103 Lumbar Puncture in Diagnosis of Disease of the Brain and Spinal Cord. (Bedeutung der Lumbalpunktion für die Diagnose von Gehirn- und Rückenmarkskrankheiten.) Stertz.

104 The Moral and Mental Changes in the Tuberculous. (Der Seelenzustand der Tuberkulösen.) W. Weygandt. Commenced in No. 3.

105 Changes in the Senile Blood. (Typische, wenig gekannte Blutveränderungen im Senium.) W. Hammer, J. P. Kirch and H. Schlesinger.

106 Non-Tuberculous Shriveling of the Apex and Apical Tuberculous Processes. (Kollapsinduration und Tuberkulose der Lungenspitzen.) G. Maier.

107 Radium Emanations in Therapeutics. (Zur Frage der Anwendung grosser oder kleiner Dosen von Radiumemanation.) W. Benedikt.

108 *Treatment of Pneumonia. (Zur Frage der Pneumoniebehandlung.) W. Löwenstein.

109 Studies in Eugenics. (Moderne Gesichtspunkte in der Abstammungslehre.) V. Franz.

110 Pathology and Treatment of Diseases of the Larynx. (Erkrankungen des Kehlkopfs.) O. Frese.

February 4, No. 5, pp. 177-218

111 Interrelation Between Glands with Internal Secretion. (Wechselbeziehungen der Drüsen mit innerer Sekretion.) P. Fleischmann.

112 *Suture of the Vessels for Aneurysm. (Zur Behandlung der Aneurysmen mittels Gefässnaht—Ideale Aneurysmaoperation.) Wiewiorowski.

113 Salvarsan in Syphilis. (Ueber Kupierung initialer Syphilis mit Salvarsan.) J. Fabry and E. Jerzycki.

114 Respiratory Exercises in Treatment of Disease of Nose and Adjoining Organs. (Atemübungen als therapeutisches Hilfsmittel bei Erkrankungen der Nase und Nachbarorgane.) H. Reimers.

115 Wealth of Waters in Micro-Organisms. (Ueber den Reichtum der Gewässer an Kleinlebewesen.) R. Kolkwitz.

116 Vegetarian Diet. (Ueber die körperliche Anpassung des Menschen an die Ausnutzung pflanzlicher Nahrung.) H. Friedenthal.

108. **Large Doses of Digitalis in Treatment of Pneumonia.**—The text-books of late years have generally mentioned without comment the method of treating pneumonia with colossal doses of digitalis, introduced by Petrescu. Löwenstein has been applying the method systematically—although never venturing to use such high doses as Petrescu advocates—and reports eighty-two patients thus treated and compared with 110 under ordinary treatment. The mortality in the digitalis group was 20.7 per cent., while it was only 14.5 per cent. in the others. The patients were many of them elderly, and a number had other complications, explaining the high mortality, but the general impression is decidedly unfavorable to the Petrescu method.

112. **Ideal Operation for Aneurysm.**—That technic may be called ideal which restores the circulation through the vessel, and Küttner has recently performed a successful operation of the kind which is here reported and compared with the seventeen similar ones on record. Küttner's case is a further confirmation of the fine results obtainable by direct suture of the vessel even under apparently the most adverse conditions. He applied compression with a screw tourniquet at first, to reduce the aneurysm and aid in dilating the collaterals, and ascribes the successful outcome in large measure to this. The compression has to be applied very cautiously; Delbet has reported five ruptures and seventy-six cures in 111 cases of aneurysm in which compression was applied. The aneurysm in Küttner's case developed from a gunshot wound.

Münchener medizinische Wochenschrift

January 30, LIX, No. 5, pp. 233-288

117 *Bloodless Cure of Hemorrhoids. (Ueber die extraanale—unblutige—Behandlung der Hämorrhoiden.) I. Boas.

118 Mouse Cancers. (Bedeutung der Mäusekarzinome.) F. Henke.

119 Dog Sarcoma. (Zur Biologie des Rundzellensarkoms des Hundes.) E. v. Dungern.

120 Nitrogen Colloid of the Urine. (Ueber das stickstoffhaltige Kolloid des Harnes.) H. Pribram and J. Löwy.

121 Large Angiomas; Two Cases. (Zur Pathologie der Angiome.) G. E. Konjetzny.

122 Clinical Symptoms of Cerebral Cirsoid Angioma. (Die klinischen Symptome des zerebralen Rankenangioms.) R. Isenschmid.

123 Superior Strength of Wilm's Suture for Tendons. (Ueber Sehnennaht.) Kimura.

124 Action of Methyl Alcohol. (Wirkung des Methylalkohols.) R. Foerster.

125 *Sources of Error in Testing for Sugar. (Eine Fehlerquelle bei der Trommerschen Zuckerprobe.) N. Schulz.

126 *Benzin Poisoning of Infant. (Eine akute Benzinvergiftung beim Säugling.) A. Friediger.

127 *Ascending Peritonitis in Little Girls. (Ueber Peritonitis purulenta ascendens.) G. Mertens.

128 Superheated Air in Gynecology. (Heissluftbehandlung in der Gynäkologie.) H. Sieber.

129 Underfed School Children. (Hungernde Kinder?) M. Pfaundler.

130 The Doctor's Waiting Room. (Das Wartezimmer des Arztes.) H. Krauss.

117. **Extra-Anal, Non-Operative Treatment of Hemorrhoids.**—Boas has been applying in thirty cases the method of treatment he advocated in 1909, summarized in The Journal May 22, 1909, p. 1725. The principle is the reverse of the usual method of returning to the bowel the varicose nodules; he thinks we should imitate Nature, which aims to let the nodules stay outside and shrivel up. He accomplishes this by applying the suction bell, drawing the hemorrhoids out and causing the production around them of a ring of edema. The edema cushion shuts off the circulation and the nodules gradually shrivel away. In cases in which the edema does not form, it is hopeless to apply this method. He applies the suction for from thirty to sixty minutes, to make the edema permanent for a while. The patients have to stay in bed for one or two weeks; defecation is not interfered with. In every case the hemorrhages, prolapse and connected disturbances were cured at once, and the benefit was permanent in as large a proportion of cases as with the usual operative measures. There is nothing to prevent applying the method again in case of recurrence. He reiterates that it is unconditionally the best among all bloodless methods. It is entirely free from dangers and complications, and it is applicable in cases in which operative treatment is out of the question. Another advantage is that the method can be applied in the home. The painfulness of the method varies; it was rarely necessary in his cases to resort to an injection of morphin; in a few cases a sedative suppository relieved the patients. All pains subsided with the edema; he does not combat the edema at first, as otherwise the nodules might slip back inside the anus. By the third to the fifth day, the hemorrhoids had shrunk to half their former size or less.

125. **Source of Error in Trommer's Test for Sugar.**—Schulz warns that the reagents give a misleading reaction if they are used in reverse order; also if the boiling is kept up too long.

126. **Benzin Poisoning.**—Friediger was removing the plaster from extensive patches of rebellious eczema on an infant a month old, and loosened them with benzin, after which fresh plaster dressings were applied. The child developed symptoms of benzin poisoning, possibly from inhalation of the fumes and absorption from the traces left under the fresh plaster. The manifestations were mostly in the nervous system, and when seen twenty-four hours later the child seemed moribund, but rapidly recovered after being placed in a bran bath, gradually cooled.

127. **Ascending Purulent Peritonitis.**—Mertens states that all died of the twelve little girls with peritonitis from acute salpingitis whose cases were reported by Riedel. Mertens' own experience has been more favorable; he reports five cases in girls from 2 to 11 years old, and three of the children

recovered. The peritonitis had been preceded by a suppurative process in the genitals. Three of the children showed traces on the genitals of scratching, and it was known that the children had complained of itching; for this the oxyuris was probably responsible. The scratches became inflamed and the ascending peritonitis followed in time. He advises opening the abdominal cavity on both sides and tamponing down into the pouch of Douglas, treating at the same time the suppuration in the external genitals and eradicating the helminths.

Virchows Archiv, Berlin

January, CCVII, No. 1, pp. 1-160

131 Normal Involution of the Thymus. C. Barbano.
132 Pathologic Involution of the Thymus. (Thymusstudien. I. Auftreten von Fett in der Thymus.) K. Hart.
133 Unusual Concrements in Pyonephrosis. (Seltene Komplikation bei Pyonephrose.) H. Merkel.
134 Origin of Congenital Cystic Kidney. (Einige Bemerkungen über die Entstehung der angeborenen Zystenniere.) J. Hornowski.
135 *Disease of the Adrenals and Appendix in Connection with Fecal Obstruction. (Ueber den Zusammenhang von Nebennieren- und Appendixerkrankungen mit schweren Kotstauungen.) A. Brosch.
136 Atonic Dilatation of the Cecum. (Zur Kenntnis der anatomischen Formen der Typhlatonie.) A. Brosch.
137 Defective Bone Growth. (Zur Lehre der Osteogenesis imperfecta.) F. Fuchs.
138 Acromegaly. (Kurze Bemerkung zur Akromegaliefrage.) K. Petren.
139 Actinomycotic Peritonitis. (Zur Aktinomykose des Bauchfells.) K. Tiling.
140 Metastasis from Teratoma in Testicle. (Ueber ein metastasierendes Hodenteratom.) T. Mori.
141 *Diphtheritic Changes in the Heart Muscle. (Ueber die Veränderungen der Herzmuskulatur, vor allem des Atrioventrikularbündels bei Diphtherie; zugleich ein Beitrag zur Frage der Selbständigkeit des Bündels.) T. Tanaka.
142 Hemophilia in Cow. (Fall von Hämophilie beim Rinde.) A. Guillebeau.
143 Virulence and Cultivation of Avian Tubercle Bacilli. (Einiges über Wachstum und Virulenz des Erregers der Hühnertuberkulose.) W. Carl.
144 Spirochetes in Upper Air Passages and Gastro-Intestinal Tract. (Ueber Spirochäten und Spirochatösen der oberen Luft- und Verdauungswege.) P. H. Gerber.

135. **Disease of the Adrenals and Appendix in Connection with Fecal Stasis.**—Brosch after calling attention to the various mechanical ways in which the bowels can be obstructed by fecal stasis, says that the mechanical factors are generally secondary. He emphasizes the fact that a lesion, like a retroperitoneal tumor, can produce maximum contractions of the bowels by disturbing the innervation of the celiac ganglion. Animal experimentation has shown a center in the celiac plexus for inhibition of peristalsis. With atrophy of the celiac plexus there is liable to be diffuse dilatation of the stomach and intestine. With constriction of a spastic nature, the question arises what causes the preceding irritation of the celiac ganglion, and this leads to a consideration of the adrenal gland, on account of its nearness to the splanchnic nerve and because affections of this gland may, through the celiac ganglion, cause a spastic stenosis of the intestine. A case of this with softening of the medulla of the adrenal points to this. He also believes that the loss of the appendix with its tenacious secretion favors the drying out of the fecal matters and promotes their stagnation and consequent obstruction of the bowel. From this point of view children bear the loss of the appendix better than adults.

141. **Changes in the Heart Muscle in Diphtheria.**—Tanaka in consideration of the physiology and pathology of the bundle of His and the changes in Adams-Stokes disease, studied serial sections of the heart in fifteen children dying during or soon after an attack of diphtheria of the throat. He found that fatty degeneration was the most important change in the heart muscle, with hyaline degeneration of muscle fibers. Fragmentation was rare; intestinal myocarditis was found in six cases. Infiltration with leukocytes was present only as a symptom of the infection. In some cases the bundle of His showed fatty or hyaline degeneration, while the myocardium was nearly free from it, and vice versa, demonstrating a certain independence pathologically of the atrioventricular bundle. The sudden paralysis of the heart in diphtheria may be due to pathologic changes in the myocardium without there being any essential lesions in the bundle. In other cases the disturbance of the heart action and sudden paralysis of the heart may be explained by the changes found in the bundle of His.

Wiener klinische Wochenschrift

February 1, XXV, No. 5, pp. 191-226

145 Physiologic and Therapeutic Study of the Action of Light on the Skin. (Lichtwirkung auf die Haut.) L. Freund.
146 Microscopic Research on Bullous Dermatoses. III. (Ueber parasitäre Befunde in den Hautblasen und in der Milz bei Pemphigus vulgaris.) B. Lipschütz.
147 The Internal Secretion of the Mammary Glands. (Versuche über innere Sekretion der Brustdrüse.) A. L. Scherbak.
148 *Operative Treatment of Lung Disease. (Ueber operative Behandlung von Lungenkrankheiten.) E. Rochelt.
149 Favorable Action of Solution of Trypsin on Suppurative Processes: Fermentotherapy. (Wirkung von tryptischen Fermentlösungen auf örtliche chirurgische Tuberkulose und über die Antifermentbehandlung eitriger Prozesse.) M. Saidmann.
150 Reduction of Tuberculosis Mortality in District Surrounding Tuberculosis Sanatorium. (Bilden Heilstätten für Lungenkranke eine Gefahr für ihre Umgebung?) J. Sorgo.
151 Morbidity in the Printing Trades. (Die Morbidität im Wiener Buchdruckergewerbe.) S. Rosenfeld. Commenced in No. 4.

148. **Operative Treatment of Lung Disease.**—Rochelt remarks that when he published twenty-five years ago his first four cases of operative treatment of pulmonary lesions he could find on record only eight cases of surgical treatment of an abscess in the lung, five of gangrene and thirteen of bronchiectasia. Since then, however, numerous series have been published; Tuffier alone has reported sixty-six and Lenhartz 118 operations of the kind. Rochelt mentions a number of technical points learned from his and others' experience, and says of operative measures or artificial pneumothorax or other means of immobilizing the lung to cure cavities, that one of the main advantages is the protection of others against infection from the bacilli which the cavity bearers are generally scattering broadcast. If every tuberculous cavity can be systematically cured, without delay, a great advance in prophylaxis cannot fail to result, which is another powerful argument in favor of operative treatment of lung disease. He advocated years ago a valve drain which has proved extremely useful. A rubber film valve is fastened in a silver tube 1 cm. long. The silver tube is slipped into the mouth of an ordinary rubber drain tube and tied in place. The valve is pushed open by accumulating fluid behind or by air as the patient coughs, but the valve closes at once when the pressure is removed and thus prevents aspiration of air from without. The valve drain can be introduced through a trocar cannula inserted at the lowest point of the pleural cavity; this permits the incision above to be completely sutured, while effectually draining without danger of aspiration of air.

Zentralblatt für Chirurgie, Leipsic

February 3, XXXIX, No. 5, pp. 137-168

152 *Prevention of Atrophy of the Muscles After Injury of Joints. (Zur Verhütung des Muskelschwundes nach Gelenkverletzungen.) C. Hübscher.
153 *Experimental Exophthalmic Goiter. (Zur experimentellen Erzeugung des Morbus Basedowii.) E. Bircher.

152. **Prevention of Atrophy of the Muscles After Injury of the Joints.**—Hübscher says that any one can, with a little practice, contract certain muscles without moving the joint. This can be done most easily with the biceps in the arm and the quadriceps in the thigh, bringing them from the state of rest into active contraction. The muscle can thus be exercised systematically every hour even when the injured limb is wrapped up in dressings, and by this simple means the muscle is kept in a healthy condition. The advantages of the measure were abundantly demonstrated in the case of a young cavalry man whose spur caught and he hung suspended by it from a gate. The knee was not fractured, but laceration of the ligaments forbade active exercise. The young man was ordered to contract the musculature of the thigh fifty times at each stroke of the hour. He was intelligent and used to military discipline, and the results confirmed the efficacy of the measure in preventing all tendency to atrophy not only of the muscles, but of the entire neuromuscular element, the terminal neuron and the trophic tracts.

153. **Experimental Exophthalmic Goiter.**—Bircher gives an illustration of one of the five dogs in which he has induced typical and pronounced exophthalmic goiter by implanting in the abdomen pieces of thymus gland removed from patients; none of the patients had exophthalmic goiter. The exophthalmos was especially pronounced in the dogs.

Zentralblatt für Gynäkologie, Leipsic

February 3, XXXVI, No. 5, pp. 129-160

154 Epithelium in the Uterine Cervix. (Zur Frage des Epithels im Isthmus uteri.) E. Moritz.
155 Operative Treatment of Uterine Prolapse. (Zur operativen Behandling der Prolapse des Uterus.) M. v. Holst.
156 *Early Symptom of Extra-Uterine Pregnancy. (Frühsymptom der Extra-uterin-Gravidität.) A. Solowij.

156. **Early Symptom of Extra-Uterine Pregnancy.**—Solowij found the pouch of Douglas apparently normal in examining a woman who complained of slight abdominal disturbance during the last few weeks, but was otherwise healthy. She had borne two children and menstruation had occurred last six weeks before. The uterus was slightly enlarged and to the left a small, longish, doughy and somewhat painful resistance could be felt; the pouch of Douglas was apparently normal. Three days later the findings were the same except that a doughy resistance could also be palpated in the pouch of Douglas. This sustained the presumption of tubal pregnancy, and it was confirmed by the operation, as also in a second, similar case, an irregular resistance developing in the pouch of Douglas which at first had been apparently normal. The condition of the pouch of Douglas is thus an index of an extra-uterine pregnancy.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 30, XXXII, No. 13, pp. 129-136

157 *Bilateral Spastic Paralysis in Three Brothers. (Interessante caso familiare di malattia di Little.) C. Lupi.

February 1, No. 14, pp. 137-144

158 Rupture of the Liver Tardily Simulating Liver Colic. (Rottura del fegato simulante la colica epatica.) G. Trotta.

157. **Bilateral Spastic Paralysis.**—In the family described by Lupi, three of the children had Little's disease associated with mental disease. The three brothers with the congenital spastic rigidity of the limbs are now in the thirties. The father had been addicted to liquor and died of apoplexy at 66. The mother is healthy, as also are the other four children.

Policlinico, Rome

January 28, XIX, No. 5, pp. 149-184

159 Postoperative Paresis of the Intestines. (Sull'ileo post-operatorio.) L. Vaccari.

February 4, No. 6, pp. 185-224

160 *Thermoprecipitin Technic in Serodiagnosis. (La reazione della termoprecipitina come metodo generale di sierodiagnosi. Applicazione al mal rossino.) A. Ascoli.

160. **Thermoprecipitin Technic for Serodiagnosis.**—Ascoli calls attention to the importance in diagnosis of the resistance to heat of certain precipitins, especially those of anthrax in cattle and swine plague. The reaction is obtained in a few minutes by simply boiling a little of the material in three or five times the amount of physiologic salt solution and pouring the cooled filtrate on the precipitating serum. The ring and zone at the point of junction are characteristic for these two diseases in domestic animals, while with extracts from pellagra, septicemia and lymphadenitis the reaction is constantly negative.

Riforma Medica, Naples

January 6, XXVIII, No. 1, pp. 1-28

161 Tuberculosis of Stomach and Intestines. (Tubercolosi gastro-intestinale.) A. d'Antona.
162 Fibril Substance in Tumors. (Studio sulle gitterfasern dei tumori.) C. Martelli.
163 Blood Cyst in Axilla Excised as Supposed Recurrence of Mammary Cancer. (Cisti ematica del cavo ascellare simulante recidiva gangliare di un carcinoma mammario.) C. Mantelli.

January 13, No. 2, pp. 29-56

164 Normal Intestinal Digestion in Woman After Gastrectomy. (La digestione intestinale in una donna operata di gastrectomia.) G. Adamo.
165 Diplococcus Responsible for Vegetating Pemphigus. (Sulla etiologia e patogenesi del pemfigo vegetante.) P. Longo and A. Speciale.

Revista de Medicina y Cirugia, Havana

February 10, XVI, No. 3, pp. 63-90

166 *Beriberi in Cuba. (Contribucion al estudio del beri-beri.) M. G. Lebredo.
167 Present Status of Knowledge in Regard to Physiology of Blood. (Fisiologia de la sangre.) R. P. Vento. Commenced in No 1.

166. **True and False Beriberi.**—Lebredo insists on the necessity for distinguishing true beriberi—which is observed in connection with inanition or deprivation of certain food elements—and a false beriberi which may present similar symptoms, especially the polyneuritis, but which differs essentially from the other. Beriberi has been epidemic at times in Cuba, he states, notably in times of famine and among the rural population collected in the cities during the war of independence. Cases of the false beriberi have also been encountered. He has recently had seven cases of acute beriberi among the inmates of the Santa Clara prison, all persons accustomed to a good and varied diet. Four of the patients died, the syndrome suggesting the cardiopulmonary type of beriberi, with precordial anguish and extreme dilatation of the heart; in one case 400 c.c. of effusion were found in the pericardium. He examined the rice used in the prison and was able to cultivate from the cooked rice a spore which occurred in large numbers and was resistant to heat, its vitality apparently unmodified by boiling for twenty minutes. In the boiled rice the spores grow into a shape like a cigar, the young spore in the tip taking the Gram stain, so the whole looks like a lighted cigar. Boiled rice seems its favorite culture medium, and the rice water proved fatal for rabbits when 10 c.c. was injected into the peritoneum, the animals succumbing in from two and a half to six hours, and with approximately the same cardiopulmonary symptoms. Rice from other lots did not produce any disturbance, although cooked and the fluid injected in the same way, even up to twice the amount. There did not seem to be any question of anaphylaxis. He gave the infected fluid to other animals by the mouth, but it produced no disturbance. Other animals with experimental gastritis, induced as a preliminary, developed fatal intoxication after ingestion of 10 c.c. of the rice water.

Hospitalstidende, Copenhagen

December 29, LIV, No. 52, pp. 1521-1556

168 Rebellious Neuralgia of the Mammæ Cured by Removal of Cystic Ovary and Correction of Retroversion of the Uterus. (Et Tilfælde af Mastodyni.) R. Hastrup.
169 Transformations of Bacterium Found in Urinary Passages. (En Undersøgelsrække over Forandringer af en Urinbakterie, foregaaede i de menneskelige Urinveje.) E. Sörensen.

Norsk Magazin for Lægevidenskaben, Christiania

February, LXXIII, No. 2, pp. 147-200

170 Dulness with Small Effusions in the Pericardium. (Dæmpningsfor holdene ved smaa væskeansamlinger i perikardiet.) S. Høyer.
171 Angioneuroses; Two Cases. (Akut paroxystisk ødem med dødelig forløp.—paa hereditær basis.—Symmetrisk gangræn.) F. Harbitz.
172 *Hypertrophy of the Heart. (Om hjertehypertrofi.) S. Widerøe.
173 *Paraffin in Treatment of Ozena. (Behandling av Ozæna med submukøs injektion og implantation av paraffinum solidum.) S. Wetterstad.

172. **Hypertrophy of the Heart.**—Widerøe reports research on the comparative weight of the heart and of its ventricles in comparison to the general weight. He had 311 hearts thus examined; the most characteristic changes were those noted with valvular defects.

173. **Paraffin Treatment of Ozena.**—Wetterstad remarks that no instance is known in which injection of paraffin with a high melting point caused embolism while Eckstein has collected thirteen cases of embolism in the retinal artery or thrombosis of the ophthalmic vein which followed injection of paraffin with a low melting point. This paraffin method seems to be proving an effectual method of treating otherwise rebellious ozena, the submucous injection or implantation of a sheet of hard paraffin modifying conditions so that the vicious circle of the ozena is broken up. Wetterstad has treated ten patients with the injections alone and five with implantation of a sheet of paraffin. In some of the cases the ozena was of twenty or thirty years' standing. Three of the first group are entirely cured and the others show progressive improvement. In the second group three of the patients were much improved; the treatment was necessarily incomplete in the other cases. He cites the experience of nine other rhinologists, all but Burger reporting from 26 to 75 per cent. cured.

Books Received

Acknowledgments of books received, being ephemeral matter not necessary to be included in the bound volumes, appear on the second, fourth or sixth advertising page following.

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OPPENHEIM'S MYATONIA

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BUFFALO

In 1900 Oppenheim described a remarkable condition in children, characterized by a serious loss of the motor functions and high-grade flaccidity in large groups of muscles. The symptoms are noticed usually soon after birth, more rarely in later infancy.

The muscles of the neck, extremities and trunk may all be affected, but usually only the extremities are involved. The legs suffer from a greater degree of weakness than the arms. Thus the patient may show only a slight loss of power in the arms and almost complete paraplegia. The baby may be able to grasp objects and handle its bottle, but it cannot kick or move its legs. The atony may vary from a pronounced weakness of the extremities to almost complete paralysis. One arm or leg may be less efficient than its fellow. In extreme cases a baby may lie breathing and nursing and incapable of moving either upper or lower extremities. Sometimes the extremities may be helpless, but the child moves its fingers and toes. The chief feature of the little patient is his inactivity, suggesting a high-grade muscular weakness.

Although spontaneous movements are lacking there is no complete destruction of motor function. Traces of power remain in all muscles but their action is languid and inefficient. When motion is produced by painful stimulation it is executed with perfect coordination.

As the child grows older its infirmity grows more evident. With the neck muscles weak, the head wobbles about and cannot be held erect; with the trunk muscles affected, the attitude of kyphosis is present in sitting. There is no loss of power in the sphincters; the arms show varying degrees of weakness. Walking and standing are impossible; if the child is placed on his feet the knees double up and it sinks on the floor.

In only two cases were the arms weaker than the legs.

On palpation the muscles are found soft and flabby. The extremities may be found thin, but no atrophy is present. Some cases show a fair amount of adipose tissue. Hypermobility of the articulation is nearly always seen. The joints make wide and abnormal excursions. In my case the joints were as movable as those of a doll; the feet could be placed behind the back or ears. In Tobler's[1] case the child's habitual attitude was to lie with its head between its feet. The flail-like joints are due to relaxed ligaments and flaccid muscles.

In contradistinction to the condition in poliomyelitis in myatonia the faradic and galvanic irritability, while often diminished, is seldom lost. It may be present in some muscles and absent in others. The reaction of degeneration is never found.

The mental condition is always fair or normal; some patients at three or four years seem backward, owing to their inactivity, malnutrition and inability to play with other children.

The condition should not be confused with the incoordination and awkward motor functions of an idiot.

COURSE OF THE DISEASE

Although the condition is congenital, it may not attract serious attention until later infancy, being regarded as a retarded development tending to betterment or recovery. No authentic cases are observed in adults. We may surmise that the muscular weakness is outgrown or more probably, owing to lowered resistance, the patients die in childhood of intercurrent maladies.

As for the course of the malady, many of the cases reported were in young, limp, apathetic babies. They were accurately described and soon lost sight of. About one-third died of pneumonia. Respiratory affections were especially fatal, owing to the feeble thoracic muscles.

If the patient lives, strength is apt to return to large groups of the muscles. No patient recovers completely. The arms improve faster than the legs. The child may learn to use its hands and arms in a normal way, but either cannot stand at all or walks awkwardly with quick fatigue. Berti's[2] patient, at birth, could only move its head; at 18 months it could only lift up its arms. Cattanee's[3] patient at 4 months showed only slight movements of the hands and feet and could not lift up its head.

In Comby's[4] boy, aged 2½ years, the hands were used unskilfully; the child could sit, but with kyphosis; could move legs, but could not stand or walk; muscles were soft, but not atrophic; knee-jerks absent; intellect normal.

In Haberman's[5] case, that of a girl 3½ years old, the condition dated from birth; the patient could move upper extremities in all directions, but with some weakness. There was great hypotonia of lower extremities; the muscles were flabby; knee-jerks absent. The patient walked with effort if supported. There was reduction of electrical irritability; intellect was normal. My patient at 3 years 9 months could use its hands well; could walk in a clumsy waddling way. No patient has been observed over 7 years of age.

ETIOLOGY

The cause of myatonia is obscure. Neither heredity nor sex has any influence. Age is very important. In nearly all of the patients the symptoms date from birth. In one case the condition was noticed after the sixth month, in three after the tenth month. With a severe, well-marked case of congenital muscular flaccidity the inactivity would certainly be noticed early in infancy by the mother or other women who were interested in the child. With a mild case the lack of power might be attributed to rickets. Hypotonia is always recognized at the age when the child is expected to walk and use its arms. Oppenheim assumes that all cases rest on a congenital basis. This may be true, yet some authors believe that an acute disease may develop or accentuate the symptoms of myatonia.

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[1] Monatschr. f. Psychiat. u. Neurol., 1900, viii, 232.

[2] Jahrb. f. Kinderh., 1907, lxiv, 33.

[3] Clin. mod., 1906, xi, 282.

[4] Arch. de méd. des enf., 196, ix, 552.

[5] Am. Jour. Med. Sc., 1910, cxxxix, 383.

Some cases were observed first after pneumonia and diarrhea. My case appeared after apparent meningitis. Several authors state that the fetus shows no movement *in utero*. Dunn[6] thinks that there is no reason to believe that the disease is infectious, as the lesions are not focal and single muscles or muscle-groups are not affected.

The disease might be due to a toxic agent acting in muscle fibers or terminal nerves. Oppenheim holds that the disease is not in the nervous centers, but is simply delayed muscular development. Baudouin[7] considers myatonia a faulty development or degeneration of peripheral nerves, from infection or auto-intoxication of the thymus, but the influence of the internal secretions of the thymus gland is poorly understood and this gland in health shows enormous variations in size and structure.

MORBID ANATOMY

Six autopsies are recorded and there is much variance in the findings. In one there was degeneration of the anterior horn cells of the cord. In some the cord was normal. The muscles showed imperfect development, great diminution in size in certain fibers and great enlargement in others.

DIAGNOSIS

Myatonia is easily recognized if one is familiar with the description of the disease. The condition should be sharply distinguished from the inactivity of idiocy. In myatonia the intellect is not disturbed. The pseudoparalysis of rickets would be diagnosed by changes in the bones and cartilages. In poliomyelitis there are permanent localized palsies, muscular atrophy and the reaction of degeneration. The paralytic sequelæ of encephalitis and meningitis are of a spastic character. The course of the disease tending to improve, would exclude muscular dystrophies.

PROGNOSIS

In general the outlook is for a betterment, but not for a complete restoration of muscular strength. Many of the cases were in babies observed only for a short time. Dunn says that without actual destruction of nerve cells there may be capacity for regeneration. The few reported cases of over five years of age showed varying degrees of improvement, but no complete recovery.

Oppenheim himself thinks that the prospect of regaining muscular power is very good.

TREATMENT

There is no dissent from the opinion that the myatonia should be vigorously treated and that correct therapy is useful.

Strychnin should be given. Electricity, massage and resistive exercises should be used. Individual instruction, by playing with the patient, coaxing the child to reach for things, to stand and to move its legs, is very effective.

CONCLUSION

Griffith,[8] in 1910, found forty-nine cases of myatonia on record. Dunn, in 1911, quotes thirty cases. Both authors evidently consulted the same bibliography.

There is reason to suppose that this infantile muscular weakness, Oppenheim's myatonia, is not uncommon, and that as the symptoms become known to the profession, numerous cases will be found.

REPORT OF CASE

History.—L. O. presented a condition of flaccid paraplegia at the age of 2 years and 9 months. The parents were nonalcoholic, with seven living children and one dead. An older brother had convulsions in infancy, was puny and mentally backward. The patient was the fifth child, born after a normal labor, and was nursed. At the age of 2 months he lay for a week feverish, unconscious, with his head retracted; no convulsions. The legs were completely anesthetic; could be roughly handled without discomfort. After a week all symptoms subsided except that the legs were very tender. This hypersensibility lasted for three weeks and then disappeared. After this the baby throve except that the legs were weak. At 2 years he was able to feed himself and sit erect with his feet crossed beneath him. His lower extremities seemed completely paralyzed, except that he could cross his legs. He would creep by pulling himself along by his arms, dragging his legs behind him. At 2½ years he was severely ill with whooping cough. At the age of 2 years and 9 months he was received into the Buffalo General Hospital, in November, 1910. The child was pale, underweight, was of pleasant, amiable disposition; mentally backward; could say only a few words; was nervous and easily frightened. Nevertheless, he recognized his family, the doctors and nurses, was eager for his food and interested in the talk and play of the children in the ward. His digestion was good; he was apt to wet his clothes and bed. There was no sign of rickets. He had his full complement of teeth.

Examination.—He habitually sat crossed-legged in bed, showing a marked kyphosis due to muscular weakness. Sensation was everywhere perfect.

The upper extremities were fairly strong. The hands trembled when they were used, but he could reach for objects with his hands, feed himself and play with toys. Save for the crossing of the legs, there was no attempt to move the lower extremities. The child made no effort to walk. If he were placed on his feet the knees would double up and he would sink to the floor. In fact, he gave the impression of suffering from a flaccid paraplegia. The muscles of the gluteal region, thighs and legs were soft and flabby, but not atrophied. On carefully examining the legs it became evident that there was no absolute loss of power in any muscle of the lower extremities. By electrical or painful stimulation every muscle in the hips, upper and lower legs and feet could be made to move. The muscular contractions were slow and feeble, but always occurred with perfect coordination. He gave the impression that he was too lazy to move his legs unless he was forced to.

All the leg muscles reacted to faradic and galvanic electrical stimulation; the contraction of the adductors of the thighs was rather sluggish. The abdominal, cremasteric and plantar reflexes were present; the knee-jerks were absent; Babinski present; Kernig absent. The joints were hypermobile; the toes could be moved up and down; the knees twisted laterally; the feet could be placed behind the back, into the mouth and behind the head. Either lower extremity could be swung about like a flail.

Diagnosis.—As I was not familiar with Oppenheim's article on myatonia, I was much puzzled as to diagnosis. The weakness of the legs was not due to idiocy or rickets; the lost reflexes and flaccidity excluded a paresis due to polioencephalitis, meningitis or myelitis. Infantile paralysis could be excluded by the movements of all the muscles under painful stimulation, by electrical irritability, and by the absence of muscular atrophy and of retardation in growth.

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[6] Am. Jour. Dis. Child., 1911, ii, 340.

[7] Semaine méd., 1907, xxvii, 241.

[8] Tr. Am. Pediat. Soc., 1910, p. 184.

After reading articles on myatonia by Griffith[8] and by Dunn,[9] it seemed clear to me that the condition of flaccid weakness of the lower extremities was due to Oppenheim's newly described disease called myatonia, probably developed or accentuated by the illness during infancy.

Treatment.—The child was given strychnin, faradism, massage and resistive exercises. This latter treatment by educative movements proved the most effective of all. At first the child made small progress beyond gaining weight and learning a few words.

In August, 1911, after eight months' treatment, he began to gain strength in his legs. After using a walking chair he began to stand and use his legs and feet. In September, 1911, he was found to be flat-footed and was fitted with appropriate shoes.

By the middle of November he could walk 20 feet alone, could pick up things from the floor and only fell occasionally. About Christmas, he could keep on his feet all day except for the noon rest. He now walks in a waddling fashion with toes turned out, showing that the gluteal and tibial muscles are still weak. The left leg is not so strong as the right. In sitting he assumes a crossed-legged position, and has a marked postural curve in the back. The knee-jerks are absent; the leg muscles are fat and firm. The joints are still hypermobile.

476 Franklin Street.

SUPERNUMERARY AXILLARY MAMMARY GLANDS

JOHN D. CANTWELL, M.D

DAVENPORT, IA.

Patient.—Mrs. D., aged 22, primipara, gave birth to a normal robust child in January, 1912. Her puerperium presented nothing unusual until the fourth day, when she complained of swelling and pain in each axilla. At this time, because of the pain, she lay in bed with her arms extended at right angles to her body.

Examination.—There was found in each axilla a tumor as large as a half orange, the base 3 inches in diameter, and the elevation 1½ inches. The right tumor was covered by hair at its upper edge only, while the entire upper half of the left tumor was so covered. The skin over both tumors was entirely normal, not reddened, although quite tense. The tumors were bounded behind by the latissimus dorsi, in front by the pectoralis major, were separated from the normal breast by a distance of 1 inch, and were freely movable on the underlying tissue. At the center of the dome of each tumor there was a darkened area, ½ inch in diameter, from the center of which there projected a small nipple ⅛ inch in diameter and the same in height. On slight pressure over the tumors, a milk-like fluid escaped from both nipples. On the application of a breast-pump milk squirted from each nipple in four distinct streams. There could be no question as to the nature of these tumors. A sensation of fulness and discomfort was experienced in these axillary milk-glands but milk did not flow when the child nursed the normal breasts.

Course.—The axillary milk-glands increased in size until the sixth day of the puerperium, after which time their volume diminished until the fourteenth day, when there remained only the areola and the nipple to indicate their position.

Cases of this kind are rare; in the available literature there appears no case so beautifully symmetrical as this one, and but eight cases in which supernumerary axillary mammary glands were provided with nipples, although there are about a half dozen other cases in which a milk-like fluid exuded through an apparently normal skin on pressure, and a number of others from which a milk-like fluid was obtained on puncture with a hypodermic needle. While there has been some question as to the real nature of the nippleless milk-exuding axillary glands, of which some thirty appear in the literature, there is no possible question as to the nature of the case here reported. The patient was seen in consultation by Dr. William Rendleman, Davenport, Ia.

Knaebel[1] and Kayser[2] present the best recent reviews of the available literature on this subject.

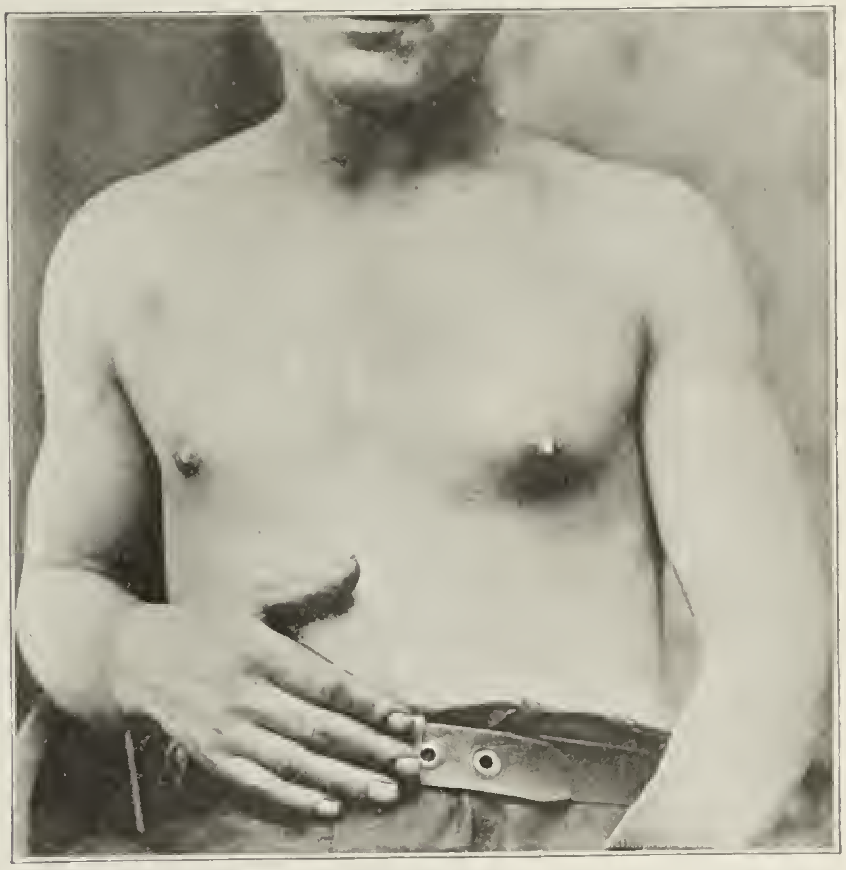
612 Putnam Building.

LACTATION FROM THE MAMMARY GLAND IN THE MALE

R. C. CREASY, M.D.

WICONISCO, PA.

Patient.—A man of Russian descent, aged 24, single, fireman, appearing very muscular and robust, came to me for the first time, complaining of pain in the mammary glands, and a milk-like secretion oozing from the nipples. He informed me that during and after his laboring hours, the glands became more painful and the secretions increased to such a degree that it saturated his clothing covering the nipples. The patient is in the habit of manipulating and massaging his left gland during his idle time; this, in my opinion, has been a great factor in developing the organ if any tendency to lactation previously existed. This pain or general soreness has been present at varying intervals during the last two years, but no secretive function existed until eight weeks before examination. The latter process has been increasing but slowly.



Examination.—I noted that the left gland was materially larger than the right; the nipple was pouting; there was but a very small amount of pigment deposited within the near area of the nipple; there were, however, a number of shot-like nodules within the skin tissue, simulating Montgomery nodules in the female gland. There was no erosion or thickening of epithelial tissue, no tumors palpable, and no signs of any inflammatory process within or about the gland. The temperature, pulse and respiration were normal. Under the objective fat globules are sparsely distributed throughout the film of fluid; no pus-cells or erythrocytes present.

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[1] Knaebel, A.: Kasuistischer Beitrag zur Frage der Genese der Mammae accessoriae und der sogenannte Achselhöhlenbrüste ohne Warze und Ausführungsgang bei Wöchnerinnen, Monatschr. f. Geburtsh. u. Gynäk., Berl., 1910, xxxi, 547.

[2] Kayser, F.: Achselhöhlenbrüste bei Wöchnerinnen, Arch. f. Gynäk., Berl., 1908, lxxxv, 459.

Treatment.—Internally, the administration of fluidextract belladonna root to full physiologic effects, and externally to the glands, the application of belladonna ointment, morning and evening, were quite successful in checking the secretion completely and relieving the patient of the pain throughout the glands.

X-RAY FINDINGS IN THE DIFFERENTIAL DIAGNOSIS OF EARLY AND LATE PREGNANCIES

PATRICK S. O'DONNELL, M.D.
CHICAGO

With Discussions by Drs. J. B. Murphy and J. B. De Lee

X-ray skiagraphs for the differential diagnosis of pregnancy have been attempted for some time by radiologists, both in America and abroad, but with only partial success. Many radiologists have shown on plates only indistinct opaque shadows without detail, making it difficult to obtain any clear conception of the position of the fetus.

The technic I have developed not only shows clearly the fetus in the uterus, but is capable of showing many abnormalities. The first case was referred to me by Dr. J. B. Murphy, a breech presentation which has distinct pathologic conditions and which will be described by him in detail. I have since then made over 150 exposures, and find that there is not the slightest danger to mother or child.

The position of the fetus can be clearly determined from the fourth month. The obstetricians to whom the plates have been shown think the method of great value. The exposure is less than one-fifth of a second with a medium tube. The technic is difficult to describe fully in print, as conditions vary considerably with every subject, length of term, etc.

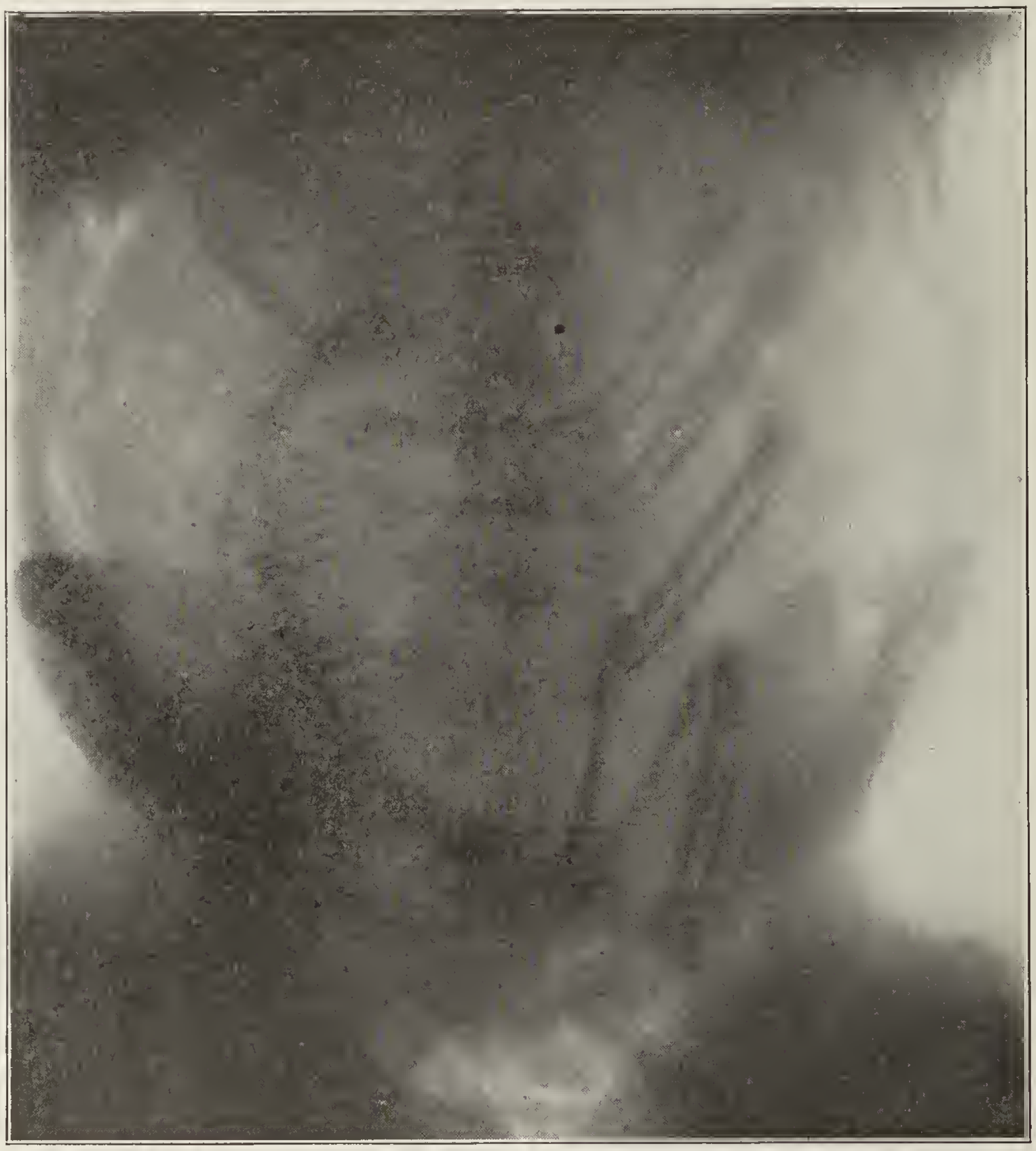

Fig. 1.—Radiograph (slightly retouched) in the case described by Dr. Murphy. Ankylosis of elbow diagnosed in utero. Seven and one-half months.

THE DIAGNOSTIC VIEWPOINT, BY DR. MURPHY

Patient.—Mrs. S. F. W., American, aged 35; married twelve years. Five pregnancies; three children, all living; two abortions; no complications. First two births forceps deliveries, uneventful. Family history, negative; no tuberculosis; urinalysis, negative. Diseases of childhood, with good recovery. In sanitarium for nervous trouble, April, 1907, and April, 1910, one month each time. Menstruation began at 14 years of age, irregular up to twelve years ago, regular since then, every twenty-eight days, duration three or four days; amount, two napkins daily. No change in duration or amount. Pain begins with the flow, lasts twenty-four hours. Never passed blood-clots. No leukorrhea. Last period, December, 1910.

History.—December, 1910, patient failed to menstruate. She felt well, except that she was very nervous. Beginning Jan. 15, 1911, she had a chilly sensation every afternoon between 5 and 6, but no fever; she would generally vomit at 6 p. m. This lasted three months. Two months before the time of examination, patient had occasional attacks of pain in the right iliac region, dull, aching, which would last just a short time; then her abdomen began to enlarge in the left hypochondriac and umbilical regions; since then it had not enlarged very much. There was tenderness over this area; no pain or distress after eating. The bowels were regular. The last eight months there had been an increase in the frequency of urination (two or three times more frequent than formerly). There had been no loss in weight. About seventeen days before examination, the patient's ankles were swollen for eight days and during these eight days her bowels did not move as well as previously. She never had a diarrhea. At 5:15 p. m. temperature was 99.4; pulse, 94; respiration, 20.

Examination. — The abdomen was enlarged to about the size of an eight-months pregnancy. A distinct, irregular, non-angular mass could be felt just above the symphysis and a hard, round, firm mass could be felt under the right costal arch. Under the left costal arch, a point at which the patient had had frequent attacks of pain, was a sharp, projecting mass. It was not more than an inch or an inch and a half in diameter, could not be displaced to the right and could not be brought closer to the hard mass under the right costal arch (the fetal head). The uterine wall was so thin that the form of the fetus could be fairly well outlined. In fact, it was questionable whether it was a uterine or an abdominal pregnancy, as the uterus did not contract under the manipulation of the examination but remained flabby and soft. The bones of the fetal pelvis could be felt through the walls of the uterus by a vaginal examination.

Skiagram.—The perplexing part to me, after the examination, was why the foot or hand remained so far from the head or face and why it could not be displaced into some other position or brought closer to the chest. To clarify this, I conceived the idea of having a skiagram made, and sent the patient at once to Dr. O'Donnell. This was the first time the idea of making a skiagram of the fetus *in utero* had been suggested to him. He readily consented and succeeded in making a splendid skiagram (Fig. 1). A careful examination of this skiagram shows that the right arm is held in a straight position and that there is no articulation perceptible at the right elbow-joint and no even clean-cut one at the left.

The position of the fetus is so perfectly outlined in the skiagram that it needs no description.

Later History.—The patient returned home to await confinement, which occurred Saturday, Oct. 14, 1911. She was attended by Dr. L. J. Frederick of Joliet. It was a breech presentation; delivery occurred without forceps and was very speedy. The child did not suffer from strangulation. The cord was found twisted around the neck but the physicians did not note whether it was also around the arm. The arms were not drawn down in the delivery, but were permitted to rest along the head and came through the straits with the head. This was fortunate, for if the physician had endeavored to deliver the arms before the head he would have had to fracture them.

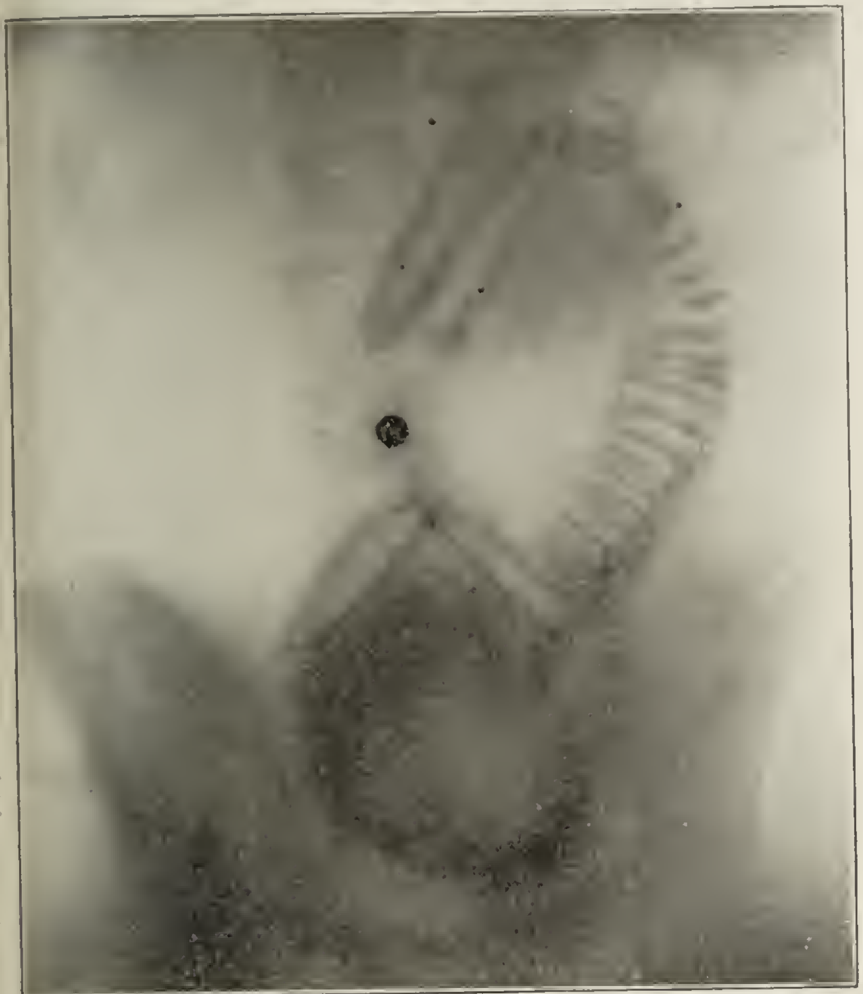

Fig. 2.—Radiograph (slightly retouched) of five months' fetus in utero.

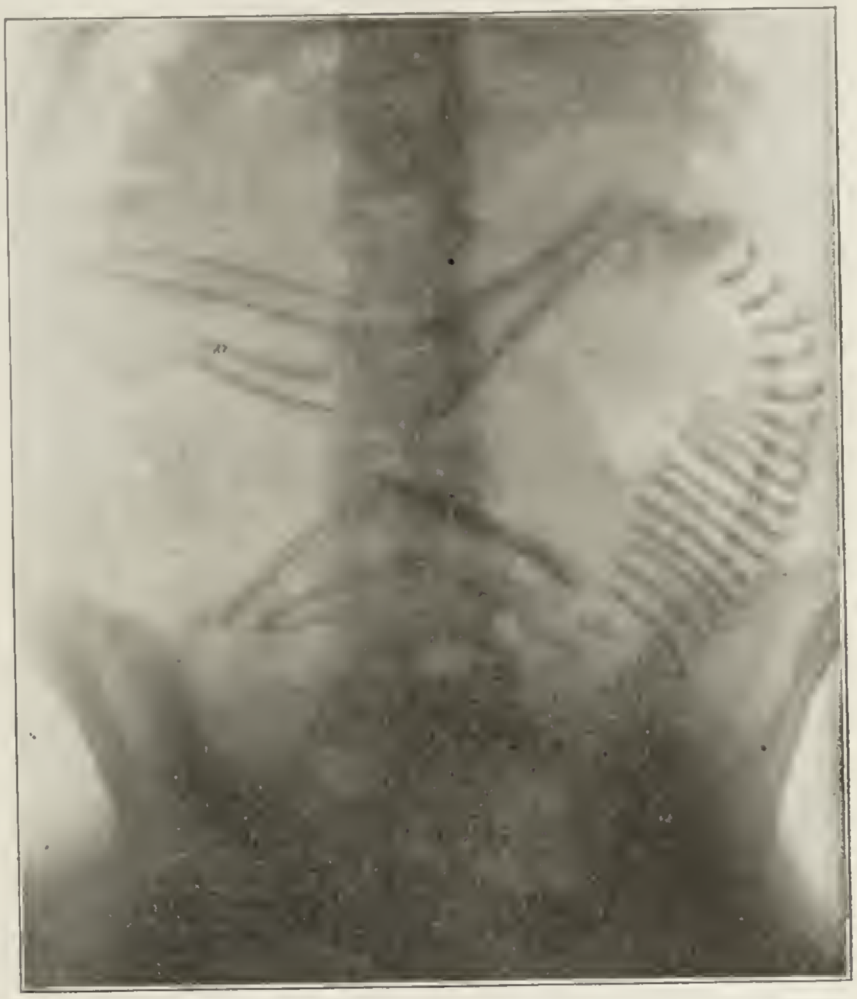

Fig. 3.—Radiograph (slightly retouched) of six months' fetus in utero.

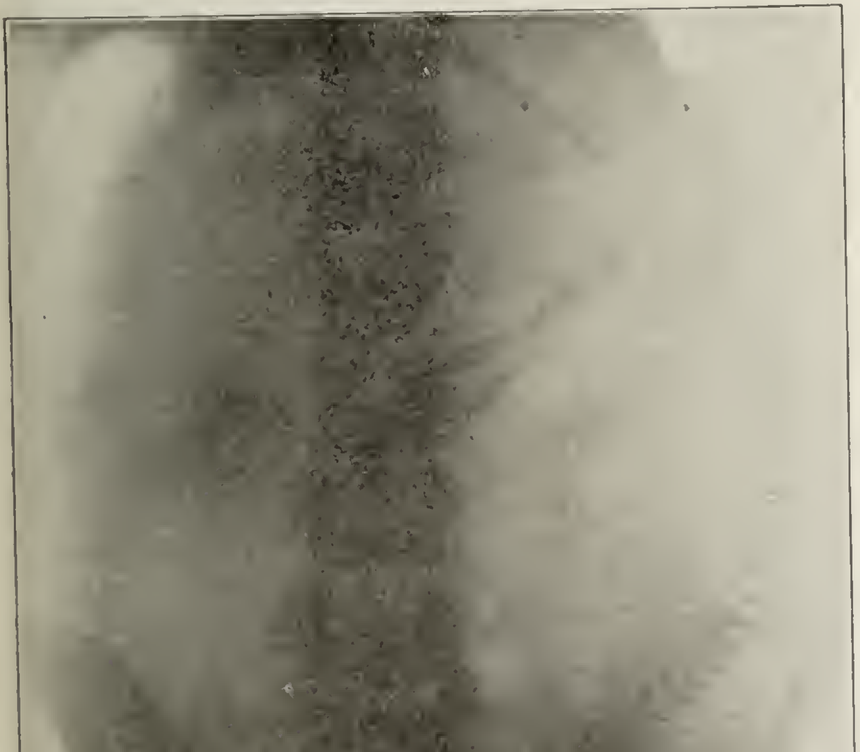

Fig. 4.—Radiograph of seven months' fetus in utero. This illustration is made direct from the photographic print without retouching. It is shown for comparison with the retouched pictures.

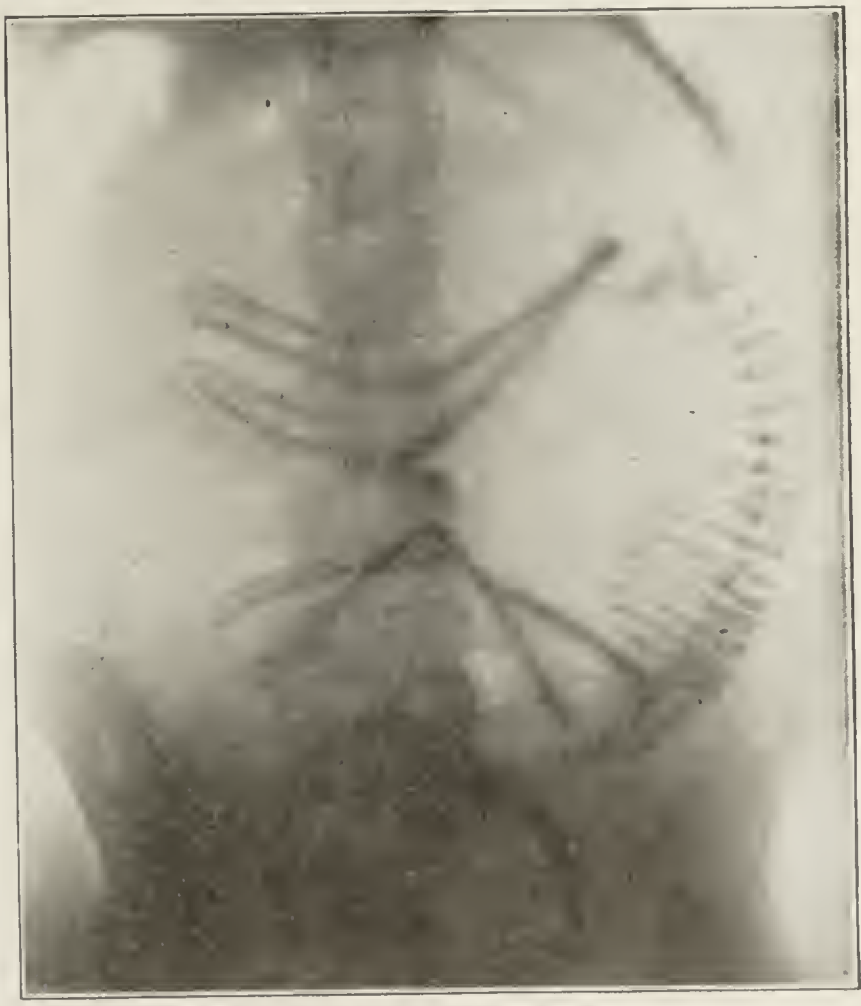

Fig. 5.—Same as Figure 4, slightly retouched.

Child.—I was in that city the day after the delivery and through the courtesy of Dr. Frederick had an opportunity to examine the baby. The following conditions were noted:

Both arms rested motionless at the baby's side and in the extended position. The right arm could not be abducted from the body more than 45 or 50 degrees. The right elbow was stiff, not, however, in bony ankylosis but apparently a fibrous ankylosis. There was rotation at the right elbow-joint. Reflexes were entirely absent. There was a constriction in the soft parts of the arm, at the lower axillary margin, completely encircling it. There was no evidence of pain on irritation of the skin, and not the slightest reflex. This showed that the lesion was a peripheral nerve lesion and not a spinal cord or cerebral lesion. The left arm could be extended almost to right angles with the body. The left elbow could be flexed only to a little less than right angles. There was an absence of all reflexes from irritation of the hands, fingers and palms. The child made no voluntary motion of the fingers, wrists, arms, or forearms, nor did she endeavor to use the deltoids in abducting the arms out from the body. The position of the hand in the skiagram, as observed before the delivery, in the radiograph, which showed it so far in advance of the forehead, is accounted for by the fibro-cartilaginous ankylosed condition of the right elbow-joint; the left hand was held in its position owing to the partial fixation of the left elbow. All of the muscles and fatty structures of both arms were atrophied. The atrophy was, however, more marked in the right than the left arm. The neck was comparatively small but there was no crease in it to indicate that the cord cut into it deeply. The small, constricting, depressed crease just below the axilla on the right arm was also present on the left, but not to such a marked degree. The question is whether or not these constrictions were due to amniotic bands; but that would not explain the fact that the shoulder-muscles were paralyzed. Both legs were movable; both responded in a reflex way; it was impossible to straighten them beyond 120 degrees from the body; they could not be flexed to the side of the abdomen, both being somewhat fixed at the hip. I could not make out that the hips were luxated, although it appeared to me that they might be. As the examination was made in a cool room and under unfavorable circumstances for continued exposure, it was limited.

The question arises, are the paralysis and failure of development of the upper extremities due to a constriction of the brachial plexus in the neck by the cord, or to the amniotic bands just below the axillary margin? If to the latter, why are the shoulder muscles paralyzed? The arrest in development must have taken place early, as the elbow-joint failed to undergo the embryologic separation of the cartilage. It is well known that the bones of the extremities are first connected by a continuous fibrocartilaginous mass with no joint surfaces intervening. Finally there is a central splitting of this cartilaginous mass. The split separates to the periphery and around to the general conformation of the joint, until the joint is fully formed. The arrest in development occurred here before the splitting had taken place, which is completed in these joints at about the fourth to the sixth month of gestation.

Since this case was submitted to Dr. O'Donnell he has made many splendid skiagrams that I have had opportunities to examine. I feel that we can get considerable embryologic information from a careful study of these pictures, and I trust that he will pursue this line of investigation further.

THE USES OF THE X-RAY IN OBSTETRICS,

BY DR. DE LEE

The *x*-ray has proved itself almost useless in the diagnosis of the size and shape of the female pelvis, with a view of determining the possibility of mechanical difficulties during labor. It is possible by its means to recognize gross deformities, distortions, and also narrowing of the pelvic outlet, but the usefulness of the results is not so great as we would wish.

The location of the larger portion of the lumen of the pelvis can be determined by the *x*-ray, and thus might be of help in the question, on which side of the pelvis the large occiput of the head should be brought down for delivery. By means of the *x*-ray, it is possible to discover a rupture of the pubic joint, and also to study the healing processes after pubiotomy. In the differential diagnosis between rupture of the pubis and neuritis, the *x*-ray might be valuable. Softening and relaxation of the pelvic joints could also be discovered by the *x*-ray, and thus serve in the differential between polyneuritis, paraplegia and pelvic bone disease. Kyphotic and assimilation pelves could be discovered, and thus many unsuspected causes of dystocia be explained.

In the diagnosis of pregnancy the *x*-ray will have a very limited field, because the cases are rare in which pregnancy could not be determined with the usual methods, by the time the *x*-ray is able to discover it. In fat women, or in cases in which the differential lies between pregnancy and large fibroid tumor of the uterus, the *x*-ray will be helpful. In cases of illegitimate pregnancy, where an abdominal examination is not permitted, or could not be suggested, the *x*-ray might discover the fetus. Extra-uterine pregnancy could not be diagnosed as such, but a lithopedion could be discovered, although it would be impossible to say that it was not a calcified fibroid.

The differential diagnosis between a normal pregnancy and hydatid mole, after the fifth month, could possibly be made by the *x*-ray. Twins should be easily discoverable after the sixth month. It might also be possible to diagnose gross fetal deformities, such as hydrocephalus and anencephalus, double monsters; and it is barely possible that an *x*-ray picture will become a necessity before every cesarean section, the object being to certify that the child is well formed.

The *x*-ray may be valuable in early infancy. By its means hyperossification, due to prolonged pregnancy, could be determined. As a means of estimating the intra-uterine age of a premature fetus, for medicolegal purposes, in the question of illegitimacy, the *x*-ray is useless, because I have found that ossification in the different bones during gestation proceeds with varying regularity. Injuries to the fetus are easily determined by the *x*-ray, such as fracture of the extremities and fracture of the skull. It may perhaps be possible to find a hemorrhage in the brain by this means.

Never before, to my knowledge, has it been possible so clearly to portray the fetus in utero by means of the *x*-ray, and Dr. O'Donnell's work in this department of investigation deserves general recognition. Altogether, since modern improvements in the technic have rendered the use of the *x*-ray safe, to both mother and child, one can recommend its wider employment.

Prevalence of Bladder Calculi in Java.—The last issue of *Janus* contains an illustrated article by D. van Twist, a medical missionary in Java, who states that during the four years ending in 1909, 461 patients applied for relief from pain during micturition and 450 of them were found to have concrements in the bladder or urethra. Among the 335 patients operated on by suprapubic incision, 244 were children under 15, the majority under 6. In one case 1,500 para-urethral calculi were found, in another, 1,236 preputial calculi. The squatting position assumed by Mohammedans in micturition, preventing complete evacuation of the bladder, is responsible to some extent for the lithiasis, and also the manipulations with phimosis, causing clots, which obstruct the flow of urine.

X-RAY DIAGNOSIS OF PREGNANCY

ANGUS McLEAN, M.D., AND P. M. HICKEY, M.D.
DETROIT

The following case illustrates the aid which the Roentgen ray may afford in the differential diagnosis between pregnancy and fibromyoma of the uterus:

Mrs. B., aged 33, was admitted to Harper Hospital Nov. 7, 1911. Since the age of 11, she has been the subject of convulsive attacks, probably of hysterical origin, from which she s aroused with difficulty. She is the mother of three children, all of whom were delivered normally and are well at the present time. Twelve months before her admission to the hospital her menstruation ceased and has not been present since that time. Following the stoppage of her menses there has been a gradual enlargement of the abdomen which on palpation was found to be uterine.

Previous to her admission to the hospital, she had been examined by several physicians who were unable to make a positive diagnosis of pregnancy. There was no history of nausea or vomiting. The breasts showed no enlargement or pigmentary signs. The patient was very fleshy, her weight being about 250 pounds. The abdominal walls were very thick and quite relaxed. External manual examination failed to reveal anything which could be suggestive of a fetal body. Careful stethoscopic examination did not reveal the fetal heart-beat. Vaginal examination showed a slight softening of the uterine os. No ballottement could be elicited.

The differential diagnosis lay between large fibromyomata of the uterus and pregnancy. Accordingly the day following her admission, two *x*-ray exposures were made, each of four seconds, and the Roentgen rays were directed laterally by means of a large cone-shaped diaphragm through the pendulous abdomen. Both plates distinctly showed the spine, the thoracic cage, and the legs and arms of a well-ossified fetus. The fetal head could not be distinguished. Accordingly from the examination of the *x*-ray plates, a diagnosis was made of pregnancy with the fetal head in the pelvis. On December 15 the patient was delivered of a normal baby girl by forceps, the position being right occipitoposterior. The mother and child both did well and left the hospital on Dec. 24, 1911.

In a paper read before the Michigan State Society, September, 1911, one of us (Dr. Hickey) suggested the value of the Roentgen ray in differential diagnosis between fibroid of the uterus and pregnancy. This case illustrates the ease with which such a diagnosis can be made and shows how the element of uncertainty can be eliminated in many cases in which the thickness of the abdominal walls and the obesity of the patient make the ordinary manual examinations difficult.

If the exposures are short and made with an exact technic, they should not be attended with any danger to the mother or to the fetus. Roentgenologists have for some time been somewhat diffident about making these examinations owing to the fear of injury to fetal life. The improved technic, notably with the recently improved intensifying screens, in which exposures last practically only one or two seconds, however, should do away with any such fear.

32 Adams Avenue, West.

Biology and Medicine.—In ancient civilizations and even down to modern times, the one great stimulus to the growth of biological knowledge lay in the healing art. In ancient and medieval times almost all the contributors to biological knowledge, with the possible exception of Aristotle, were physicians, though it is doubtful if an exception should be made of a man who kept a pharmacy shop. At the Alexandrian museum the subjects of natural history and anatomy were carried on by the faculty of medicine, one of the four faculties originally established at the museum.—Bushee in *Popular Science Monthly.*

MALT SOUP IN NUTRITIONAL DISTURBANCES OF INFANTS

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Malt soup has been highly lauded in Germany for years as a remedy for babies with gastro-intestinal disturbances. Its use in this country has extended quite rapidly during the past few years among pediatricians. Koplik[1] has had very gratifying results with Liebig's formula as modified by Keller. I believe that his writings have been responsible for popularizing in America the use of this food for sick babies.

METHOD OF PREPARATION

Keller's[2] malt soup is prepared as follows: Two ounces of wheat flour are mixed with 11 ounces of whole milk and then passed through a sieve. In a second vessel 3 ounces of extract of malt are mixed with 20 ounces of warm water. The two mixtures are then poured into a porcelain vessel, 2½ drams of 11 per cent. carbonate of potassium added, and the whole cooked with constant stirring for twenty minutes and then brought to a momentary boil; any loss through heat is made up by the addition of boiled water.

This mixture has a formula of fat 1.20, protein 2.00, carbohydrates 12.00, and has a caloric value of 800 to the liter. The above is designed for babies with a body-weight of from 6½ to 10 pounds from the third to the ninth month. For babies under 3 months old the flour is reduced to 1 ounce and the malt-extract to 2 ounces. It must be kept on ice and warmed before being fed. It has a sweet pleasant taste and is taken greedily by all infants.

According to Keller and Czerny, there is a strict and definite indication for the employment of this food: if this is fulfilled, recovery follows with almost absolute certainty.

MILK NUTRITIONAL DISORDER

Milch-Nährschaden (milk nutritional disorder, Czerny and Keller) is a definite clinical syndrome often met with in this country, and should be recognized by every one caring for children. For years this clinical picture has been misinterpreted; and to these authors belong much credit for giving us a sharp and precise description of the condition and a therapy which is very often successful.

The symptoms develop gradually and in the beginning receive little attention from the mother. If the baby is weighed regularly it will be noticed that the weight-curve becomes very irregular; for two or three weeks there may be no gain at all, at most a very slight gain. This occurs in spite of the fact that the caloric value of the food is sufficient to cause an increase in the weight. In an endeavor to force the baby to gain, the mother increases the amount or the strength of the food which causes a loss of weight (the paradoxical reaction of Finkelstein). The baby becomes pale and the skin loses its elasticity; the muscles become soft and flabby. Restlessness, peevishness and inability to sleep are prominent symptoms. From the actions of the infant the mother is positive the baby is not receiving enough food. Distention of the abdomen is frequently present; vomiting is sometimes met with. The stools show characteristic changes; they assume a gray to white color, are very dry and do not soil the napkin; they frequently emit a foul odor. The friableness of the stool is due to the fact that it contains very little water; this is because it is composed mostly of insoluble soaps, as proved by chemical examination, and cannot take up water. The reaction of the stool is markedly alkaline. The above-described stool may be displaced by a loose watery acid stool in the presence of a complicating dyspepsia or intestinal infection. If the proper treatment is not instituted many of these cases go over into marasmus (decomposition).

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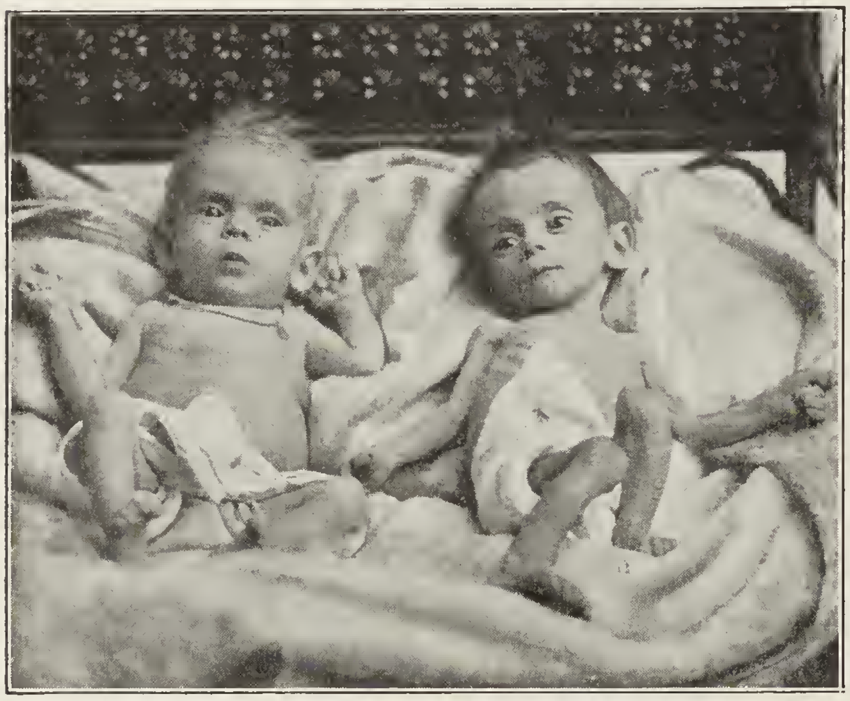
[1] Koplik: Diseases of Infancy and Childhood, 1906, p. 150.

[2] Des Kindes Ernährung, Ernährungsstörung und Ernährungs Therapie, 1909; Franz Deuticke, Leipsic and Vienna.

NATURE OF THE DISTURBANCE

This is a severe metabolic disturbance in which the entire organism of the infant is concerned. The element of the food which brings about the condition is the fat which has been present in the food in a high percentage, or only in a moderate one, but still relatively high for that particular baby. Bacteria have nothing to do with the condition. Owing to the fact that top mixtures have been quite popular the past several years, this clinical picture is frequently seen. The therapeutic test at once places the blame on the fat. Increase of fat in the food causes the condition of the baby to become worse and causes an increased formation of soap in the stools. Increase of proteids brings about no change. Diminution of the fat percentage, with an increase of the carbohydrates, causes an improvement in the condition of the baby with a disappearance of the soap-stools.



The infant seen on the left side was suffering from balance disturbance; aged 9 months; weight 9 pounds, 15 ounces. The infant on the right side, in the stage of decomposition, was aged 8 months; weight 6 pounds, 10 ounces.

This condition is described by Finkelstein, under the caption "balance disturbance" (*Bilanz-Störung*). While Czerny and Keller believe that the fats themselves are the cause of the fat-soap stools, Finkelstein holds that their formation is due to a loss of salt balance, and he is of the opinion that an excess of fatty acids has been combined with calcium and magnesiums[3] with a result that there is formed a much larger amount of insoluble calcium and magnesium soaps than is encountered under normal conditions. An important observation of the Czerny school is the presence of an acidosis and an increase of the ammonia coefficient in the urine. Treatment with alkalies directed to overcome this acidosis does not benefit the baby unless the cause of the condition is removed. It will be noticed that carbonate of potassium is incorporated in the malt soup mixture with the view of neutralizing this acid intoxication.

RESULTS WITH MALT SOUP

I have used malt soup extensively for the past five years and have found it especially valuable in infants showing the above-described picture. If over 3 months of age they respond almost invariably to this therapy. The abnormal appetite is appeased, the restlessness is quieted and the infant becomes much happier. The soap-stools rapidly clear up and take a soft, moist, mahogany-brown, salve-like consistency. The body-weight starts upward, the gain averaging usually from 4 to 7 ounces a week. Too rapid gain in weight such as a pound a week is, in my experience, undesirable and is usually followed by a relapse. It is indicative of overfeeding with carbohydrates and should be met by a reduction in the amount of flour and malt extract. For a favorable result it is necessary that the baby possess a high carbohydrate tolerance. As a matter of fact, the babies with this disturbance usually show an exaggerated tolerance for starches and sugars. I frequently modify the original formula of Keller. Since the curative properties of casein have been demonstrated I frequently have the mixture made up with 20 ounces of skim-milk. Instead of wheat flour, I believe at times I have had better results with a dextrinized flour; the amount may be varied from one-half to two and one-half ounces, depending on the individual case. The amount of the malt-extract in the mixture may be with advantage altered, depending on the presence or absence of constipation, and a failure to gain in weight. After improvement has begun it is well gradually to raise the percentage of fat in the mixture, remembering that while it was the cause of the metabolic disturbance, it is not well to eliminate it from the diet over too protracted a period. Fat has twice the food value of protein or sugar and is desirable in the diet as soon as it can be tolerated. I have frequently prescribed this food when vomiting was an associated symptom. Stomach lavage was also employed and the mixture made up with skim-milk.

In feeding malt soup to these patients I believe it is of essential importance to leave out the fat for a time. Cannon[4] has proved that feeding a high percentage of fat inhibits the secretion of hydrochloric acid and that the cardiac sphincter remains open as long as the reaction of the cardia is alkaline. When a small amount of fat is fed the normal amount of hydrochloric acid is again secreted, the entrance of the stomach closes and the outlet opens at the proper time.

Even if the condition of the baby has progressed to the state of marasmus, the outcome under malt soup is frequently favorable. This food should be continued only for two or three months, at which time the following formula is indicated: Fat 2 to 3; proteid 2 to $2\frac{1}{2}$; maltose and dextrin sufficient to make the total carbohydrate 7. On the malt-soup diet, with its high carbohydrate percentage, the organism is forced to gain, much as a florist forces his plants in a hot-house. Hence the necessity of changing off to some other diet after a certain length of time. Any disadvantage which may arise from using a cooked food may be overcome by the daily administration of a small amount of orange juice.

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[3] Meyer: Ernährungsstörungen und Salzstoffwechsel beim Säugling. Ergeb. d. Inn. Med. Kinderh., i.

[4] Quoted by Talbot: Am. Jour. Dis. Child., 1911, i, 176.

This food is not adapted to infants under 3 months. have been successful in a few instances, but usually he results are disappointing. The bowels become loose nd sour-smelling and the infant grows very restless; ymptoms due to the carbohydrate content of the food. lbumin milk is much more likely to be of service for hese babies.

In diarrheas this food is frequently of inestimable alue; without any other medication the stools frequently become formed and the weight is rapidly rought back to normal. It may be prescribed as early s the third or fourth day, even in the presence of a marked diarrhea. I believe that the chief explanation or the favorable results[5] in this condition is the fact hat the maltose, unlike the lactose, shows little tendency o ferment in the bowels. Lactase, the ferment which onverts the lactose into its monosaccharid, is found xclusively in the intestinal tract; while maltase, which cts on the maltose, occurs not only in the intestine, but n other parts of the body, particularly the blood. Thus ny of the maltose which may possibly pass through the ntestinal wall may still be converted into its monosaccharid. This is thought to be the reason for the fact hat the power of assimilation of the body is much greater for maltose than for the other sugars.

It must be distinctly borne in mind that some infants after malt soup administration develop dangerous symptoms of intoxication, owing to the high percentage of soluble carbohydrates. That high fever and convulsions may follow the use of this food is illustrated by the following case:

Patient.—Baby M., 6 months old, fed artificially from birth as mother had no milk. Top milk mixtures were employed or several weeks; infant did not thrive. Condensed milk and various proprietary foods tried with unsatisfactory results. When I first saw the baby, diarrhea had existed for three weeks. The general condition was very poor; continuation of the downward progress meant that the typical picture of marasmus was but a short time off.

Treatment and Course.—Malt soup was prescribed, made up with 10 ounces of skim-milk, 1 ounce flour, and 1 ounce malt-extract. There was an immediate and rapid improvement which extended over a period of four weeks. The stools became formed, restlessness ceased and the body-weight started upward, amounting during this period to 20 ounces. In the fifth and sixth week after the commencement of the malt-soup diet the weight was stationary; the malt-extract was increased to 1½ ounces. The baby responded with a fever of 105 F. and convulsions which continued three hours, necessitating the use of morphin hypodermatically. Physical examination excluded organic lesion of any of the internal organs. The presence of rapid, deep, pauseless respiration, with the history, pointed to the diagnosis of alimentary intoxication (Finkelstein).[6] All food was withheld for eighteen hours and water administered freely. Breast-milk feeding was begun first in very small amounts, gradually increased with improvement of the baby. The further course toward recovery was uneventful.

Such babies should have a rectal temperature taken regularly twice a day. Any rise of temperature should call for an immediate examination of the urine for sugar so as to forestall the development of severe symptoms. The phenylhydrazin test is the best.[7] These symptoms, even if of the severest grade, immediately subside on withdrawing the carbohydrates. The great danger is that the clinician will misinterpret the symptoms and continue with the sugars in the diet.

CONCLUSIONS

1. Milk nutritional disorder (Keller-Czerny) is a definite clinical condition occurring subsequently to the administration of fat of cow's milk.
2. It is frequently cured, particularly after the third month, by Keller's malt soup.
3. Even if the metabolic disturbance has persisted so long that marasmus has developed, malt soup is often of signal service.
4. For these babies to recover on malt soup they must have a high carbohydrate tolerance.
5. Malt soup is frequently a good diet in diarrhea.

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A NEW TEST-MEAL *

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The information to be obtained from an extracted Ewald test-breakfast is necessarily very limited. It is obvious that little is gained as to the motility of the stomach. The actual acidity of the gastric juice, as secreted, cannot be found. No estimate can be made of the total amount of gastric juice produced.

In the hope of obviating some of these deficiencies, Mathieu proposed the addition of a definite quantity of water to the residue in the stomach after the expression of a small sample. After an interval of an hour, he showed that the total residue could be calculated by using a formula based on the difference in acidity of the two abstracted samples before and after the addition of the water. While from this method it is possible to determine the residue of test-meal and gastric secretion it is impossible to say how much of each makes up this residue.

To give further information on these facts, Sahli proposed his butyrometric test-meal. This, it will be recalled, is a fat emulsion made by roasting 45 gm. of flour thoroughly intermixed with 15 gm. of butter. To this mixture 350 c.c. of water are added, and the whole boiled two minutes. Fifty c.c. of this soup are retained for fat determination and 300 c.c. given to the patient. After one hour the stomach contents are aspirated and a definite amount of water is poured into the stomach as in the method of Mathieu. Fat determinations are then made of the soup as given and of the first aspiration of stomach contents.

It soon became apparent to clinicians working with this test-meal that, apart from the time consumed by its preparation, it was unsatisfactory because such a large amount of fat inhibited gastric secretion, and because the instability of the emulsion led to erroneous results.

Friedman,[1] after working with this meal and finding the objections justified, came to the conclusion that a satisfactory modification was to be found in a meal made by diluting condensed milk with water in the proportion of one to three. He sums up his excellent presentation of the entire subject as follows:

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[5] Leopold: Arch. Pediat., 1911, xxviii, 345.

[6] Jahrb. f. Kinderh., January, 1907, p. 1.

[7] In a test-tube put 1 gm. of phenylhydrazin hydrochlorid, an equal quantity of powdered sodium acetate and enough of the suspected fluid to half fill the tube. The acetate dissolves as the tube is heated. Boil for two minutes and after twenty minutes examine, under the microscope, for the characteristic osazone crystals. (Holland: Medical Chemistry and Toxicology, 1911.)

* Read at the annual meeting of the American Gastro-Enterological Association, Philadelphia, April 19, 1911.

[1] Friedman: Arch. of Int. Med., 1909, iv, 69.

> The method does, however, fail occasionally, probably for the reason that the emulsion is destroyed. Failure is particularly liable to occur under the following circumstances:
>
> 1. In cases in which there is low acidity and hypermotility. In such cases there will be so little fluid in the stomach in fifty minutes that no accurate fat determination can be made. When such a condition is suspected, it is best to aspirate in thirty minutes.
> 2. In cases of gastritis in which there are very large amounts of mucus which destroys the emulsion and by rising to the surface of the Babcock bottles obscures the readings.
> 3. In cases of greatly impaired motility owing to the difficulty of completely emptying the stomach preliminary to lavage.
>
> Even where it fails it still, however, offers as much information as the ordinary Ewald test-breakfast.

In the hope of finding a test-meal which would afford the desired knowledge, without these possibilities of error or complete failure, I have experimented with various substances to discover one which, when added to the test-meal in definite quantity, would indicate, on its passage from the stomach, at the lapse of an hour, the amount of test-meal which remained. It was finally concluded that lactose had many advantages for this purpose, and during the past few months seventy test-meals of this character have been given. In detail the test-meal is made as follows:

To 300 c.c. of freshly made weak tea 30 gm. of lactose are added. This fills two ordinary tea-cups. It has been found of practical advantage to give at the same time one pilot biscuit or two soda biscuits. Crackers containing salt, sugar or dextrin should not be used. After this test-meal has remained in the patient's stomach for an hour a liberal portion is extracted, and, preferably with the bulb, water, about 200 c.c., but necessarily a definite amount, is forced into the stomach through the tube. The mixing in the stomach is effected by partly withdrawing the contents and forcing them back again several times before the extraction of the second sample. These two samples are then ready for analysis. The free acidity of the first is determined and has been found to be comparable to the free acidity resulting from the Ewald test-breakfast. The total acidity of both specimens is then estimated with great care, using phenolphthalein as an indicator. The residue, after the extraction of the first portion, is determined by means of the Mathieu formula as follows: Let A equal the acidity of the first portion, and B the acidity of the second portion; then $B \times 200 \div (A-B) = X$, i. e., the residue. To find the total stomach contents after the lapse of one hour it is necessary, of course, to add the quantity of the first specimen to the residue as found by the above formula.

The next step is the determination of lactose in the first specimen. Before satisfactory results were obtained many methods of lactose determination were experimented with until, finally, trials were made with the method of Gerard and Allen as modified by Rüdisch and Cellar.[2] This modification of Fehling's solution is made by adding one part, by volume, of the mixed copper and Rochelle salt solution to four parts, by volume, of 50 per cent. aqueous solution of chemically pure potassium sulphocyanate. Twenty-five c.c. of this solution, the equivalent of 5 c.c. of mixed Fehling's solution, are gently boiled in a porcelain dish, and the sugar solution is added drop by drop, preferably from a burette. The end reaction is a quick and sharp loss of color, and when the experiment is done with care many trials with the same specimen give results which show less than 0.1 per cent. variation. In determining the lactose percentage in this solution, the end reaction has been found even more sharp than is the case with a complex fluid such as urine. The presence of acids in the stomach contents has not seemed to alter the results in any way.

It must be remembered in making these estimations that the oxidation of copper by lactose is somewhat slower than with glucose and care must be exercised to add the drops slowly and to titrate during the dropping. It is more convenient to work with filtered chyme that has been diluted three or four times. The number of cubic centimeters of the undiluted chyme necessary to decolorize 50 c.c. of the Rüdisch-Cellar solution having been found, to find the percentage of lactose it is necessary to divide, not 0.05 gm., as is the case for glucose, but 0.06 gm., as lactose has a different power of reduction. Reduced to simple terms it may be said that six divided by the number of cubic centimeters of undiluted chyme necessary to decolorize 50 c.c. of the Rüdisch-Cellar solution gives the percentage of lactose.

Having previously determined the stomach contents at the end of one hour by the Mathieu formula, it is now determined just what portion of this is test-meal and what portion gastric secretion. If 30 gm. of lactose were given to the patient the amount of fluid test-meal remaining would be proportionate to the amount of lactose remaining. The actual amount of lactose is easily determined by multiplying the determined total residue by the determined percentage. Let L equal the number of grams of lactose in the stomach contents, and A the number of cubic centimeters of contents; then the following formula needs no explanation: $300 : A :: 30 : L$, 300 being the amount of fluid test-meal ingested. Simplified, this formula will read $10 \times L = X$. The amount of gastric juice in the stomach contents is found by subtracting the discovered test-meal residue from the total residue found by Mathieu's formula.

The following is an example of the result on a normal stomach. First extract 40 c.c. in amount; free acidity was 20, total acidity, 40. One hundred and fifty c.c. of water were injected into the stomach and the second sample showed a total acidity of 8. $B \times 150 \div (A-B) = X$ here became $8 \times 150 \div 32 = 37.5$. The total residue was then $37.5 + 40$ or 77.5. The percentage of lactose in this total residue was 0.641 per cent. The total residue, $77.5 \times 0.641 = 3$ gm. of lactose; $300 : 30 :: X : 3$, or $X = 10 \times 3$, or 30, the test-meal residue. Then $77.5 - 30 = 47$ c.c., the actual amount of gastric juice.

From these calculations we now have the total stomach contents one hour after the ingestion of a definite test-meal. We know how much of this is test-meal residue and how much is gastric secretion. Working with these figures secured by the Sahli test-meal and its modifications a number of formulas have been suggested designed to give us quotients which could be used as bases of comparison. Thus, for example, G. J., the gastric juice residue, divided by T. M., the test-meal residue, is said normally to be as .7 is to 1; if the figure deduced in any case is more than 1 we have hypersecretion, and if less than 0.7 we have a quotient of hyposecretion. The motility again is found by dividing 300, less the test-meal residue, by 300. Practically, I doubt that these quotients will be much used, but I am inclined to think that the estimate of the actual acidity of the undiluted gastric juice is a matter of clinical interest. This is determined as follows: Let A equal the acidity of the aspirated stomach contents; let T equal the total stomach contents at the time of aspiration and G. J. equal the amount of gastric juice discovered. Then X, the calculated acidity of the gastric juice not diluted by the test-meal residue, would be as follows: X=A × T÷G. J. Taking as an example the previous case we have:

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[2] Rüdisch and Cellar: The Journal A. M. A., Jan. 26, 1907, p. 324

A=40, T=77.5, G. J.=47. Then X=66.

The advantage of this test-meal over the butyrometric test-meals, previously suggested, are the ease of preparation, the palatability of the meal and the simplicity of the lactose determination. I cannot see that the objections which, Friedman admits, are inherent in the test-meal he proposes are applicable to the test-meal here described; separation of the sugar from the liquid could not conceivably take place. The presence of mucus would have no particular influence on the estimates. In no case have I found the quantity at the end of an hour insufficient for several confirmatory readings.

TABLE SHOWING RESULTS FROM THE USE OF A NEW TEST-MEAL

Case.	Free Acidity.	Total Acidity.	Test-Meal Residue.	Gastric Juice. Residue.	Gastric Condition.
1	22	40	138	92	Ptosis and asthenia.
2	14	31	120	84	Ptosls and asthenia.
3	8	28	216	150	Ptosis and asthenia.
4	16	44	90	60	Ptosis and asthenia.
5	0	8	170	30	Ptosis, asthenia, achylia.
6	0	12	205	95	Ptosis, asthenia, achylia.
7	0	8	63	70	Achylia gastrica.
8	0	20	31	50	Achylia gastrica.
9	44	68	55	224	Peptic ulcer.
10	80	120	15	138	Peptic ulcer.
11	44	65	20	150	Peptic ulcer.
12	36	50	39	131	Peptic ulcer.
13	20	40	18	104	Peptic ulcer.
14	40	63	32	110	Peptlc ulcer.
15	20	46	40	70	Normal.
16	19	40	30	47	Normal.
17	26	42	68	84	Marked ptosis, motility good.
18	10	45	65	49	Marked ptosis proved by *x*-ray. Motility good proved by *x*-ray.
19	40	60	28	48	Moderate ptosis.
20	20	40	60	46	Chronic appendicitis; appendix removed. Attacks of pylorospasm. Constant dyspeptic complaints.
21	16	56	51	122	Cholelithiasis, occasional colics with constant gastric complaints.
22	30	50	80	95	Cholellthiasis, constant complaints, operation.

Every practitioner should be familiar with quantitative sugar determinations, and the method I have recommended requires no extraordinary equipment nor considerable experience with laboratory technic.

The question suggests itself whether sugar may not be directly absorbed by the stomach and thus lead to erroneous conclusions in using this test-meal. It has been established that the sugar in strong solutions may be directly absorbed from the stomach, and, although at the present time I am not able to say that within the hour none of the lactose is absorbed by the stomach, thus leading to faulty inferences, I am of the opinion, from practical experience, that any such absorption is inconsiderable. I hope to be able to settle this question definitely, but at present can only say that, in the cases in which motility has been obviously affected, the lactose readings have been so high as to justify the belief that but little, if any, absorption from the stomach could have taken place. Even though it may be shown that a certain small proportion of sugar is absorbed from the stomach the method would still be of value in a comparative way.

It is not intended in this preliminary communication to establish figures showing the normal limits of motility and secretion. The comparatively small number of cases studied, seventy in all, is insufficient for conclusive deductions, and only tentative conclusions have thus far been reached.

In the accompanying series of cases the diagnosis of conditions present in the stomach was established by considerable clinical study or shown by surgical exploration.

84 Remsen Street.

THE FREQUENCY OF SURGICAL LESIONS OF THE KIDNEY AND URETER AS ESTIMATED FROM AUTOPSY AND HOSPITAL RECORDS *

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In no special field of surgery has more substantial progress been made during the past ten years than in the surgery of the kidney and ureter. The diagnosis of the surgical lesions of the kidney and ureter by the aid of the cystoscope, the ureteral catheter and the *x*-ray has now become almost an exact science; and with the development of accurate means of diagnosis the operative mortality has fallen and the end-results have at the same time improved until the results obtained compare favorably with those in any other branch of major surgery.

Further progress in this field must come, in part, through a clear conception as to the actual frequency and importance of the several pathologic conditions which go to make up the surgical group of diseases of the kidney and ureter, and the study on which this paper is based was undertaken with the idea of throwing some light on this phase of the subject.

The data which has been collected in this study may be grouped under three headings as follows:

1. Autopsy statistics (Tables 1, 2 and 3).
2. The recognized frequency as found in hospital practice (Table 4).
3. The relative frequency of the different lesions as they are found at operation (Tables 5 and 6).

Surgical diseases affecting the kidney and ureter may be conveniently considered under the following heads:

1. Calculous disease with the stones situated either in the kidneys, ureters or both.
2. Obstructions interfering with the free flow of urine from the kidney to the bladder.
3. Pyogenic infections involving the kidney and ureter.
4. Tuberculosis.
5. Tumor growths.
6. Traumatisms.

The frequency of these conditions as found at autopsy is shown in Tables 1, 2 and 3. In the Bender Laboratory series, comprising 1,652 consecutive autopsies performed by the members of the staff of this institution previous to August, 1911, I found 106 instances of surgical lesions of the kidney or ureter, a proportion of 1 in 15.5. All of these patients presented surgical lesions of practical diagnostic interest and seventy-four of these, or 1 in 23.3 of the patients coming to autopsy at the Bender Laboratory, presented lesions of the kidney or ureter which, had they been accurately diagnosed during life, would certainly at some time have been considered as definitely calling for surgical treatment. These figures are higher than I had expected to find, but they correspond very closely with those given in Table 3, which I have compiled from Kapsammer's[1] analysis of 20,770 autopsies performed at the Wiener Allgemeine Krankenhaus during the ten years ending with 1902.

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* Read before the Rensselaer County Medical Society, Troy, N. Y., Jan. 9, 1912.

Kapsammer, in his series, makes no mention of hydronephrosis and it is probable that most of the cases of hydronephrosis which occurred in the autopsies analyzed by him are included under pyelitis and pyelonephrosis which so frequently complicate hydronephrosis.

TABLE 1.—SURGICAL LESIONS OF KIDNEY AND URETER FOUND IN 1,652 AUTOPSIES—BENDER LABORATORY RECORDS

				Proportion
I	Renal or ureteral calculus		14	1 in 118
II	Total hydronephrosis and hydropyonephrosis		61	1 in 27
(a)	Due to benign non-calculous urethral obstructions	21		
(b)	Secondary to enlarged prostate, urethral stricture, vesical stone, etc.	23		
(c)	Secondary to extra urinary malignant growths	13		
(d)	Congenital	4		
III	Fatal cases of pyelitis and pyelonephrosis all accompanied by obstruction and classified under cause of obstruction.			
IV	Tuberculosis and actinomycosis		13	1 in 127
(a)	Tuberculosis of kidney (primary in genito-urinary tract)	12		
(b)	Actinomycosis (limited to kidney and bladder)	1		
V	Malignant renal tumors and cystic kidney		11	
(a)	Malignant tumors primary in kidney	6		
(b)	Bilateral cystic kidney	3		
(c)	Unilateral cystic kidneys (massive cortical retention cysts)	2		
VI	Traumatic injuries of kidney		7	
			106	1 in 15.5 (6.4 per cent.)

TABLE 2.—ADDITIONAL RENAL AND URETERAL ABNORMALITIES FOUND IN 1,652 AUTOPSIES—BENDER LABORATORY RECORDS

Absence of one kidney (congenital aplasia or hypoplasia with ureter impervious)	7
Horse-shoe kidneys	3
Double ureters	9
Terminal renal tuberculosis with extensive renal destruction in cases of pulmonary or generalized tuberculosis	8
Metastatic malignant growths invading kidney	4
Small calculi in infants	4

Morris,[2] in 6,536 autopsies performed at the Middlesex Hospital, London, from 1873 to 1897, found 381 cases of non-calculous hydronephrosis, a proportion of 1 in 17.2, which is considerably higher than the 1 in 27 found in the Bender Laboratory series. But, in considering the Middlesex Hospital statistics which have been widely quoted in the literature, we must bear in mind the fact that the Middlesex Hospital is the great cancer hospital of London, and that a very large proportion of the patients coming to autopsy at this hospital have died of cancer.

From Tables 1 and 3 we may safely estimate that surgical lesions of the kidney or ureter, of at least practical diagnostic interest, are found in approximately from 4 to 6 per cent. of patients coming to autopsy, and that the great majority of these patients could at some time have been cured or greatly benefited by surgical intervention, had an accurate and timely diagnosis been made.

Of equal importance is the fact that, with very few exceptions, the renal lesion is the chief factor which determines the death of the patient. Thus in ten out of fourteen of the calculous cases in the Bender Laboratory series the patients died as a direct result of the presence of the calculi in the kidney or ureter, and an equally high proportion obtained for all of the other conditions enumerated in Table 1. From a study of the autopsy records one is led directly to the conclusion that not only are surgical lesions of the kidney and ureter of relatively frequent occurrence, but also that they constitute a group of affections which, in the long run, are particularly fatal. Some of them kill quickly, but most of them add the handicap which determines a fatal outcome at a time when the body cannot carry a handicap and win against some intercurrent disease.

TABLE 3.—SURGICAL KIDNEY LESIONS FOUND IN 20,770 AUTOPSIES—WIENER ALLGEMEINE KRANKENHAUS, 1893-1902

I	Renal calculus, total cases		73
	Unilateral	51	
	Bilateral	22	
	Not diagnosed	69	
	Diagnosed	4	
II	Hydronephrosis—Figures not reported.		
III	Pyelitis and pyelonephrosis, total cases.		550
	Not diagnosed	518	
	Unilateral	118	
	Bilateral	400	
	Correctly diagnosed	23	
	Unilateral diagnosed as bilateral	15	
	Total diagnosed	38	
IV	Tuberculosis of kidney, total cases		191
	Unilateral	67	
	Bilateral	124	
	Diagnosed	6	
	Four of the six diagnosed were bilateral cases, the patients dying after an unilateral operation.		
V	Renal tumors, total cases		74
	Unilateral	69	
	Bilateral	5	
	Diagnosed	24	
	Previously operated	12	
	Total kidney operations in hospital during same period		92
	Good operative risks, the patients dying without a diagnosis		304

TABLE 4.—SURGICAL DISEASES OF KIDNEY AND URETER. FREQUENCY OF RECOGNIZED CASES IN RECENT AMERICAN HOSPITAL PRACTICE

	Total Admissions	Surg. Dis. of Kidney and Ureter	Proportion	Per Cent.
General admissions, ten hospitals.	69,209	762	1 to 98	1.0
Med., surg., gyn. and g.-u. dispensaries in three hospitals	23,532	45	1 to 523	0.2
Surgical service in seven hospitals not making routine use of cystoscope and *x*-ray	16,529	185	1 to 89	1.1
Surgical service in three hospitals in which routine cystoscopic and *x*-ray examinations are made	25,243	527	1 to 48	2.1
McMullen and Stanton, private cases	5,507	102	1 to 54	1.8

A fairly accurate estimate of the frequency of this group of surgical lesions, as recognized clinically, may be obtained from the annual reports of representative hospitals, and Table 4 has been compiled from the 1908, 1909 and 1910 reports of a number of representative American hospitals and from the histories of private cases examined by my associate, Dr. McMullen, and myself.

Out of 69,209 patients treated at ten representative American hospitals during 1908, 1909 and 1910, 762 were diagnosed as having surgical lesions of the kidney or ureter, exclusive of cases diagnosed as movable kidney. This gives a proportion of 1 in 98.2, or 1 per cent. of all patients admitted to these hospitals, which probably represents a fair average as to the frequency of these conditions as recognized by the average standards of diagnosis.

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[1] Kapsammer: Nieren-Diagnostik und Nieren-Chirurgie, Vienna, 1907.

[2] Morris: Surgical Diseases of the Kidney and Ureter, 1901, i, 404-406

Among 23,532 new patients admitted to the medical, surgical, gynecologic and genito-urinary dispensaries of the University of Pennsylvania, the German hospitals in Philadelphia and the Massachusetts General Hospital in Boston, one finds but forty-five cases, or 1 in 523, diagnosed as belonging to the surgical group of kidney lesions and then usually under some such indefinite diagnosis as renal colic, renal hematuria or pyelitis. This simply shows that in the superficial examination given dispensary patients these lesions, for the most part, go entirely unrecognized unless the symptoms are so palpable as to demand a guess in the direction of the kidney.

TABLE 5.—OPERATIONS ON KIDNEY AND URETER COMPILED FROM 1909-1910 ANNUAL REPORTS OF THIRTY-FIVE AMERICAN HOSPITALS

	No. Hospitals Reporting Cases	No. Cases
Cystic kidney	3	3
Movable kidney	27	143
Renal calculus	21	146
Ureteral calculus	10	24
Hematuria	1	3
Pyelitis	13	35
Pyonephrosis	27	46
Hydronephrosis	8	20
Intermittent hydronephrosis	1	12
Hydro-ureter	2	2
Tuberculosis of kidney	12	29
Malignant tumors of kidney	2	2
Renal fistula	3	3
Ureteral obstruction	1	1
Total		469

TABLE 6.—OPERATIONS ON KIDNEY AND URETER—ST. MARY'S (MAYO) CLINIC, 1908, 1909 AND 1910

	Admitted	Recovered	Died
Exploration, kidney, negative	10	10	.
Exploration, kidney, double cystic disease	3	2	1
Exploration, kidney, inoperable hypernephroma, 5; sarcoma, 1	6	6	.
Exploration, kidney and ureter, double tuberculosis	6	6	.
Acute anuria, double decapsulation	2	2	.
Nephrectomy for carcinoma, 3; sarcoma, 2; hypernephroma, 21	26	23	3
Nephrectomy for hematoma, 1; traumatic rupture, 1	2	1	1
Nephrectomy for acute parenchymatous nephritis	4	3	1
Nephrectomy for pyelonephritis	4	4	.
Nephrectomy for tuberculosis disease	67	66	1
Nephrectomy for cystic kidney and calculi	1	1	.
Nephrectomy for hydronephrosis, 5; infected hydronephrosis, 17	22	22	.
Nephrectomy for pyonephrosis, with or without stone	59	56	3
Nephrotomy (lesion not stated)	7	7	.
Intermittent hydronephrosis, 21; plastic on pelvis of kidney for intermittent hydronephrosis, 20	41	41	.
Nephrorrhaphy	2	2	.
Nephrolithotomy and pelviotomy for stones	59	59	.
Ureterolithotomy	61	61	.
Nephrectomy for stricture of ureter	1	1	.
Ureterotomy (lesions not stated)	2	2	.
Ureterectomy	7	7	.
Sinus of kidney, drained	1	1	.
Total	393	383	10

Among 16,529 surgical cases treated in seven American hospitals in which the *x*-ray and cystoscope are made use of to only a limited extent, there were 185 operations on the kidney and ureter, or 1 in 89.3. The average of approximately 1 per cent. holds good with a surprising uniformity in each of these hospitals and probably represents approximately the diagnosed incidence of these cases in the hands of surgeons who have recognized diagnostic ability, but who do not make routine use of the cystoscope and *x*-ray in all suspicious cases.

On the other hand, among 25,243 surgical cases treated in three American hospitals in which routine cystoscopic and *x*-ray examinations are made in all suspicious cases, we find 527 operations on the kidney and ureter, or 1 in 47.9, and the proportion of approximately 2 per cent. holds good for each of these hospitals. Since the work done by these hospitals is too varied and extensive for the proportion to be materially altered by any reputation of the surgeons for this particular line of work, the proportion of 1 in 50 probably represents approximately the true incidence of these lesions in operative surgical work.

My associate, Dr. McMullen, and I, in examining 5,507 patients, between Aug. 1, 1907, and Nov. 30, 1911, found 102 cases which we could definitely diagnose as belonging to the surgical group of kidney or ureteral lesions, a proportion of 1 in 54 of all patients seen in consultation by us during this period.

Table 5, which was compiled from the 1909-1910 reports of thirty-five American hospitals, gives us an idea of the relative frequency of the different kidney and ureteral lesions as they are found at operation in ordinary hospital practice, while Table 6 shows the relative frequency of these conditions as they are found at operation in a hospital in which modern diagnostic methods are used in all suspected cases. It is worthy of note that Table 5 shows 143 operations for movable kidney while Table 6 shows only two nephrorrhaphies. The relative frequency of the different lesions as shown in Table 6 corresponds, in a general way, quite closely with the relative frequency of the same conditions as found at autopsy and, as compared with Table 5, shows a decided increase in the frequency of those conditions most often requiring the use of the cystoscope or the *x*-ray for their diagnosis.

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THE DEFINITION OF NORMAL URINE *

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The term "normal urine" has conveyed different meanings as it has been employed by writers in the last fifty years, since more or less exact analyses of the excretion have been available, and even to-day a comparison of the clinical literature, on the one hand, with the special research literature, on the other, would show a very great lack of harmony in the use of the term.

For one class of writers, by no means small, the conception of a normal urine was apparently that of an excretion from healthy individuals consuming a rather large weight of food in nearly constant quantity from day to day; the important products in the excretion were supposed to appear in proportions varying within pretty narrow limits. This old idea grew up at a time when our notions of the protein metabolism were rather obscure, and when foods in general and the proteins in particular were supposed to tarry long in the body before the products of their metabolism were finally excreted.

One of the theories of protein metabolism long current assumed a marked fixation of ingested protein in the living tissues before catabolism was possible, and this fixation would serve as a kind of regulator of the rate of catabolism, and therefore of the following excretion.

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* Read before the Biological Section of the American Chemical Society, Washington, D. C., Dec. 28, 1911.

The assumed fairly constant elimination of urea, for example, might be accounted for in this way.

While a multitude of facts speak against this view, as originally presented, and while numerous extended series of urine examinations have shown a close dependence of the excretion on the food but recently consumed, the old idea of a normal, as exemplified by a uniform excretion, still holds in many quarters and even reappears from time to time in our standard text-books and handbooks. For example, this statement is found in the last American edition of Hammarsten's "Physiological Chemistry" (p. 645): "The quantity of urea which is voided in twenty-four hours on a mixed diet is, in a grown man, about 30 gm., in women somewhat less." As it stands this is misleading, but later in the work (p. 732) a table is given which shows that 30 gm. of urea may be expected from a diet corresponding to the old Voit standard of 118 gm. of protein, 56 gm. of fat and 500 gm. of carbohydrate in the daily food. This table, just referred to as quoted by Hammarsten, is given also in the new handbook of Neuberg, and is seen to present the same values. But the paragraph preceding the table reads thus: "In twenty-four hours, on a mixed diet, healthy men excrete about 60 gm. of solids with the urine, consisting of 25 gm. of inorganic and 35 gm. of organic substances."

Of course physiologic chemists and others who have followed the developing literature closely are in no way misled by such statements, and the authors themselves would probably be the last to attach much importance to them. I quote them here merely to illustrate the lingering tendency to confound an average with a normal composition of the urine.

But the figures quoted may serve to call attention to what I believe is another fallacy in the statements concerning the composition of urine. I mean the assumption of a high nitrogen excretion following the assumed *necessary* high protein intake. This last assumption had its origin in the views of Liebig regarding the relation of protein to work, and reappears in several of the so-called standard dietaries with which we are familiar. But practically, I believe, these dietaries, calling for high protein consumption, are not normal or standard except for limited groups of individuals. The great majority of men, especially those past 50 years of age, do not consume an amount of protein running from 125 to 150 gm. or more a day, and consequently cannot excrete an amount of nitrogen corresponding to such weights. If the experience of old or middle-aged men be considered along with that of the younger and more vigorous men with hearty appetites, or the experience of students, clerks and professional men along with that of the out-of-doors worker it would be found, doubtless, that the *average* urea excretion, dependent on the protein consumption, is nearer 20 than 30 gm. per day. If the excretion is less in women than in men it is so, not because of any essential difference in the direction of metabolism, but simply because of the lower protein intake.

The erroneous opinion regarding the urea output which obtains among medical men in this country is largely due to the very faulty method of clinical testing employed, and to the fallacy of thinking of urea in percentages, rather than in terms of grams per day. An *apparent* excretion of 2 per cent. is often observed, and this is assumed to follow an excretion of 1,500 to 2,000 c.c., since the books have long stated that this is the normal volume. But the 2,000 c.c. is seldom reached, and 1,000 c.c. is nearer the actual average in this country. I had a student who excreted a urine with 4 per cent. of urea, but the amount was not 60 gm. per day, but only about 24 gm. as the volume was seldom above 600 c.c.

To the chemist or physiologist the above statements regarding the relation of nitrogen intake and output must appear as self-evident, but to the clinician they are certainly not self-evident, and the tendency to look on the output of urine constituents as something apart from, and independent of, the protein intake is nowhere better illustrated than in the clinical report blanks of some of our hospitals. Without a record of the food consumption, what sense is there in such statements recorded on the blanks: "urea increased," "phosphates diminished," "sulphates normal"? Anyone who has had occasion to examine hospital reports has seen just such records. It should be recognized that the sulphur and the phosphorus, the calcium and the magnesium, as well as the nitrogen, vary with the food, and especially with the protein food, and that a normal urine must be one consistent with the food. One urine may be normal with an output of 15 gm. of urea per day while another with 45 gm. would be likewise normal.

Folin and others have given interesting illustrations of extreme variations in the composition of urine following the ingestion of special diets. Such variations may be shown, also, with perfectly normal diets, and I can illustrate this with two analyses showing changes in the nitrogen excretion of a man following a change in the diet. The analyses are of the urines of a young man in normal health, a student in my laboratory, who consumed through a period of about two weeks a rather liberal protein diet, and later, through another period of two weeks a diet poorer in protein, but still sufficient for his taste and needs, along with more fat and carbohydrates. The figures given are the means of daily results through ten days in each case, and obtained from determinations on the whole excretion for the twenty-four hours.

A.—Urine of First Period in Gm.	
Total nitrogen	12.58
Urea nitrogen	10.64
Urea	22.80
Creatinin nitrogen	.68
Ammonia nitrogen	.40
Uric acid nitrogen	.22
Purin nitrogen	.06
Rest nitrogen	.58

B.—Urine of Second Period in Gm.	
Total nitrogen	7.30
Urea nitrogen	5.56
Urea	11.91
Creatinin nitrogen	.64
Ammonia nitrogen	.34
Uric acid nitrogen	.15
Purin nitrogen	.05
Rest nitrogen	.56

An interesting light is thrown on these figures if we calculate from them the nitrogen partition, that is, show in percentage form the distribution of the nitrogen among the several compounds containing it. This calculation is given as follows:

A	Per Cent.
Urea nitrogen	84.58
Creatinin nitrogen	5.40
Ammonia nitrogen	3.18
Uric acid nitrogen	1.74
Purin nitrogen	.48
Rest nitrogen	4.62
	100.00

B	Per Cent.
Urea nitrogen	76.16
Creatinin nitrogen	8.78
Ammonia nitrogen	4.66
Uric acid nitrogen	2.06
Purin nitrogen	.68
Rest nitrogen	7.66
	100.00

The analyses of urines of "starvation artists" and of people on low protein, or starch and cream diets show that the urea nitrogen may fall as low as 50 or 60 per cent. of the whole; but this case is interesting, since the lowest diet in question was a perfectly normal one and sufficient to keep the man in perfect health and nitrogen equilibrium for weeks or months, without loss of weight, as I have observed with other students over rather long periods. Urines of the B type, with about 75 per cent. of the nitrogen in the form of urea, in place of 85 per cent. as usually stated, are perfectly normal and must be considered in framing any definition.

But as we ordinarily use the term "normal urine" it is employed in a sense somewhat different from that suggested by the above paragraphs. We usually employ it to describe an excretion free from constituents arising in some pathologic condition in the body, and in this sense it is necessary to distinguish between so-called pathologic and normal products in the excretion. This conception is not a clear one because it leaves out of consideration the well-known facts—that is, well-known to physiologists — that certain substances commonly called pathologic are usually present in small amounts in all urines, and that other substances classed as normal may indicate a pathologic condition by a change in the proportions in which they are present. It becomes important, therefore, to study the relations of some of these so-called pathologic constituents, and uric acid and the other purins, ammonia and the sulphur excretion, as well as albumin and sugar, should receive attention.

While many of the mysteries connected with uric acid have been cleared up, and the "uric acid diathesis" is no longer the gold-mine to the medicine manufacturer it was some years ago, enough remains to be very puzzling at times. The relation of ingested purin-furnishing foods to the excreted uric acid, the extent of the uricolytic action, varying apparently from individual to individual, the relation of the unoxidized purins to the final uric acid, are all points which must be more fully elucidated before we are able to fix the limits of what may be called the normal excretion of these bodies. While it is something which might be expected, the fact is generally overlooked that an enormous increase in the purin output may follow from the consumption of a few ounces of chocolate-coated confectionery. I have frequently noticed that 100 mg. daily of purin nitrogen may be added to the usual excretion by eating a few large chocolate "creams" of a well-known variety sold in most of our cities. The ordinary relation between the uric acid and the other purins becomes here reversed, and I mention the fact to call attention to the necessity of knowing about the diet before a judgment from the figures of a urine analysis is safe. Ordinarily a relation such as this would be looked on as abnormal. After the consumption of such chocolate confectionery the increase in the purins persists for several days, and seems to reach a maximum on the second or third day. The increase in the purins from the ordinary nuclein substances seems to follow much more rapidly.

It is only within recent times that much attention has been paid to the extent of the ammonia excretion, and this partly because of the fact that until a short time ago simple and satisfactory methods of examination were not available. Ammonia in normal urine was looked on as of very trifling importance and the relation to certain acidoses was not suspected. Now, with many more facts known, and with reliable methods of determination, the question of the range of the ammonia excretion assumes much more importance. The ammonia nitrogen of the urine in health may make up from 4 to 7 or 8 per cent. of the total nitrogen output, while in diabetes it may make up 25 per cent. or more, the urea being correspondingly diminished. The relation of this excretion to that of certain organic acids becomes very important, and we have here a good illustration of a substance which, while always present, furnishes a pathologic indication when the amount is much increased.

In attempting to define a normal urine the greatest importance attaches to those substances which are usually regarded as pathologic, but which may in reality be always present in small amount. We have here, especially, traces of sugars, albumin and certain forms of casts. By the use of very delicate reagents it is possible to detect what must be considered as an albumin in all normal urines. I believe that authorities in general now regard that point as settled, but, limiting ourselves to the use of the common tests for albumin as clinically applied, it is still true that a very considerable number of urines from healthy individuals show traces of albumin which may be recognized by the nitric acid ring, or by heating after the addition of a trace of acetic acid, or enough to acidify. It has often been pointed out that soldiers on long marches, or athletes after strenuous exercise, very frequently void urine showing a little albumin, but it is not so generally recognized that in apparently normal men at ordinary pursuits the occurrence of albumin is by no means rare. The recognition of this fact is of importance, and by overlooking it grave mistakes have been made. It is not sufficient to say, as some authorities have said, that any urine showing albumin is pathologic, since such simple factors as diet and posture may sometimes give rise to its presence.

The same thing may be said of hyaline and certain other forms of casts. At one time, and not so long ago, their appearance was looked on as a gravely pathologic indication, but in recent years the situation has greatly changed, and largely because the means of examination are now much more perfect. Before the introduction of the centrifuge urines were allowed to stand some hours, or even a day, before testing in order to let them settle. In this interval bacterial action frequently destroyed every vestige of a cast, and even when this did not happen the sedimentation was at best imperfect. In either event casts were rarely found except when very abundant. With our present, properly speeded centrifuges it is possible to secure practically complete sedimentation and make the examination in a few minutes. Under these conditions we find the casts where before they would have been overlooked.

During the past ten years it has been my custom to require from the members of one of my classes frequent examinations of their own urine. These tests have given some interesting results which may be illustrated by the data tabulated during the last school year by one of my students, Mr. J. W. Boren. Examinations were carried out on the urines of forty men, who from the usual physical examination and history might be considered as in normal health. In each case ten tests were made in two weeks, and if no albumin was found the examinations were dropped. Following an appearance of albumin the tests were kept up to get some idea of frequency and conditions of occurrence. In some cases nearly 100 tests were made, the examinations lasting through three months. In all, 1,042 examinations were made on the forty men, an average of twenty-six to each man. Casts were found in 6.5 per cent. of all the urines examined, and in 62.5 per cent. of all the men. Corresponding to modern experience, but in conflict with the older view, albumin is much less frequently found than are casts. In this work albumin was found in six of the forty cases, or 15 per cent. against 62.5. In four of these men the albumin was very rarely found, while the occurrence was frequent with the other two. In one of them the morning urine was free from albumin, but appeared about noon, after the man had stood two or three hours at a laboratory table. With the other man the albumin was found occasionally in the morning, but very frequently after his work in the laboratory in standing posture. We have here evidently two cases of the orthostatic type, which is not exactly uncommon. These men were under observation a year before the tests were made and have been watched since. They appear to be in good condition in other respects, but what may develop later cannot be foretold. Such cases suggest the desirability of keeping long records, through years if necessary, of urines about which there is any suspicion concerning the occurrence of albumin. The records kept by some life-insurance companies have value in this regard.

As it is hard to draw the line in the question of the traces of albumin in urine, so it is almost equally puzzling to reach a sharp conclusion concerning the meaning of sugar present. All urines show a so-called normal reduction, which is variable in extent from individual to individual. I have had observations made on the urines of all the men in large classes for years back and find a rather wide range in this reducing power. Several substances besides the carbohydrate, especially creatinin and uric acid, are factors in the reduction, but when the effect of these is eliminated the fraction which must be charged to the sugar body is sometimes large enough to be difficult of interpretation. The condition may be normal, or it may suggest incipient diabetes. Here longer and systematic observations are necessary, as with the albumin.

In the metabolism of the protein substances the larger part of the sulphur fraction appears as an inorganic sulphate in the urine, a much smaller amount comes out in the so-called ethereal sulphates, while a very considerable amount fails to be completely oxidized and forms the so-called neutral sulphur of the urine. I believe that too little attention has been given to the proportion in which this neutral sulphur appears, and the condition of its appearance. While it is well known that it may make up from 15 to 25 per cent. of the total sulphur output in health, it has been shown that the fraction in disease may run considerably higher, and attempts have been made to connect it with diminished urea and the failure in the normal oxidative functions of the body. In much of the literature the output of neutral sulphur recorded is not well coordinated with the amount of ingested protein. With improvements in the methods of sulphur determination the variations in the neutral sulphur should be the subject of much more frequent clinical observations.

I have called attention to a number of facts which, while well known to those interested in the chemistry of the urine, are often not known or are overlooked by clinicians. I speak of them to emphasize the practical difficulty in giving a concise answer to the question, what is normal urine. Normal urine is not only a function of the diet, and this is quantitatively the main factor, but it is a function also of certain idiosyncrasies in each individual. It is this factor which makes the greatest difficulty in coming to a conclusion in many a doubtful case, and which suggests the necessity of admitting a much wider range in certain factors than is usually the case. Our more modern quantitative methods for the urine should permit a closer relation between clinical observations and chemical findings in those cases in which the question of normal limits may assume considerable practical importance.

THE ORGANIZATION AND THE SYSTEM OF EXAMINATIONS OF THE CONJOINT EXAMINING BOARD

OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND [*]

FREDERIC G. HALLETT, Secretary
London, England

In order that I may explain our organization and system of examination, it is necessary for me to enter into considerable detail, for it is mainly to the details of the organization that the success of the examination system is due.

The problem awaiting solution with you is, I understand, the development of an uniform system of state examination which shall be of such a character as to secure to the public a guarantee that the doctor who holds a state license has shown adequate proof of his ability to practice his profession. If in the smallest degree our methods of testing candidates for their fitness to practice prove to be worthy of your imitation or of use in guiding you to a still more serviceable system, it will be a source of great satisfaction to the royal colleges and, I need hardly add, to myself also.

Our system of examination has gradually developed as the result of many years of experience in dealing with large numbers of candidates. By large numbers I mean anything from 500 to 800 a year, and the system is so arranged that after the papers are written, the clinical, practical and oral work of each batch of men—from twenty-five to fifty—is completed in one or two days, so that an addition of 100 men at any time means merely four more days' examination.

In Great Britain and Ireland there are several ways in which the license to practice can be obtained. Any graduate in medicine of one of the universities is entitled to be registered as a medical practitioner without further examination; his university M.D. diploma entitling him to practice; in addition several ancient corporations, the Royal Colleges of Physicians and Surgeons in each division of the kingdom and the Societies of Apothecaries, can grant a license with similar privileges, the only difference being that those who hold diplomas of the corporations cannot call themselves doctors of medicine, or use the letters "M.D."

The most important of these professional bodies, however, is the Conjoint Board of the Royal Colleges of Physicians and Surgeons in London. Previous to the year 1884 each of these colleges held separate examinations and granted their diplomas separately. The license of the Royal College of Physicians was always claimed to be a complete qualification in medicine, surgery and midwifery, but the membership of the Royal College of Surgeons was a surgical diploma only, although curiously enough, when once placed on the register, that diploma entitled its owner to practice all branches of the profession.

In 1884, the two colleges combined for the purpose of the examination of students for a complete license to practice, and it is of importance to understand that this organization is in the hands of men who have risen to the highest positions in the medical profession. No influence, commercial, political or financial, can be brought to bear on this combination of corporations. Their independent and high position enables them largely to control and guide medical education, to set a high standard of examination and to maintain honored traditions.

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[*] Read before the Conference on Medical Education of the American Medical Association, at Chicago, Feb. 26, 1912. The discussion on Mr. Hallett's paper will be found under Society Proceedings in this issue of The Journal.

To explain their position it is interesting to recall that the charter incorporating the Royal College of Physicians is dated 1513, while the Royal College of Surgeons, although dating back to 1745, when it was known as the Company of Surgeons, is really descended directly from the Barber Surgeons Company, the records of which go back to the year 1308. I do not intend to go further into the subject of examinations in those early days, for I do not think we have much to learn in the way of examinations from our forefathers, who would, I fancy, be rather astonished at the elaborate detail of the present day ordeal of a qualifying examination!

The Royal College of Physicians is governed by the body of Fellows to the number of about 350. These Fellows, or such of them as take interest and attend meetings of the college, have an equal voice in the discussions of the college. There are standing and special committees which are appointed from time to time to consider any question of policy or of education on which the college may desire advice. The Fellows include all the physicians to the well-known hospitals in London and many of those in the provinces, as well as a certain number of distinguished foreign and colonial physicians.

The Royal College of Surgeons is governed by its council—a body of twenty-four members. This council is elected by the Fellows of the college, who number some 1,500. The councilors are all either active members of the surgical staffs of the large London and provincial hospitals or have only recently resigned their appointments. The council is, therefore, composed of well-known surgeons of established reputation, all or nearly all of whom are engaged in regular clinical instruction.

Each of the royal colleges appoints three members to a body called the Committee of Management, which is the administrative body of the Conjoint Board, and of which I have been secretary since its establishment in 1884. Its duties are as follows:

1. To arrange the examinations in accordance with the regulations approved by the royal colleges.
2. To appoint visitors of the first and second examinations.
3. To consider such questions in relation to the examinations as they may think fit, or such as shall be referred to them by either college or by both colleges, and to report thereon.

This committee is intentionally small as it is essentially a business committee, and those who have experience of business matters know well that a small committee is generally the most business-like. No member may serve as examiner, but the committee generally consists of those who have been at some time or other examiners of the board. It is interesting to me to remember that among the distinguished physicians and surgeons who have served on this committee are Lord Lister, Sir William Savory, Dr. Ord, Sir Henry Pitman, Sir William MacCormac, Sir Jonathan Hutchinson. The present committee consists of Dr. Norman Moore, a former senior censor of the Royal College of Physicians; Dr. Frederick Taylor, present senior censor of the college, whose text-book of medicine is well known; Dr. Ormerod, the registrar of the Royal College of Physicians; Mr. Rickman J. Godlee, the present president of the Royal College of Surgeons; Sir Henry Morris, Bart., a past president of the college; and Sir William Watson Cheyne, Bart., C.B., F.R.S., a past vice-president of the college.

The Committee of Management cannot alter the regulations relating to the course of study or the conditions of admission to the examination, without the authority of the royal colleges. They may consider and report to the royal colleges on any proposal which may be made relating to the course of study or the examinations, and they are authorized to call together for consultation any teachers of any subject who may be interested in a particular proposal. In the first professional examination in chemistry, for instance, if any suggestion is made for alteration in the form of examination or in the syllabus of the subject, the committee would be authorized to consult the teachers of chemistry in the medical schools, and if thought desirable the teachers of the other subjects of the first year of the curriculum. In addition they may, and do, from time to time take the opinion of the deans of the medical schools. These bodies are consulted together or separately, and as a result of the joint deliberations between the committee and the teachers, a report is made to the royal colleges by the Committee of Management. The same applies to other subjects of the first examination and to the second examination in anatomy and physiology. When any question of importance relating to medicine or surgery comes up for consideration, it is generally dealt with in the first place by the royal college respectively interested, and if any decision affecting the curriculum or examination is determined on, the Committee of Management is then requested to draw up the necessary conditions and to report to both colleges. It will be seen, therefore, that the Examining Board of the Royal Colleges, while entirely independent of all medical schools and hospitals, has close relation with the teachers in all branches, while its governing bodies are composed largely of active clinical teachers. It is to be noted, also, that any alteration in the regulations of study made by the royal colleges is carried out at once in all medical schools in England, whether university medical schools or not, for the reason that, by virtue of the influence exerted by the royal colleges through their examinations, which are taken by university as well as by purely conjoint students, no medical school could allow itself to be in the position of not supplying all the conditions required by those students who desire our diplomas.

Our first examination consists of chemistry, physics, and biology, and is taken usually after about nine months' study in a medical school or in an institution recognized by the board for the purpose. Certain secondary schools where modern and equipped laboratories exist are recognized for this purpose, provided that the masters are properly qualified to teach these subjects. No such school or institution is recognized until it has been inspected by a member of the Committee of Management. Students cannot enter for the first examination until they have completed 180 hours of instruction in chemistry, 120 hours of physics, and 120 hours of biology. If a student presents himself for examination from one of these institutions, whatever may be the duration of his course of study, it will count only for six months of the curriculum, leaving therefore four and one-half years to be completed at a medical school and hospital. The instruction may be taken partly or in whole before the entrance examination in general education is passed, but if this is the case a full five years' curriculum of professional study must be completed after the entrance examination is passed.

The examination in chemistry consists of a written paper of nine questions, five in inorganic and four in organic chemistry, six of which must be answered, and for which three hours are allowed. There is also a practical examination of three hours' duration, which includes a qualitative analysis of a single salt or a mixture of two metals and one acid, a simple volumetric analysis and the preparation of a chemical compound in a well-crystallized condition.

A synopsis of this practical examination is issued.

The examination is conducted in our own laboratory where we can take as many as eighty candidates in one batch. The examiners can add a *viva voce* examination in doubtful cases.

The examination in physics is conducted with a paper of two hours' duration consisting of six questions, of which four must be answered, and a practical examination with physical apparatus, during which the examiners take each candidate orally. Candidates are taken in batches of sixteen an hour.

The examination in biology consists of a two-hours' paper of six questions, of which four must be answered, and an oral examination on specimens, each candidate being examined for a quarter of an hour.

A candidate must enter for chemistry and physics together, but he may pass in one only, provided he obtains half the marks required to pass in the other subject. He may take biology separately.

Now the board does not allow a student to commence the study of anatomy and physiology until he has passed in two of three subjects of the first examination. We do not countenance overlapping of the subjects of the first, second and third examinations, but we feel that if the student has only one subject of the first examination still to pass, he may fairly be allowed to commence anatomy and physiology. He must, however, complete the first examination before entrance to the second examination. Between the first two examinations we have, therefore, only a partial block system.

For the second examination a student must dissect during twelve months of the regular sessions and his dissections must include the whole body. He must also attend a course of lectures on anatomy for six months, a course of lectures on physiology for six months, and a course of practical physiology, including histology, also for six months.

The examination consists of papers in anatomy and physiology of eight questions, in each of which six must be answered. They are followed by a *viva voce* examination in each. In anatomy the candidate is examined by one examiner on a freshly dissected body, on preserved specimens, on a living model, etc.; while in physiology he is examined on various instruments, apparatus and diagrams, on histology and physiologic chemistry. In each case another examiner assesses.

Between the second and the final examination there is an absolute block, that is to say, no student may commence the courses required for his final examination until he has passed the examination in anatomy and physiology, and an interval of two years must elapse between the examinations.

During the interval of two years the student is constantly occupied in practical work, both out-patient and in-patient. He has to be a medical clinical clerk and surgical dresser in both out- and in-patient departments, as well as clerk in the gynecologic wards. He has to attend in the ophthalmic department, to attend pathologic histology, clinical pathology and bacteriology, fever hospital practice, clinical demonstrations in a lunatic asylum, besides systematic lectures.

I have dealt very shortly with our earlier examination and with the curriculum of study because I believe that you will be more interested in our final examination, about which I feel that the fullest details are necessary in order that the system may be understood.

In regard to these certificates of attendance on the various courses of lectures, hospital practice, clinical lectures, dressership, clerkships, post-mortem work, etc., we make a very important provision, and that is that every certificate should contain evidence that the student has attended to the "satisfaction of his teachers." This enables a teacher of any subject to enforce discipline in his class, to bring pressure to bear on the slack and idle student, and to encourage thoroughness in attendance, because any one certificate presented by a student with these words deleted would prevent him from presenting himself for the examination. Fortunately it does not often occur that such a certificate is presented to me, because the moral influence of such a regulation is sufficient to enable the medical school authorities to exercise control over the work of their students.

A most important element in our organization is the appointment of the examiners in the final subjects, and on this point I must lay particular stress because we consider that it is largely to the position and reputation of the examiners whom the royal colleges can command that the prestige and high standing of our diplomas is due.

Ten physicians are appointed examiners in medicine by the Royal College of Physicians, ten surgeons by the Royal College of Surgeons to examine in surgery, five examiners in midwifery by the Royal College of Physicians and four by the Royal College of Surgeons. In all cases the examiners are chosen from members of the staffs of the hospitals connected with medical schools either in London or at any of the university centers. They need not necessarily be professors on their subjects, but they must be members of the staff of a large hospital and therefore actively engaged in clinical teaching. It is customary for the examiners appointed by the Royal College of Physicians to serve for four years, while those appointed by the Royal College of Surgeons are elected for five years and may be reelected for a second period of five years.

At the present time we have nine physicians from London hospitals and one from Manchester, while in surgery we have eight from London hospitals, one from Leeds and one from Birmingham. In midwifery we have eight from London hospitals and one from Liverpool.

It has never been found, at either college, that any difficulty arises in regard to filling these appointments with leading physicians and surgeons, for it is not only felt to be an honor to examine for the royal colleges, but it is considered important to a medical school and hospital that one of the staff should be on the examining board; consequently, there is the inducement to an examiner to serve the Conjoint Board both for his own reputation and for that of his school and hospital, although it must be added that the office not infrequently involves a pecuniary sacrifice on his part. Naturally, the examination takes up a considerable part of the examiners' time, but we arrange as far as possible to consult the convenience of the examiners by fixing such hours as will enable them to devote some part of each day to their own practices, and we break from time to time the sequence of days so as to give them a little respite. For instance, in medicine the papers are on a Tuesday and Wednesday, and the first clinical and oral examination is on the following Saturday; then in the next week they examine on the Tuesday, Wednesday and Friday, and if more days are required, in the subsequent week on the same days. Thus an examiner has time to read his papers, to take part in the clinical and oral examination, and to see his own patients. Very much the same applies to midwifery and surgery.

We remunerate the examiners as liberally as possible, and indeed it may safely be said that our examinerships are the most valuable in the country. Last year, for instance, each examiner in medicine received £260; each examiner in surgery received £265; and each examiner in midwifery received £140. The fees for the examiners are determined by the number of candidates; in other words, we pay by capitation fee. Taking the number of candidates examined per day—twenty-four in medicine and surgery and thirty-two in midwifery—the fees work out approximately at £10 a day for each examiner. It occasionally happens that an examiner resigns his office on account of the pressure of his private practice, but it has been a very rare occurrence. Fortunately, as I have already said, there has been no difficulty hitherto in securing examiners of high reputation to fill these positions.

The list of past and present examiners of the royal colleges is one long line of distinguished men known for their scientific reputation, highly respected by their professional brethren, and many honored by their sovereign.

Table 1 gives a list of the various universities and other medical school and hospitals from which we can and do draw our examiners.

TABLE 1.—LIST OF RECOGNIZED MEDICAL SCHOOLS IN ENGLAND

Oxford University.			
Cambridge "			
Durham "			
London University	University College	Incorporated colleges of the University	
	Kings College		
	St. Bartholomew's Hospital Medical School		Schools of the University
	Guy's " " "		
	St. Thomas' " " "		
	London " " College		
	Middlesex " " School		
	Charing Cross " " "		
	Westminster " " "		
	St. Mary's " " "		
	St. George's " " "		
	London School of Medicine for Women.		
Victoria University, Manchester.			
Birmingham "			
Leeds "			
Liverpool "			
Sheffield "			
Bristol "			

The examinations are held four times a year, in January, April, July and October, with the result that if a man fails at one examination he can present himself again in three months' time, but during the interval he must attend again the practice and clinical lectures at a recognized hospital.

Some ten days before the commencement of an examination each separate board of examiners—medicine, surgery and midwifery — is summoned to set questions for the papers. They meet at the Examination Hall and each examiner brings with him one or two questions for discussion; together they select the requisite number of questions, frame them carefully, and so determine the papers.

For the examination in every subject the examiners are paired, that is to say, two examiners always examine together, while every paper must be read and marked by two examiners. The standard of the examination is maintained by tradition, for it rarely happens that more than two examiners go off at a time, frequently only one, and when a new examiner is appointed he is invariably set to examine on the first two or three occasions with one who has been on the board for some time. He learns, therefore, from experienced examiners the range of the examination, the standard of marking, and the traditions attaching to the ordeal. By this means and by constant changes in the pairing of examiners we believe that there is, year in and year out, very little, if any alteration in the standard of the examination. That the standard is a high one is shown by the percentage of rejections. The average annual numbers for the last five years have been as follows:

Total	Passed	Referred	Percent. of Rejections
	MEDICINE		
639	389	250	39
	SURGERY		
690	374	316	45.6
	MIDWIFERY AND GYNECOLOGY		
567	377	190	38

The royal colleges do not profess to turn out an expert in any branch of the profession, but they do aim at assuring the public that a man who has obtained their diplomas is well qualified to practice. For this reason we do not hold separate examinations in special subjects; but from the fact that all subjects are included in one or other branch of the final examination a student must get up his work in all departments. He will be examined very thoroughly in general medicine, surgery and obstetries, with a liability to be taken over special branches according to the patients brought down on the day of his examination, or to the particular branch of the subject which an examiner may think fit to examine on at the oral part. In the papers there are always questions on forensic medicine, therapeutics, hygiene, pathology, medical and surgical anatomy, as well as in general medicine and surgery; and although it is not absolutely necessary that a candidate should answer every question in each paper, yet it is well known that if he leaves any unanswered he is likely to suffer thereby. This of itself necessitates a thorough preparation in all branches.

Candidates who intend to present themselves for the examination must deposit in my office, fourteen days beforehand, a schedule of certificates showing that they have attended all the courses of study required by the regulations, extending over a period of five years. These schedules are all examined by me, and if I find that there is any irregularity in the certificates, or that any condition has not been fulfilled, I have the power to exclude a candidate from the examination.

We have an Examination Hall which was specially built for the purpose, in 1886, at a cost of £26,000, containing large examination rooms, waiting and cloak rooms, a chemical laboratory, an anatomic room, as well as the administrative offices. This building is now found to be inconvenient owing to various developments in the examination, and a new Examination Hall is being erected by the royal colleges in the west central district of London at a cost, including the freehold site, of £50,000. We expect to move into the new building in May next.

My staff prides itself on making all arrangements so complete for the examinations that the examiners shall have nothing to do except to examine. The details are so worked out that every examiner knows which candidate he has to examine in each part. We inform every examiner of the number of patients he has to provide for each day, at the same time sending him cards to be given to the patients for each of the several days' examination. We remind them that they must provide the pathologic specimens, macroscopic and microscopic and other examination material. We also give them a program of the exact days and hours of their attendance. We impress on them the absolute necessity of punctuality and the importance of adhering strictly to the rules laid down by the Committee of Management, for we maintain that in dealing with a large number of candidates, unless system, punctuality and regularity are maintained, it is impossible to guarantee equality and thorough impartiality in the examination.

An important point in our system is that every candidate, when he has entered his name, is known by number only. The list of candidates for each part of the examination is compiled by my staff, and the examiners are given only the numbers of those whom they have to examine in the several parts. Occasionally it happens that an examiner may be struck by the excellence, or the reverse, of some candidate's examination, or he may fancy he recognizes some one and he may ask "Who is so and so?" or "Where does he come from?" The invariable answer is: "You shall know when the examination for the day is completed and the report is determined." No personal influence is allowed to affect the result of the examination, and none is ever attempted.

I will now proceed to describe the examination in medicine. Of the ten examiners appointed, we employ only eight at a time, leaving two to sit out in rotation. These may be asked to fill any vacancy caused by illness or urgent call. The examiners (eight in number) are divided into four pairs called A, B, C, D, and in order that the details of the system may be followed, I give (in Table 2) the actual names of the present examiners and the hospitals to which they are attached. At section A there will be, we will say, two examiners from St. Bartholomew's and Middlesex hospitals, while at B there will be two examiners from University College Hospital and Manchester. These four examiners will examine all the candidates bearing odd numbers and, therefore, in the office we arrange that no candidates from the hospitals in question are allotted odd numbers. In the same way, sections C and D will be examiners from King's College and St. Mary's and from London Hospital and Westminster, respectively; consequently in the office we arrange that no candidate from those hospitals are allotted to even numbers. Students from other medical schools (not represented by examiners) are fitted into either odd or even numbers to balance the two sides.

When the papers are written, the odd numbers are sorted out and put together. From these odd numbers the alternate numbers 1, 5, 9, 13, etc., are sent to section A, and the others, 3, 7, 11, 15, etc., to section B, half of the papers allotted each section being sent to each examiner of the section. The two examiners of a section read the papers sent to them and exchange with one another, so that by the time the clinical and oral examinations commence, the examiners have read the papers of those candidates who will be examined on any particular day. They will not only have read them, but before the clinical examination commences they will have discussed them, and if there is any difference in the marking of the two examiners, they will go through the paper together and agree on the mark to be allotted. In practice, it is found that the marking of the individual examiners is extremely close and that very little adjustment is required before the final mark is awarded. In case of a difference of opinion, benefit of the doubt is given to the candidate. On the Saturday following the two medicine papers, the first batch of the clinical examination is held at the Examination Hall, where we arrange two large rooms temporarily as hospital wards, one for males and the other for females. These rooms are shown in Figure 1—the longer one is 100 by 33 feet, and the smaller 60 by 25 feet. The patients are sent by the examiners from their hospitals, and each patient brings a card on which are endorsed short notes of the case. These patients are either selected by the examiner himself or by his house physician, and may come from the wards or from the out-patient department, and they are dispatched in cabs, the expense of which the examining board pays. We also give to each patient a fee for coming. The examiners take the trouble to vary the cases as much as possible, as will be seen from the following list of patients who attended on one day during the last examination.

List of Medical Patients in Attendance on Saturday, Jan. 13, 1912

1. Hemiplegia with phthisis—probably tuberculous—of brain.
2. Paraplegia from caisson disease.
3. Morbus cordis—mitral stenosis.
4. Rheumatoid arthritis from gonorrhea.
5. Old hemiplegia—probably thrombotic.
6. Chronic arthritis—rheumatoid.
7. Ascites—cirrhosis of liver.
8. Dorsal myelitis—spastic paraplegia.
9. Aortic regurgitation.
10. Mitral regurgitation with pulmonary infarction.
11. Splenomedullary leukemia.
12. Chronic pulmonary tuberculosis.
13. Aortic and mitral disease—rheumatic endocarditis.
14. Alcoholic cirrhosis of liver.
15. Pulmonary apical consolidation—probably pneumonic.
16. Aortic regurgitation.
17. Disseminated sclerosis.
18. Granular kidney with hydatid of liver.
19. Endocarditis—mitral regurgitation—enlarged liver and spleen.
20. Hypertrophy of heart—interstitial nephritis.
21. Hypertrophic muscular dystrophy.
22. Lichen planus—general distribution.
23. Thoracic aneurysm obstructing superior cava and pressing on trachea.
24. Locomotor ataxia with ptosis and optic atrophy.
25. Tuberculous peritonitis.

It will be noticed that in each department, male and female, there are so many beds and chairs allotted to each section, the partitions being formed by movable screens. It may happen that on one day Section A, for instance, has two males and four females, in which case the extra beds will be taken from the male room and put into the female room for Section A; but usually the beds are distributed as shown in Figure 1. At the time of commencing, 2 p. m., four candidates are brought into the room; one is taken to each pair of examiners—A, B, C, D. The examiners from Section A tell their candidate to examine one of the patients, and he is left alone ten minutes to make his examination of the patient. The same happens at each of the other sections. At the end of ten minutes the examiners go to him, one of them takes him carefully over the case, while the other listens and assesses. The examination on this first case continues for the period of ten minutes, and is known as the long case. At the end of the second ten minutes the examiner who has been assessing then takes the same candidate over two or three short cases for another ten minutes, while the first examiner assesses. At the commencement of the third period of ten minutes a second batch of four candidates is brought in, and so overlaps the first batch by ten minutes, and when at the end of this third period of ten minutes, the first candidate is dismissed, the second man has completed his ten minutes' preliminary examination of the long case by himself and is then taken by the first examiner over it. Although, therefore, the examiners have before them a candidate for twenty minutes only, the candidate himself is under examination for half an hour. By this method we can take twenty-four candidates in two hours and ten minutes, six candidates by each section. In every case the examiners allot their marks as the candidate leaves them. They may divide their marks between the long case and the short cases, or they may mark the candidate on the whole, according to their individual judgment, but they must allot their marks immediately on the completion of the candidate's examination.

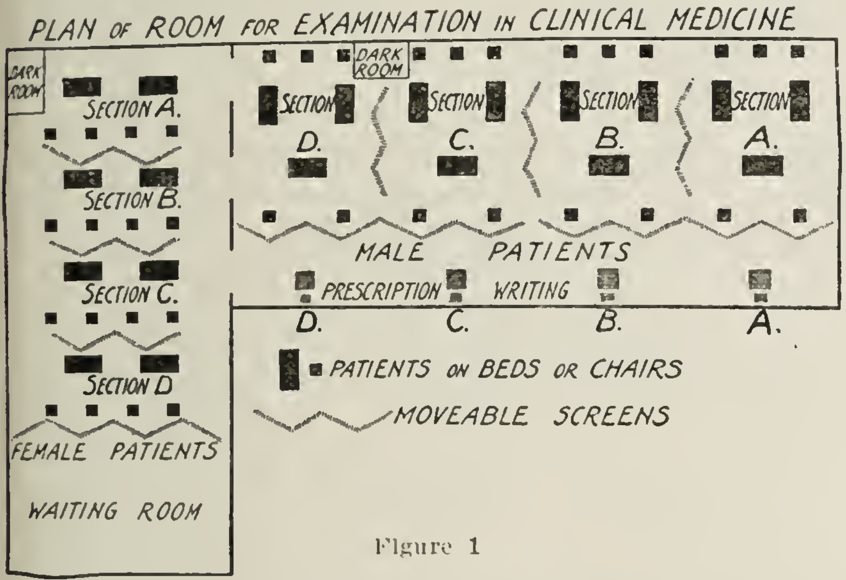

Figure 1

I may here point out that as the papers of Candidates 1 and 5 have been examined by Section A, Candidates 3 and 7 are examined by Section A at the clinical examination (see Table 2), and, therefore, their mark on the clinical examination is given without knowledge of what the candidate has done on his papers. When each candidate has finished with the examiners, he goes to a side table and he is required to write a dietary table and prescription for some hypothetic case which is given by the examiners. These written dietary tables and prescriptions are not marked with the clinical examination, but are handed to the examiners at the oral part of the examination in the evening and are taken into account in allotting the mark at that examination.

It may be thought that there would be danger of the candidates obtaining knowledge of the patients on which they were to be examined, but, in the first place, it will be noticed that as the patients are sent by the examiners from their own hospitals, and as the examiners do not examine their own students, it is obvious that the students are examined on patients from hospitals other than their own. The question of collusion between the students of the hospitals in order to find out what patients are being sent, does not appear to us to be of importance because each student will not be examined on more than three, or at the most four, out of at least twenty-four patients, and there is no means of knowing beforehand by which examiner and on what cases he will be examined. But even supposing that the candidate did know beforehand of a case which he was examined on, the experience of the examiners in discussing with him the signs and symptoms is quite sufficient to guard against any undue advantage from this cause. To avoid the possibility of those who have been examined early in the afternoon communicating the cases to those who come later, a very simple expedient had been adopted. We summon half the candidates to attend at 1:45 and shut them up in a room by themselves. By the time that the third batch of four men, or half the candidates for the afternoon examination, have gone into the room, the second twelve are summoned to another room and kept there until the first twelve have left the building. By this means we keep those who have been examined separate from those who have to come, and yet no candidate is kept waiting for any very long period, a point which must be considered when we think of the state of mind of a candidate about to be examined!

The examiners are free then at 4:10 p. m. until they reassemble at 7:40 in the evening for the oral and practical part of the examination in another room arranged as shown in Figure 2. At one end of the table of each section there are all the reagents required for urinary tests and sets of microscopes, while at the other end there are dishes of gross pathologic specimens either fresh or preserved. In the same way as at the clinical examination, four candidates are brought into the room at 7:50, by which time the examiners have arranged specimens under the microscopes and have put out so many specimens of urine. The candidate at each table is told to test one urine and to look at the three specimens under the microscopes. They are allowed ten minutes to do this by themselves. At 8 o'clock the candidate moves to

TABLE 2.—ARRANGEMENT OF EXAMINATION IN MEDICINE FOR ONE BATCH OF TWENTY-FOUR CANDIDATES

			Paper	Clinical	Oral and Practical
Section A— Dr. Herringham Dr. Voelcker	St. Bartholomew's Middlesex	Examine	1, 5, 9, 13, 17, 21	3, 7, 11, 15, 19, 23	1, 5, 9, 13, 17, 21
Section B— Dr. Sidney Martin Dr. Berry	University College Manchester	Examine	3, 7, 11, 15, 19, 23	1, 5, 9, 13, 17, 21	3, 7, 11, 15, 19, 23
Section C— Sir Hugh Beevor Dr. Harris	King's College St. Mary's	Examine	2, 6, 10, 14, 18, 22	4, 8, 12, 16, 20, 24	2, 6, 10, 14, 18, 22
Section D— Dr. Hadley Dr. Hebbs	London (Hosp.) Westminster	Examine	4, 8, 12, 16, 20, 24	2, 6, 10, 14, 18, 22	4, 8, 12, 16, 20, 24

The candidates bearing odd numbers may come from any medical school except St. Bartholomew's, Middlesex, University College or Manchester. The candidates bearing even numbers may come from any medical school except King's College, St. Mary's, London or Westminster. The same arrangement is used for the examination in obstetrics the table in front of the examiner, who then takes him over the urine and specimens and any other subject he likes for ten minutes, while the second examiner assesses. At the end of that ten minutes the second examiner takes him over gross pathology and any subject he likes for ten minutes more, but during this last ten minutes another candidate is brought in and given one of the samples of urine and the same or other microscope specimens as the examiner thinks right. In the same way as at the clinical examination, the examiners award their marks as soon as the candidate has finished his examination, and they take into account the dietary table and prescriptions written by the student in the afternoon. By 10 o'clock the twenty-four candidates who were examined at the clinical examination in the afternoon will have been examined at the oral and practical part, and the examiners then retire to the committee room to decide on the result of the examination. Incidentally, I may mention that the specimens of urine are sent from the hospitals and brought by the patients in the afternoon, while the gross pathology specimens are arranged for by the examiners, who send from the museum of their own hospitals various preserved specimens, or fresh specimens from the post-mortem room.

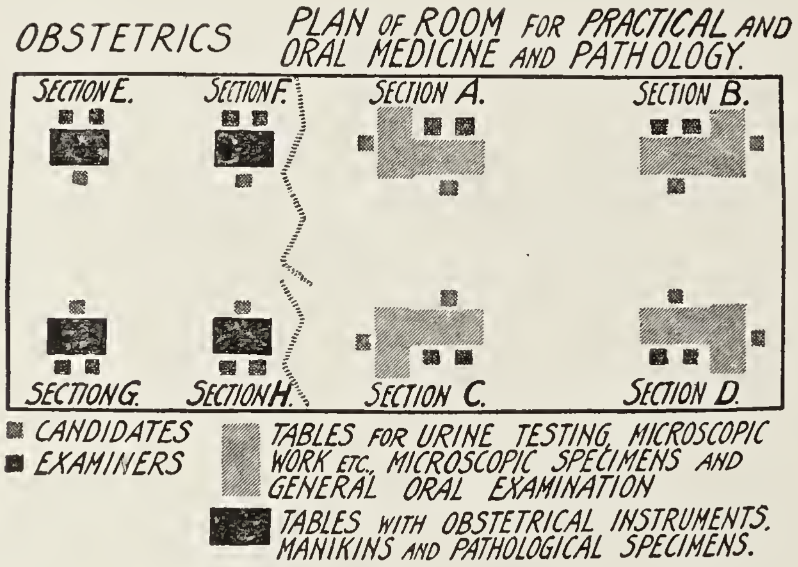
OBSTETRICS
PLAN OF ROOM FOR PRACTICAL AND ORAL MEDICINE AND PATHOLOGY.
SECTION E.
SECTION F.
SECTION A.
SECTION B.
SECTION G.
SECTION H.
SECTION C.
SECTION D.
CANDIDATES
EXAMINERS
TABLES FOR URINE TESTING, MICROSCOPIC WORK ETC., MICROSCOPIC SPECIMENS AND GENERAL ORAL EXAMINATION
TABLES WITH OBSTETRICAL INSTRUMENTS, MANIKINS AND PATHOLOGICAL SPECIMENS.

Figure 2

The examiners then sit round a table and the secretary calls out the number of the candidates in turn. Section A will give the marks on the papers of Candidate 1, Section B will call out his clinical mark, and Section A will call out his oral mark. These marks are totalled and the candidate is declared to have passed or failed. C and D will then give the marks of No. 2, B and A the marks of No. 3, D and C the marks of No. 4, and so on. There is practically no reconsideration of these marks as it will be observed that although 50 per cent. is considered the standard of the examination, the actual number — twenty-seven — is half a mark below 50 per cent. The system of marking is shown in Table 3. It is peculiar to the royal colleges and is somewhat ancient in character, but whether one marks in tens or hundreds is quite immaterial so long as one works to one definite standard.

The marks are small because, the examination being for a license to practice and not a competitive or honors examination, there is no necessity for very nice discrimination between the candidates. A man for example who writes good papers in medicine and surgery and midwifery would be marked 6, or 7, 12 and 6 respectively, but the man who is just sufficient for a pass would receive 5, 5, 9 and 5, respectively, while a poor man would only get 4 or 3, 6 or 7, and 4 on the papers. He may pick up by doing well at the clinical, practical and oral parts, but he must get 50 per cent. to pass in any subject. The minimum marks shown in Table 3 merely mean that if a student at any one part of the examination is marked below the minimum, he cannot pass even if, by doing exceptionally well on the other parts, he manages to reach a total of 50 per cent.

The candidates are summoned to return to the building by 10 o'clock, and by 10:45 each candidate is personally informed of the result of his examination. Those who have passed are brought into the room where the examiners are sitting and are formally addressed by the chairman of the board and they sign their names in the register. Those who fail are given a printed notice telling them that they have failed and that they must attend the practice of a recognized hospital for three months before presenting themselves again.

It will be seen, therefore, that we arrange the various parts of the examination in such a way that there shall be no delay in arriving at the result, because we see no reason why, if the system is properly organized, there should be any time of suspense for the student between

TABLE 3.—CONJOINT EXAMINATION BOARD OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND *

Medicine

Subjects	Time	Marks		Marks to Pass
		Maximum	Minimum	
Written { Paper I	3 hours	10	6	27
Written { Paper II	3 hours	10	6	
Clinical	30 minutes	20	6	
Practical and oral	30 minutes	15	4	
Pathological and oral	30 minutes	15	4	
		55		

Surgery

Subjects	Time	Marks		Marks to Pass
		Maximum	Minimum	
	3 hours	18	4	30
Written paper	30 minutes	12	3	
Clinical	15 minutes	10	2	
Surgical anatomy and apparatus	10 minutes	10	2	
Oral table 1	10 minutes	10	2	
Oral table 2				
		60		

Midwifery and Gynecology

Subjects	Time	Marks		Marks to Pass
		Maximum	Minimum	
Written paper	3 hours	10	3	10
Practical and oral table 1	10 minutes	5	1	
Practical and oral table 2	10 minutes	5	1	
		20		

* All papers must be read by both the examiners of a section.

the completion of his examination and the announcement of the result.

SURGERY

The arrangement of the examination in surgery differs from that in medicine, because all five pairs of examiners are employed and it is the practice for every student to be examined in some part or other by each of the five sections. The system is shown by Table 4, and we provide in the office that no papers of students from, say, the hospitals represented by the examiners at Section A are sent to them to read. It follows that the students from these two hospitals must come before their examiners at some other part of the examination, but when this happens we put down the examiner who is not the student's teacher to examine him, while the other, his teacher, merely assesses. In this way the teacher never examines his own student and only assesses to the extent of one-tenth, while his colleague does not know that he is examining a student from the other's hospital. To avoid the possibility of a certain examiner having to take a series of candidates consecutively from his colleague's hospital, the list is made out in batches of ten, care being taken, for instance, that Nos. 1, 6, 11 and 16 shall not all be from the same hospital, although Nos. 1 and 11 may be from the same hospital and numbers 6 and 16 from another.

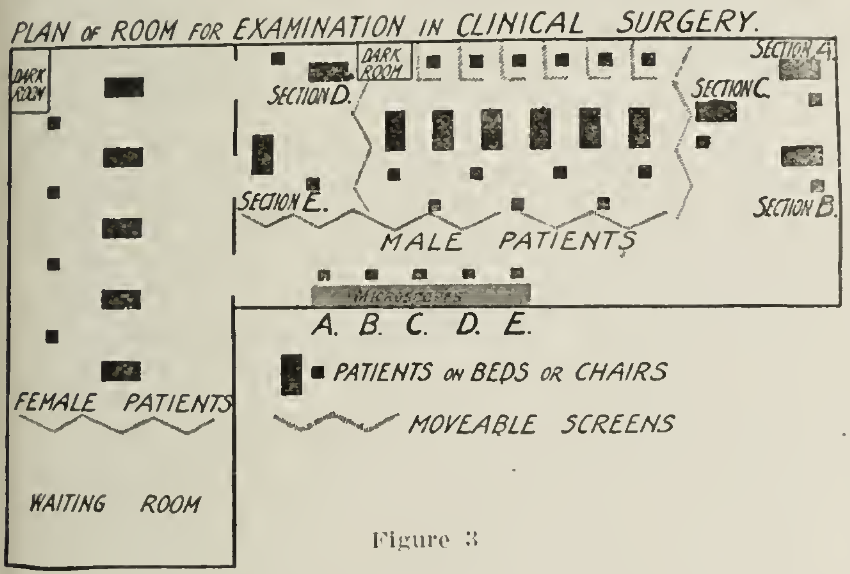

Figure 3

The patients are sent to the Examination Hall by the Examiners as in the case of medicine, and we usually arrange that there are at least thirty surgical cases present in the room. The examiners attend half an hour before the commencement of the examination, that is at 4:30 p. m., to select patients for what are again called the long cases. Figure 3 shows the arrangement of the room for the surgical examination. In the right-hand partition there are three beds and three chairs, and in the left-hand two beds and two chairs; the right-hand is for male and the left for female patients, but it depends on the number of those of each sex sent down whether all the long cases be male or not. The examiners select ten patients for the long cases, two of which are allotted to each section, and the examiners of that section fully examine those patients before the candidates go to them. The other patients are spread about the rooms and, unlike the medical cases, the surgical patients are common to all examiners. At 4:15 five candidates are brought into the room and one is sent to the two patients allotted to Section A, another to the two patients allotted to Section B, and so on; they are told that they have a quarter of an hour to examine those two patients. These are known as the long cases. At the end of the quarter of an hour's examination these five candidates go to their respective sections of examiners, and they are taken over the cases they have examined for about five or six minutes by one examiner while the other assesses, and during the remainder of the quarter of an hour they are examined on short cases by the same examiner. During the time these men are being examined, another batch of five students is brought into the room to examine the long cases. In this way, although each candidate is before the examiners for a quarter of an hour only, he has altogether half an hour's examination of patients. The examination continues until 7:15, by which time each section will have examined nine candidates and a total of forty-five will have been examined on patients. The following is the list of patients in attendance Monday, Jan. 15, 1912:

Long Cases

1. Gummatous disease of testicle.
2. Lumbar abscess.
3. Synovitis of knee. Congenital syphilis.
4. Mass of hard enlarged glands in the neck of a man aged 54, probably due to a malignant disease in throat.
5. Charcot's disease of hip.
6. Tuberculous disease of testicle.
7. Hammer-toe and sebaceous cyst on scalp.
8. Old osteomyelitis of tibia with genu valgum.
9. Sarcoma of forearm.
10. Adenoma of thyroid.

TABLE 4.—THE ARRANGEMENT OF THE EXAMINATION IN SURGERY

			Paper	Clinical	Surg. Anatomy and Apparatus	Oral Surgery and Pathology	Oral Surgery and Pathology
Section A— Mr. Pollard ..... Mr. Waterhouse ..	University College Charing Cross....	Examine	1, 6, 11, 16, 21, 26, 31, 36, 41	2, 7, 12, 17, 22, 27, 32, 37, 42	3, 8, 13, 18, 23, 28, 33, 38, 43	4, 9, 14, 19, 24 29, 34, 39, 44	5, 10, 15, 20, 25, 30, 35, 40, 45
Section B— Mr. Lane .... Mr. Ballance	St. Mary's ...... St. Thomas	Examine	2, 7, 12, 17, 22, 27, 32, 37, 42	3, 8, 13, 18, 23, 28, 33, 38, 43	4, 9, 14, 19, 24 29, 34, 39, 44	5, 10, 15, 20, 25, 30, 35, 40, 45	1, 6, 11, 16, 21, 26, 31, 36, 41
Section C— Mr. Dunn .... Mr. Waring	Guy's .... St. Bartholomew's	Examine	3, 8, 13, 18, 23, 28, 33, 38, 43	4, 9, 14, 19, 24 29, 34, 39, 44	5, 10, 15, 20, 25, 30, 35, 40, 45	1, 6, 11, 16, 21, 26, 31, 36, 41	2, 7, 12, 17, 22, 27, 32, 37, 42
Section D— Mr. Spencer ..... Mr. Knags	Westminster ..... Leeds	Examine	4, 9, 14, 19, 24 29, 34, 39, 44	5, 10, 15, 20, 25, 30, 35, 40, 45	1, 6, 11, 16, 21, 26, 31, 36, 41	2, 7, 12, 17, 22, 27, 32, 37, 42	3, 8, 13, 18, 23, 28, 33, 38, 43
Section E— Mr. Haslam ..... Mr. Hutchinson ..	Birmingham ..... London (Hosp.)..	Examine	5, 10, 15, 20, 25, 30, 35, 40, 45	1, 6, 11, 16, 21, 26, 31, 36, 41	2, 7, 12, 17, 22, 27, 32, 37, 42	3, 8, 13, 18, 23, 28, 33, 38, 43	4, 9, 14, 19, 24 29, 34, 39, 14

The candidates bearing Nos. 1, 6, 11, 16, etc., may come from any medical school except University College or Charing Cross.
" " " Nos. 2, 7, 12, 17, etc., " " " " " " " St. Mary's or St. Thomas'.
" " " Nos. 3, 8, 13, 18, etc., " " " " " " " Guy's or St. Bartholomew's.
" " " Nos. 4, 9, 14, 19, etc., " " " " " " " Westminster or Leeds.
" " " Nos. 5, 10, 15, 20, etc., " " " " " " " Birmingham or London (Hosp.).

Short Cases (Men)

1. Enlarged bursa over olecranon following injury.
2. Old osteomyelitis of humerus (when aged 21) in a man of 40.
3. Epithelioma of tongue with enlarged glands.
4. Bubonocele (large), man 39.
5. Hernia, inguinal (age 73).
6. Small hydrocele with some thickness of epidermis (boy 16), probably tubercle.
7. Specific ulceration of palate (age 38).
8. Impacted intracapsular fracture neck of femur (age 33).
9. Iliopsoas abscess with spinal caries (age 18).
10. Charcot's disease of hip (age 37).
11. Sebaceous tumors of scalp.
12. Varicocele and cyst of opposite epididymis (age 33).

Women and Children

13. Child, aged 3, very bad congenital talipes equinovarus.
14. Angular curvature of spine, child aged 9.
15. Child of 9 with specific (congenital) osteitis and periostitis and ulceration of neck.
16. Child, aged 7, old injury to elbow, fracture of internal condyle.
17. Specific ulcer of leg (age 52).
18. Enlarged glands of neck, secondary to epithelioma of upper jaw (age 42).
19. Large malignant tumor of breast (age 58).
20. Enlarged gall-bladder (age 43).
21. Enlarged gall-bladder (age 46).
22. Tuberculous glands of neck (age 34).

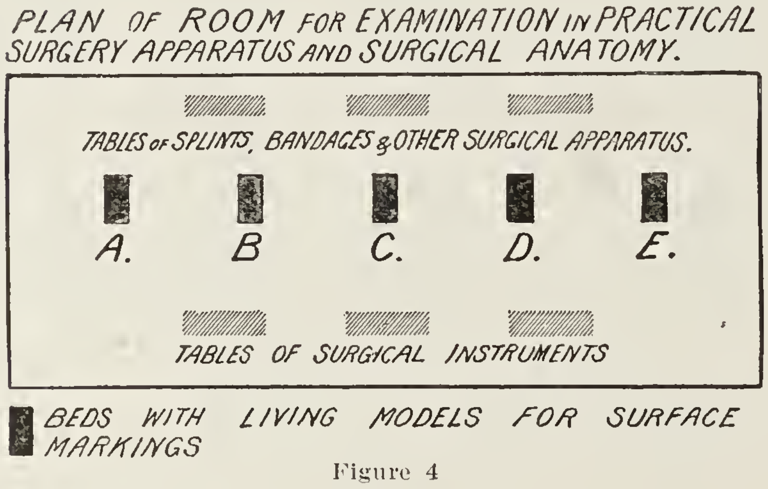
PLAN OF ROOM FOR EXAMINATION IN PRACTICAL SURGERY APPARATUS AND SURGICAL ANATOMY.
TABLES OF SPLINTS, BANDAGES & OTHER SURGICAL APPARATUS.
A.
B
C.
D.
E.
TABLES OF SURGICAL INSTRUMENTS
BEDS WITH LIVING MODELS FOR SURFACE MARKINGS

Figure 4

On the completion of the clinical examination of each batch of five men, they are sent to a table to examine specimens of surgical pathology under the microscope, two of which are given to each. The report on these specimens is made in writing on a form specially provided and taken into account on the next day at the surgical oral examination. A list of the specimens shown is handed to each examiner. The candidates are summoned to the building in batches of five up to half time, and as they finish they wait in a room by themselves until at half time the remainder of the candidates who have been summoned in one batch have arrived and have been assigned to another room. The first half are then allowed to go. There can be, therefore, no communication between those men who have been examined and those who are to be examined. The patients, who are each paid a small fee, are then dispatched to their hospitals. At 7:45 the examiners begin an examination in surgical anatomy and apparatus. During the interval my attendants rearrange the room and the examiners return to find it as shown in Figure 4. On each of these beds there is a man undressed, who is utilized as a model for surface marking. On tables arranged along the room there are bandages and splints and instruments of all sorts. The candidate is examined by one examiner and assessed by the other, and he may be asked to apply a bandage or a splint, to mark out the course of an artery, vein or nerve, to explain how he would perform a certain operation, marking out with chalk the flaps or the course of the incision, etc.; he is asked to choose from the trays the instruments he would use and to show how he would use them; to show by means of glasses and diagrams how he would test a patient's eyesight, etc. This examination lasts in each case for fifteen minutes and at the end of that time the examiner and his assessor award the mark. The examiner who has been assessing the first candidate takes the next candidate and they alternate through the evening. The same forty-five men are examined in this manner up to 10:00 p. m. The marks are all handed to me and I enter them in the report book. During the evening each pair of examiners will have also handed to me the marks on the written papers of the candidates being examined on that day. The next day the same forty-five candidates are summoned in batches of five at twenty minutes' interval, to the Royal College of Surgeons, where they are examined *viva voce* on general surgery and pathology. Each table, at which a pair of examiners sits, is covered with pathologic preparations from the celebrated Hunterian Museum of the college, and these preparations are used as a text on which to examine the candidates. This examination commences at 5 p. m., and each candidate goes to two pairs of examiners for ten minutes each. It will be seen, therefore, in Table 4, that Candidate 1 is examined by Section A for the paper, by Section E for the clinical part, by Section D for the surgical anatomy, by Sections C and B at the two pathologic tables, and the other candidates are distributed in a similar manner over the five sections. At 7 p. m. the examiners break off, when the marks of the thirty candidates whose oral examination has been completed are entered by the secretary. The examiners sit round a table, and the secretary calls out the numbers and marks from a book so that they may be checked by the examiners from their own records, and the chairman then declares those who have passed and those who have failed. The candidates are personally informed of the result of their examination: those who have passed sign the by-laws of the college and are then formally introduced into the examiner's room, where they are congratulated by the chairman and informed that they have satisfied the examiners. The examiners then proceed with the examination of the remaining fifteen men, which takes another hour, and at the end of that time the marks are called out again and the successful candidates are admitted in the same way as were the first batch.

The examiners leave at 9 p. m., having in the two days completed the examination of forty-five candidates. One hundred and eighty candidates are, therefore, examined in eight days—four pairs of two days. The surgery paper is written on a Friday and the pairs of days are usually Monday and Tuesday, Thursday and Friday, thus giving intervals to the examiners, not only to read the papers but to see their private patients. The hour of commencing each day being 4:30 or 5 as the case may be, moreover, gives the examiners considerable freedom.

For all subjects we allot the early numbers to the provincial candidates, so as to minimize as far as possible the expense of staying in London. A provincial candidate need not stay more than a week in London even if he is taking the whole examination, but if he is taking one or two subjects only four or five days will be sufficient.

MIDWIFERY

There are nine examiners in midwifery of whom eight take part in each examination, the one not employed being determined by rota. They are arranged in pairs, as usual called E, F, G, H. The same system is adopted as in the case of medicine, that is, the examiners at E read the paper of No. 1 and examine him in midwifery, while Section F takes his oral in gynecology. Section F reads the paper and takes the midwifery oral of No. 3, while Section E examines him in gynecology. In the same way Sections G and H deal with the even numbers. The office arrange in the same way that no students are examined by E, F, G and H respectively, who come from the hospitals to which the examiners are attached.

The paper on midwifery and gynecology is on a Thursday, i. e. between the medicine and surgery papers, and the oral examination is held on the same evening as the medicine examination, but from 7:00 to 9:40 p. m. The tables at which the examiners sit are furnished with all sorts of obstetric instruments, with manikins and various mounted and preserved specimens (see Figure 2).

Four candidates are called in at a time, one to each table. They are all examined for ten minutes on midwifery; at the end of this period the candidates at E and F change with one another, as do those at G and H, and they are all then examined in diseases of women for ten minutes, after which they leave the room and a fresh batch is brought to the tables.

By 9:40, therefore, thirty-two candidates will have been examined, and the examiners then call over their marks to me. I enter them and declare the results. The candidates who are summoned to return at 9:40 are then personally informed by a member of the office staff if they have been successful or not.

Now, one criticism which will probably be made is that the time of the examination is all too short, but I will answer that criticism by saying that the examination is not competitive but a test of fitness to practice.

The examiners do not ask abstruse or out-of-the-way questions but examine on straightforward matters that everyone ought to know. They do not expect an absolute diagnosis but they judge of the common-sense way a man goes about his work, of the questions he asks his patients, of the reasons he gives for forming his opinions, of the tests he uses and the methods he employs.

It is surprising how much an experienced examiner, and even an inexperienced man who has worked for a short time with an old examiner, can extract from a candidate in fifteen minutes, and it must be remembered, too, that, as I have emphasized, all our examiners are engaged in teaching and know what may fairly be expected of a student who has reached this stage in his career.

It may be interesting to state what it costs to work a final examination in medicine, surgery and midwifery for two hundred men.

The examination fees come to the following amounts:

Medicine	£700	
Surgery	850	
Midwifery	380	
	——	£1,930
Eight days' medical patients		30
Four days' surgical patients		30
Conveyances		10
Extra attendants and model men		15
Total		£2,015

In addition there is, of course, the maintenance of the Examination Hall, the general organization expenses, including the salaries of the secretary and office staff and attendants.

Be it remembered that we have no state grant in aid; we have to depend entirely on the fees for our diplomas. These fees are large—£42 ($210)—part of which is paid for the final examination. These fees—£42 ($210)—are distributed over the examination: thus $52 is paid for the first examination; $52 more, a year and a half later for the second examination; and $105 at the end of the curriculum for the final examination. No doubt this will seem a large sum to pay for a license to practice, and it is obvious that with the fees paid in this country for the degree of M.D. it would be impossible to conduct an examination on the scale such as I have described. It would be necessary either that the fees payable for the M.D degree should be increased greatly, or that the state should provide funds for the conduct of a satisfactory practical examination. In spite of these high fees and of our heavy percentage of rejections, probably to a large extent because of the high standard, the men come to us for our diplomas even when they are also taking university degrees.

Now, I wish to call attention to a very interesting fact:

Although every university degree and every diploma granted by the royal colleges carries with it precisely the same privileges with regard to registration as a medical practitioner, yet it is the practice of a large majority of those who are seeking degrees of doctor of medicine at the universities in England to take also the diplomas granted by the royal colleges. This does not apply to Scotland or Ireland with their corresponding colleges of physicians and surgeons. For example, of the graduates in medicine of the universities of Oxford and Cambridge, no less than 82 per cent. take our diplomas; of the University of London 84 per cent. take our diplomas; while of the total university medical students in England, 67 per cent. enter for the examination for our diplomas.

All these men have, therefore, to undergo twice over a final examination in medicine, surgery and midwifery—one by their university, and secondly by our board, and they have to pay a comparatively heavy fee for our diplomas. It will naturally be asked why they do so. There are various reasons. First, our diplomas are known throughout the United Kingdom for the practical nature, the fairness and the high standard of the examination and they have a well-established reputation and prestige.

Then in some cases, although we require a full five years' curriculum, our diplomas can be obtained a little earlier than the university degree, but this is by no means general. Another reason, I think, is that many university men look forward to obtaining our higher diplomas—our Fellowships which are almost essential for consulting practice in England, and they, therefore, wish to become our licentiates and members as a stepping-stone to those diplomas.

SUMMARY

We can examine at one time as many as 250 candidates. In the case of chemistry they would all write their paper on one day; they would be examined in the laboratory in three batches of eighty men each, leaving a few for a fourth batch. These four batches would take two mornings and two afternoons.

In physics the candidates would be examined at the rate of sixteen men an hour in the practical part, or a total of sixteen hours spread over three days.

In biology we take only thirty-six candidates a day for the oral part, and therefore the examination would occupy seven days.

For the second examination in anatomy and physiology we examine forty-eight candidates a day in the oral part, and we should therefore take five days and a part to get through this number.

As a matter of fact, however, we do not have such large numbers for the first and second examinations, because many of our candidates obtain exemption from these examinations by passing in the subjects at their universities.

For the final examination the papers in medicine are written on a Tuesday and Wednesday and the clinical and oral part commences on the following Saturday when twenty-four candidates are taken. We should examine four days in the next week when ninety-six more candidates are taken, and four days in the week after, when again ninety-six candidates would be examined, leaving thirty-four to be taken in one and one-half days in the following week, so that in three weeks from the date of the paper we should finish the whole of the candidates.

In midwifery we examine thirty-two candidates a day, therefore in eight days—four days a week—we should complete the examination and, as the paper is written on a Thursday and the first oral night is on the following Saturday, it takes exactly a fortnight.

For surgery, the paper is written on a Friday and the oral commences on the following Monday. We take ninety candidates in four days in the following week and ninety candidates in the week after that, and the remaining seventy candidates take another four days, two of which would be short, so that in three weeks from the date of the paper the examination is finished.

Take an individual candidate; he will have two papers of three hours each in medicine, one of three hours in midwifery, and one of three hours in surgery. He may be summoned to attend for his oral examination on any of the days appointed for the practical and oral parts. On the day that he is summoned to attend for medicine and midwifery he is examined in clinical medicine for half an hour, in practical and oral medicine for half an hour; in midwifery for twenty minutes; in surgery he would be summoned for another day for half an hour's clinical examination and fifteen minutes' examination in surgical anatomy and apparatus, and for twenty minutes' examination in pathology and surgery on the following day, making a total of sixty-five minutes for his surgical examination.

An examiner in medicine would therefore be occupied for four and one-half hours on each of ten and one-half days and would receive in fees £110 ($550); an examiner in midwifery would be engaged on seven days for two hours and forty minutes each, and would receive £60 ($300); and an examiner in surgery would be engaged on ten days for five and one-half hours and four hours alternately and for two shorter days, and would receive in fees £106 ($530).

At any rate our examinations are practical and thorough, and therefore I consider that our license has a peculiar value, namely, that the mere fact of a man having to undergo a series of examinations before such a number of strange examiners, and away from the surroundings and associations of the institution in which he has been educated is in itself a test of his ability to act in emergency, to adapt himself to circumstances, and to prove himself capable of rapid resource.

It is now thirty-four years since I first entered the office of the Royal College of Surgeons, and for twenty-four years I have been secretary of the Conjoint Examining Board of the two royal colleges. During these years the examinations and the organization have greatly developed. I have seen the practical examinations of other bodies—indeed, in addition to our own examinations the management of a considerable part of the examination for the degree of the University of London, as well as the examination for surgeons for H. M. Navy and for the Indian Medical Service is in my hands. Naturally I have acquired certain convictions as the result of this experience and have contemplated how an ideal system of state examination should be framed, where no vested interests stand in the way. May I conclude by shortly stating the outlines of such a scheme?

I. Assuming that medical education is on a sound and efficient basis, the state board should be representative of the professorial staffs of the medical schools and hospitals.

II. Should the board be a large one, an executive committee consisting of six, or at the most eight, members of the board, should be appointed which should be entrusted with the administration of the examination on conditions laid down by the state board.

III. The examiners should only be elected from physicians and surgeons who are engaged in active clinical instruction.

IV. The following conditions should be observed:

    1. There should be not less than ten examiners in medicine, in surgery, and in midwifery.
    2. They should be well distributed amongst the staffs of hospitals where clinical instruction is given.
    3. The appointments in each subject should be so arranged by rote that not more than two examiners in each subject should go off in any year.
    4. The appointments should be for a period of five years but subject to annual reelection.
    5. A new examiner should be paired with one who has examined for not less than three years.
    6. The pairs should be changed every two examinations.
    7. The examinations should be held four times a year to keep the numbers in moderation and to prevent too great a penalty for failure.
    8. An official should be responsible for all details of organization with a sufficient staff. He should have a free hand to organize the examination under the supervision of the executive committee.
    9. Punctuality, regularity, and compliance with the conditions laid down by the executive committee must be absolutely insisted on.
    10. A high standard should be set from the commencement, for unless the examination standard is a high one the teaching will not be thorough and the confidence of the profession and the public will not be gained.
    11. In the conduct of the examinations the system described for our surgery should be adopted, viz.: five pairs of examiners, each pair in turn taking some part of each candidate's examination.

V. Should there be numerous states in the country, it would conduce to economy, efficiency and equality of standard for such states to be divided into zones, two, three, four and even five states combining in one conjunct state board according to their geographic situation.

VI. There would thus be groups of state boards, between which there should be complete reciprocity.

VII. In order to justify reciprocity by the maintenance of equality of standard there might be a board of inspectors consisting of a representative of each group, whose duty it should be to visit the examination of every board in turn. They should report from time to time to all the constituent boards, which would then decide whether reciprocity should be continued with any particular board.

VIII. A scheme such as this can be started by a small number of states, and if found to work satisfactorily, can be extended as others become prepared to fulfil the necessary conditions.

I realize only too well that in attempting to explain the organization of the Conjoint Board, I may have failed to convey all I could wish, for it is difficult to express in terms all the hundred and one little points which go to build up a complete system. I can only say that it will be a great pleasure to me to supplement or explain any details of our examinations by conference or correspondence. If in any small degree I have fulfilled the mission which you expected of me as the representative of those two great and ancient corporations which form that board, I shall feel no little pride in having taken a small part in assisting to develop the system of medical education and examination to a position worthy of so great and enterprising a country.

PARETIC PATIENTS SENT TO PRISON

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The object of reporting this case is to point out the imperative need of early diagnosis of mental disease and to cite an example of the wrongs suffered by the insane because mental disorders are overlooked.

Every prison surgeon has, no doubt, met, in his routine examination of prisoners, persons who properly belong in the hospitals for the insane. My statements apply to only those individuals who are sent to penal institutions because they have been convicted wrongfully of some statutory offense which was the symptomatic expression of an unrecognized mental disorder; they do not apply to those persons who are instinctively criminal and whose constitutions are so degenerate that they frequently develop active psychoses when brought into conflict with the law.

It is of paramount importance that the general practitioner should be able to diagnose mental disorders in their incipient stages, that appropriate custodial and medical treatment may be early instituted. To do this it is necessary that the family physician should be acquainted, not only with the common mental symptoms of insanity, but with the crimes and misdemeanors that are attendant on mental diseases. Crimes are frequently a pathognomonic part of the symptom-complex; and if this fact were properly appreciated many heartaches and family disgraces would be averted.

The motives and circumstances connected with pathologic crimes generally bear the impress of mental derangement; but this is not always the case, for some of the offenses of the insane show evidence of careful planning and deliberate cunning in their commission.

Without entering on a discussion of the complex and weighty problem of criminal responsibility, I shall give a brief summary of the crimes and misdemeanors common to the insane.

First in rank, as to numbers and seriousness, are the offenses of the epileptic group. The pathologic criminal offenses common to this class are homicides, attempts at homicide, arson, rape and petty thefts. These violations of the law are frequently committed by the epileptic in the automatic states occurring before or following a paroxysm. Such acts seem to be, quite often, the result of coherent and conscious volition; but in reality consciousness is blotted out; and when the normal status of the individual is regained there is amnesia for any events that may have occurred during these periods. In the conditions of psychic epilepsy consciousness is, many times, retained, but responsibility is practically destroyed or inert, owing to the stimuli of overpowering influences or obsessions with paralysis of the inhibitory faculties.

Pyromaniacs have been frequently found to suffer from psychic epilepsy, and often can give no reason for their acts except that they were possessed with an irresistible impulsion to fire public property. In some patients an epileptic furor takes the place of a seizure proper; at which times violent deeds are occasionally committed. This type of the epileptic neurosis must always be considered when some apparently normal person commits an outrageous act without any assignable cause. Clouston has said: "Murder by an epileptic should be looked on as being as much a symptom of his disease as is larceny by a general paretic."

Second in order, the paranoic group of mental diseases furnishes us with a large quota of pathologic crimes. Persons suffering with this type of mental alienation are given to homicide, homicidal attempt, blackmail, and, on rare occasions, suicide is committed as a result of profound depression, growing out of their persecutory delusions.

Of this same class are the self-appointed martyrs who end their lives by suicide when laboring under delusions controlled by religious and philanthropic ideas.

The crimes of the manic-depressive group are infrequent, and this is especially true of the manic stage, as the extreme psychomotor activity interferes with the accomplishment of any definite act. Suicide is, however, the occasional termination of the depressive phase. Parents guided by a delusional and misguided sympathy have been known to murder their children during the depressive phase of this psychosis, to save their offspring from purgatorial fires.

The crimes of senile dementia, which are often a part of the symptom-complex, are attempts at suicide, foolish thefts, acts against public decency without any reason or purpose whatever, such as the exhibition of their genital organs, etc. The old and respected citizen whose life for forty years or more has been exemplary commits rape on a young child, owing to a lack of moral inhibition and to impulses resulting from a hyperexcitation of the genetic impulses.

The crimes of arteriosclerotic dementia are practically of the same character, with the addition of homicide and arson. Involutional melancholia usually appears at the time of the menopause in women, and in men after the forty-fifth year. The principal characteristic of this psychosis is profound depression. There are developed, on this state of anxiety and apprehension, delusions of self-depreciation and debasement. The unfortunate sufferer from this disease often thinks he has committed the unpardonable sin, and frequently commits suicide to escape his mental torture.

The misdemeanors and crimes of dementia præcox are usually of a mild character; as destruction of furniture and clothing. The noothymopsychic ataxia,[1] the cardinal symptom of this psychosis, usually prevents the carrying out of any well-defined ideas. The catatonic form of this disease is usually accompanied by impulsive acts which are devoid of premeditation or malice. Homicidal attempts are frequently committed by those persons afflicted with the paranoid form dementia præcox.

The crimes of chronic alcoholism are of a sexual nature, as rape and sodomy. Petty thefts are common in Korsakoff's psychosis.

The borderline or psychopathic characters display many anomalies of mind and mood. Their psychologic tension is lowered; things are not as they seem; the mental perspective is distorted, trivial disappointments are magnified and are interpreted to be precursors of evil, often causing depressions ending in suicide. Anomalies of sexual instinct are common, as perversions and inversions, leading to abnormal sexual acts. Kleptomania and pyromania are frequent.

The crimes of imbecility are homicide, assaults, rape and petty theft.

The offenses of the paretic are seldom dangerous to life. Patients in the early stages of paresis commit foolish and absurd crimes, such as the theft of umbrellas, canes, etc. Magan recites the case of a paretic who asked the aid of a policeman to steal a barrel of wine. The rich patient particularly has been known to steal articles of trivial worth. The patient with the expansive type of this disease forges large checks, makes wild speculation in the market and undertakes impossible financial operations without any apparent knowledge of the quality of his acts.

The formerly highly respected citizen indulges in drinking and debauchery with lewd women; and his relatives in vain attempt to stop him in his newly determined career of vice.

In the following case the patient suffering from paresis was sentenced to prison for a term of one to eight years convicted of petty larceny. His crime was the theft of $2.50 from a saloonkeeper, at whose place of business he had been indulging too freely in intoxicants. His misdemeanor was simply an expression of his mental disorder, calling for hospital treatment instead of confinement behind prison walls; and, fortunately for him, Indiana has provided a hospital for insane criminals to which he can be transferred, that he may receive treatment.

In the majority of the state prisons, prisoners of this type languish in cells without appropriate custodial and medical treatment, and are a disturbing factor in the maintenance of prison discipline. I admit that occasionally insane criminals are transferred to civil hospitals for the insane, but this procedure is dangerous as well as unsatisfactory.

History.—The patient was a butcher, aged 36, born in Berlin, Germany. He received a common school education; sustained no serious illness or injuries during childhood. He used tobacco and alcoholics to excess since about 18 years of age. All venereal history was denied. There was, however, a slight scar on the glans penis. The Wassermann test or cytologic examinations were not performed. History was obtained from prisoner, Jan. 5, 1912, but his mental state was such as to preclude the possibility of securing reliable data.

Physical Examination.—The patient was fairly well nourished; plenty of adipose tissue; muscles were soft and flabby. Height, 5 feet, 7 inches; weight, 165 pounds. The respiratory system was normal. As to the cardio-vascular system, the heart-rate was slightly irregular; some slight sclerosis of superficial vessels. The digestive system was normal. In the glandular system, some enlargement and induration of the inguinal epitrochlear and cervical glands was noted. The osseous system appeared to be normal. Examination of the genito-urinary system showed a slight scar on glans penis. Urinalysis was negative.

Neurologic Examination.—General incoordination was present; Romberg sign present. Power of hand-grips was diminished; general lack of muscular tone. The stereognostic sense was defective. Speech was defective; the patient stumbled over test phrases, speaking in a slow, hesitating and monotone manner. The pupils were unequal in size; the right was larger than the left; both were irregular and out of line. Consensual and sympathetic reflexes were absent. The pupils did not respond to light; accommodation reflex very sluggish. The abdominal reflex was present; cremasteric and patellar reflexes were absent. No ankle-clonus was present; the Babinski sign was present. Pain sense was defective; pin-pricks, after skin was stimulated, were felt five seconds later on anterior surface of lower limbs. Some areas of anesthesia were found on posterior surfaces of limbs and trunk. The heat, cold and color senses were defective; vision, 5/20. Audition was normal. Olfactory sense, defective. Motor reaction was slow; only thirty dots made in ten seconds.

Mental Examination.—The patient was untidy in personal appearance; clothes were not properly buttoned, and stained with food. Consciousness was clouded; he was disorient as to time, place and person. As to the emotional status, a considerable amount of euphoria was present. The patient was pleased with himself and his environment. Insight was lacking; he said that his mind was all right. Voluntary speech; he talked disconnectedly about his environment and the persons near him. Memory for both past and present events was nil. The Masseleon and Zeihn tests were not attempted by the patient. No hallucinations or delusions were present. Mathematical calculations of simple multiplication and addition were 60 per cent. correct. General information and moral sense were lacking. In the word association test, average reaction time was nine seconds.

Diagnosis.—The case, at the present time, presents the typical symptoms of paralytic dementia, to which there has not yet been added a paralytic insanity; but delusions may appear later on in the course of the disease. The general clouding of consciousness, confusion of ideas, dilapidation of thought, progressive failure of memory, reason and judgment, coupled with the results of neurologic examination make a diagnosis of general paresis easy.

To allow the cases of such patients to go undiagnosed, permitting their incarceration in prison, reflects seriously on the diagnostic ability of the profession.

A Chinese View of the Difference Between Whisky and Opium.—Mr. Ng Poon Chew, editor of the *Chung Sai Wat Po,* the Chinese American daily paper of San Francisco, recently said, speaking before the City Club of Chicago: "The opium question is a very, very serious one. It is just like the whisky question in this country, except that in China we have the will to abolish the opium, but by reason of limitations by other foreign countries we have not the power, whereas in America you have the power to abolish the whisky but you do not have the will. There is also this difference between opium and whisky: Whisky arouses a man's animal instincts and makes him an unreasoning brute; opium deadens his sensibilities and lessens his vitality and transforms him into a living corpse. An American whisky drinker goes home and kicks his wife; an opium fiend goes home and his wife kicks him. I wonder if that is the reason that the great American people prefers whisky to opium."

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[1] The term "noothymopsychic ataxia" is a specifically coined descriptive word employed by Dr. Irwin Stransky, an alienist of Vienna, to designate emotional ataxia and to explain its mechanism indicating a lack of coordination between the intellectual and emotional spheres.

AN EPIDEMIC OF SORE THROAT DUE TO A PECULIAR STREPTOCOCCUS *

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During the past three months there has been, and still continues, in Chicago an epidemic of sore throat that is unusually severe and characterized by complications strikingly different from those of other years. That it is generally prevalent throughout the city is attested by numerous physicians.

A streptococcus presenting certain peculiar characteristics is found in practically all cases. A number of cases have terminated fatally. In view of these facts, it is thought wise to make a brief preliminary statement at this time concerning certain clinical and bacteriologic features of the disease.

The attack usually begins suddenly with or without a chill. The fever, the muscular pains, the prostration and the constitutional symptoms are out of all proportion to what one would expect from the amount of local involvement. The pulse is relatively slow. The leukocytes are only moderately increased. The throat presents a diffuse redness; there is much secretion of mucus. The tonsils are always infected and the crypts filled with an exudate; and a grayish membrane may spread over a large part of the tonsil (closely resembling diphtheria); only occasionally does ulceration take place. The acute symptoms often subside in a few days. At the end of a week or ten days, however, the patient, instead of recovering completely, may suddenly become worse. The cervical glands may become very large, but usually do not suppurate, or the neck may become tender and the act of swallowing very painful; and the clinical picture suggests septicemia. Blood cultures are most always negative where glandular involvement is pronounced, while at the outset in the latter group of cases they yield streptococci. The visceral complications occur most often in the group of cases which have little or no glandular involvement, but marked constitutional disturbances. Otitis media occurs quite frequently, but suppurative processes in the mastoid and other accessory sinuses are relatively uncommon.

Bacteriologic examinations have been made in many cases. Among the complications represented are, suppurating lymph-nodes, empyema, arthritis, erysipelas, pulmonary abscess, otitis media, brain abscess, meningitis, septicemia, peritonitis, puerperal sepsis, etc. From the throat and tonsils and from the secondary lesions just indicated, in practically all cases and usually in pure culture a streptococcus possessing the following features has been found: Morphologically in the smears from the throat and the exudates, it occurs in short chains and often in pairs. The cocci, which commonly occur in very large numbers, are spherical, but appear in twos in the chain. They are strongly Gram-positive and are surrounded by a definite capsule. The capsular substance is less abundant than that surrounding the pneumococci, does not indent between the pairs, as is the case in the latter, and is soon lost on artificial cultivation.

The colonies on blood-agar plates are larger and more moist than those of the common hemolytic streptococcus (*Streptococcus pyogenes*); at times there may be a faint greenish tint on transmitted light. The zone of hemolysis is relatively narrow and begins immediately around the colony, and its outer margin is often indistinct. The growth on the surface of blood-agar slants is abundant, raised, and moist, but does not present the mucoid appearance of the *Streptococcus mucosus*. In broth, uniform turbidity is produced and milk is always acidified and sometimes coagulated. Inulin is not fermented. The cocci are slightly bile-soluble and autolyze slowly in sodium chlorid solution.

The organisms possess a high degree of virulence, readily killing guinea-pigs, mice and rabbits in from twelve to twenty-four hours from septicemia and serositis following intraperitoneal inoculation of small quantities. Animal passage increases strikingly the capsular substance, and the growth becomes more profuse and mucoid.

Autopsies have been made in four cases of this infection. In all there was acute serofibrinous peritonitis, in the exudate of which pure cultures of this streptococcus were obtained. In three, there was acute fibrinous pleurisy, in one acute pericarditis, and in three the cocci occurred pure in the heart's blood. Endocarditis was not found. The atrium of infection in three cases was clearly the tonsils or the throat. In the remaining case, it appeared to be a localized fibrino-purulent bronchitis following a sore throat.

To summarize, these infections are characterized by a sudden onset with severe prostration, by glandular enlargement, and frequently by serious complications. The organism, isolated, is an encapsulated hemolytic streptococcus of high virulence. It appears to occupy a position between the ordinary hemolytic streptococcus and the *Streptococcus mucosus*. It is not a pneumococcus. The increase of the capsular substance on animal passage and its loss on artificial media suggest that the capsule and high virulence are the result of frequent human passage and may serve to explain the unusual tendency to complications and the general severity of the disease.

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THE CLINICAL USE OF CARBON DIOXID WITH OXYGEN

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As the result of an immense amount of investigation on the part of physiologists, both in America and in Europe, it has been shown that carbon dioxid is not merely a waste product of the body. On the contrary it is one of the most important of the body's hormones, exercising a regulative influence on the action of the heart, on the tonus of blood-vessels, and especially on the respiration. In fact, breathing in ordinary life is practically dependent on the stimulation afforded to the respiratory center by the carbon dioxid brought to it in the blood. In the demonstration of this exceedingly important fact the Italian school of physiologists has played an important rôle. In particular, the late Professor Mosso of Turin, in his important studies on mountain sickness, was led to conclude that this condition was essentially due to a decrease in the carbon dioxid of the body, a condition to which he first gave the name of "acapnia." Although, as regards mountain sickness, this view has been vigorously combated by other physiologists, Mosso's experiments, demonstrating that acapnia induces a lowering of arterial pressure and failure of respiration, have proved of the utmost importance as the starting-point for the more recent work of others in this field. Especially deserving of mention are the investigations of Yandell Henderson on acapnia as a factor in shock. His observations are too well known to require detailed recital here.

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After reading Henderson's papers I was led to consider the practicability of utilizing mixtures of carbon dioxid with oxygen for the purpose of stimulating the bulbar centers in those cases in surgical practice in which, owing to the effects of chloroform or ether or to operative trauma—or to a combination of these causes—the automatic activity of these centers is temporarily paralyzed. My experiments have shown that in carbon dioxid properly diluted we possess a therapeutic agent of extraordinary potency.

At the outset of my investigations I experimented on animals. By means of the single or combined action of nitrites, chloroform, and morphin, failure of respiration was induced. The animals were then made to inhale a mixture of oxygen with various percentages of carbon dioxid—from 10 per cent. to 30 per cent. In every case there was an almost immediate return of the breathing and the effects of the inhalation were found to last for some time after it was discontinued. I then tried the administration of these gas mixtures to patients who, because of trauma or extensive and prolonged operation, had sunk into a partially or completely comatose state. The effects were at times brilliant, particularly in those cases in which the breathing had become shallow, irregular, or of the Cheyne-Stokes type. With mixtures of from 5 to 20 per cent. of carbon dioxid in oxygen the depth of breathing and the regularity of the rhythm was notably improved. The most satisfactory results were obtained with a mixture containing 15 per cent. of carbon dioxid. In cases which exhibited Cheyne-Stokes respiration, the periodical rhythm was immediately stopped and normal breathing was not only restored, but continued for some time after the inhalation was ended. In such cases not only was respiration improved, but there was a marked improvement in the condition of the circulation. The disappearance of cyanosis was one of the most striking features.

It is now nearly two years since the publication of my first article on this topic.[1] During this time my method has been continuously employed in the surgical clinic in Florence. Professor Burci, general director of the clinic, has in fact so strong a faith in its efficacy that he has made it a standing order that, prior to every operation, a gasometer containing a mixture of oxygen and carbon dioxid shall be prepared, and shall be at all times during the operation available for the immediate use by the assistant administering narcosis. It is our custom not to wait until the patient has reached a condition of profound shock or respiratory paralysis, but on the contrary, as soon as the slightest tendency to failure of respiratory or cardiac function appears, to administer immediately inhalations of the gas mixture. A rapid return of normal heart action and breathing is the almost invariable result. The best results, as might be expected, are obtained when the condition of shock has not progressed too far, although even in the latter condition strikingly beneficial results are obtained. The number of cases thus treated during the past two years at the surgical clinic of the Florentine university now amounts to several hundred. In no case have we observed any ill effects from the treatment. On the contrary, in several traumatic cases in which, under chloroform, breathing had entirely stopped, we have observed a prompt return of practically normal conditions. As evidence of the success of this procedure I would particularly refer to the paper published on this subject by Professor Marchetti,[2] head surgeon at the Hospital of Santa Maria Nuova in Florence, and that by Dr. Cresenzi,[3] assistant at the Florentine University Surgical Clinic.

It will perhaps be of some interest to refer here to a case of a patient recently treated in the surgical clinic by Professor Stori and Dr. Abetti. It was a case of suicide by hanging. Prolonged artificial respiration, inhalations of oxygen and hypodermic stimulation had not given the slightest result. The case was practically given up as hopeless when it was suggested that the carbon dioxid oxygen mixture should be administered. After a few minutes' inhalation of this mixture spontaneous respiration returned.

This method has also proved of service in the treatment of medical cases, particularly in cases of profound asthenia due to toxemia. The administration of carbon dioxid oxygen-gas has proved an effective substitute for the peripheral stimulation ordinarily used. Particularly in those cases in which Baccelli's method of administering oxygen would ordinarily be used, we have found that the use of carbon dioxid with the oxygen by stimulating respiration increases the oxygen absorption.

Our observations in the Florentine surgical clinic with this method seemed to afford an explanation to some extent of the good effects obtained in surgical practice from the method of narcosis with artificially reduced circulation. It seems probable that the remarkable rapidity with which patients subjected to narcosis under this condition recover consciousness, as observed by many authors, is due to the sudden return to the general circulation of a large amount of blood rich in carbon dioxid when the lower limbs are unbandaged. Following up this suggestion we have found that the use of a gas mixture containing from 10 per cent. to 15 per cent. of carbon dioxid after the completion of an operation is very effective in causing a prompt awakening of the patient. It seems also to tend to decrease the postchloroformal vomiting. This is doubtless referable to the rapid elimination of chloroform from the blood and tissues under the influence of the increased respiration induced by the carbon dioxid.

As our use of carbon dioxid and oxygen inhalations took its origin from the interesting experimental studies of Prof. Yandell Henderson on this subject, in America, it has seemed to me that it might be of interest to publish this brief résumé of our methods and observations in an American journal.

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[1] Levi, Ettore: Nota preventiva sulle applicazioni terapeutiche, nella pratica chirurgica e medica, di mischele di ossigeno e di anidriole carbonica, Accad. med. fis., Firenze, March 16, 1910; Studi sull'azione fisiopatologica dell'anidriole carbonica, e sulle applicazioni terapeutiche, nella pratica chirurgica e medica, di mescele di ossigeno ed'anidriole carbonica, Rev. Crit. di' Clin. Med., 1910, Nos. 30 and 31.

[2] Marchetti: Ueber die Anwendung der Gemische von Sauerstoff und Kohlensaürenanhydrid nach Dr. E. Levi in der Praxis der Chloroformnarkosa, Wien. klin.-therap. Wchnschr., 1910, No. 40, p. 961.

[3] Cresenzi: Die Anwendung der Gemische von Sauerstoff und Kohlensäurenanhydrid in der chirurgischen Praxis, Wien. Klin.-therap. Wchnschr., 1910, No. 40, p. 960.

Small-Pox Quarantine in Practice and Its Failure.—When we read the thoughtless expressions of antivaccinationists we often feel as if the best thing to do with them would be to leave them to their folly, but consideration of the statistics shows how unfair that would be. There are the minors who pay a disproportionate toll in such cases.—G. Dock in *Journal of Missouri State Medical Association.*

MATERNAL NURSING

THE RETURN OF MILK AFTER DISCONTINUANCE OF NURSING

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In the effort to reduce the mortality among infants, volumes have been written concerning the value of various methods of milk modifications. In turn, the proteids, the fats and the carbohydrates have received marked attention as the main factors in causing the serious illnesses of early life. Milk stations have supplied their part of the literature regarding the value of certified, sterilized and pasteurized milks in regard to relieving the morbidity among infants in the congested centers of our large cities. Recently the attention of civic workers has been drawn to the existence of a natural milk-supply that has been somewhat overlooked in the mad rush to supply a clean milk for the feeding of infants.

It is not necessary here to discuss the question as to whether there is an increasing inability on the part of mothers to nurse their babies. I feel certain, however, that the ease with which modified milk may be procured from stations of one type or another is a large factor in discouraging special effort to nurse a baby in the face of a lessening supply of breast-milk. The effort to secure an adequate supply of breast-milk is not made with the same frequency that formerly existed. The feeling of confidence in artificial feeding has materially decreased the pressure that physicians bring to bear on their patients to continue their efforts at nursing.

In the last edition of Holt's "Diseases of Infancy" appears this statement:

> Among the classes of society where most of the maternal nursing is very poor, but where every facility can be afforded for the best artificial feeding, one should not be slow to adopt the latter in cases of doubt. Among the poor and ignorant, however, where artificial feeding cannot be carried on with anything like the same chances of success, all possible efforts should be made to increase maternal nursing as the most effective means of reducing infant mortality.

Without discussing the first part of this statement, the truth of the second part is certainly admitted. Is this advice followed? Judging from the large number of mothers who present themselves at the Vanderbilt Clinic and at the milk stations with their children, weaned by the advice of the physician before the infants are 1 month old, it seems that the problem of maternal nursing is not well understood.

Supplemental artificial feeding is too frequently given to children during the first few weeks of life without informing the mother that it is merely a temporary procedure. This practice is all too common in the service of some of our large lying-in hospitals. The fact that the suckling by the infant is one of the main factors in producing the secretion of an adequate milk-supply is entirely overlooked. At times there may be a delay in the production of the milk-supply owing to the weakness of the suckling of the infant. In one case under observation the milk did not appear until the seventh day, and the full quantity required for the child was not in the breasts until the tenth day. The child, however, was given no artificial food, but was placed at regular intervals to the breast and boiled water given as required. In hospital services, if the infant is puny the breast of the mother may be excited to action by allowing an older and stronger infant to draw on the nipples at regular intervals until the milk flows freely enough for the weaker infant to continue the nursing.

During the first few weeks of the puerperium the maternal milk-supply undergoes many changes owing to the readjustment of the mother to the assumption of new duties in addition to taking up the old burdens in her more or less weakened condition. This is the most important time in the lactating period and the time when it is most important that assiduous attention be given to placing the infant regularly to the breast. This is the dangerous time when the milk-supply appears to be decreasing and when, above all things, the removal of the baby from the breast may make maternal nursing impossible. The best producer of mother's milk is the rhythmic recurrent action of the lips of the baby.

It is my desire to pay especial attention to the possibility of placing the baby back on the breast after it has been removed therefrom for a variable period of time. I must repeat that the best method of creating a maternal milk-supply is to secure the traction on the nipple by the nursing infant. Milk has been secured from the breasts of virgins through this means. Pediatric text-books give little space to this phase of maternal nursing. Pfaundler and Schlossmann say:

> After nursing has been discontinued for a few days the secretion practically disappears; frequently, however, it happens that even after a longer pause it is possible to secure the return of the secretion.

Ballou, Martin, Marfan, Quinsac and Bourier, from Budin's clinic, report many instances in which the maternal milk-supply had been recovered after the lapse of a few days to five months. The literature relating to the subject is singularly scarce considering its value in the care of mothers, especially of the poorer class.

As a basis for discussion of this neglected phase of maternal nursing I shall briefly cite a few typical conditions in which the mammary secretion was recalled after the babies had been taken from the breasts of their mothers and placed on various types of artificial feeding.

Case 1.—B. O., first seen at the age of 12 weeks, had been taken from the breast because of vomiting. On the tenth day the attending physician stated that the milk was too rich and he placed the infant on artificial feeding. Under the care of three different physicians the child was given condensed milk, albumin water, beef-juice, and several proprietary foods, but there was no improvement. Marasmus finally came to be the diagnosis and death the prognosis. When seen the weight was 6 pounds and 14 ounces, a full pound below the birth-weight. There was projectile vomiting, small mucoid stools and peristaltic waves. As a case of spastic pyloric stenosis the child was put back to the breast while the artificial food was stopped. Briefly, the breast responded, the spasticity slowly lessened and the mother nursed her child for the rest of the first year of its life.

Case 2.—T. O'S. similarly had a spastic pyloric stenosis and the mother's milk had been stopped because it caused vomiting. After six weeks the child came under observation and all artificial milk was discontinued. Within five days the breasts took up their function and the baby was successfully nursed for ten months.

Case 3.—Baby D. had too powerful suction and the breasts of the mother were caking, so the baby was used as a pump to empty them. As a result of this abuse of nursing the baby's stomach was distended, vomiting occurred and the nipples of the mother became excoriated and ulcers, 2 cm. in diameter, appeared. This condition of the nipples rendered nursing impossible. Even with a nipple-shield bleeding from the ulcers occurred and the pain was too intense to allow even momentary nursing. The infant was taken from the breasts and placed on artificial food. The breasts were regularly emptied;

fluids were decreased in the diet; the bowels were kept open and the supply of milk decreased. After four weeks of rest the ulcers were healed and the nipples adjudged to be in condition to resume their normal function. The infant was placed again on the breast. After each nursing a supplemental feeding was given for about six days. At the end of one week the full supply necessary for the sustenance of the infant had returned and the mother nursed the child for nine months.

Case 4.—Mrs. M. was advised to take her child from the breast because of cracked nipples. After the lapse of ten days her baby was placed back on the breasts and nursing continued uneventfully. The supplemental feedings were discontinued two days after the return of the child to the breasts.

Case 5.—Mrs. O'S. during the second week of lactation developed a painful breast which went on to abscess formation. As soon as seen, the mother was sent into a hospital where, unfortunately and contrary to the right of mother and child, the baby could not be admitted. The mother being thus suddenly taken from the child, artificial feeding was instituted. At the end of one month the mother with her scarred breast was released from the hospital. The baby was returned to the breasts, both of them, and the interval of nursing was regularly followed. At the conclusion of the effort at nursing a supplemental feeding was given the child. This extra feeding was gradually reduced and by the seventh day the baby's only source of nourishment was its mother's breast.

Case 6.—Mrs. K., after having had one breast operated on for an abscess, was told that if the baby nursed from that breast the soreness would return. In consequence her child was kept at one breast which was not yielding sufficient milk, and the baby was stationary in weight. Though two months had elapsed the child was placed back on the scarred breast and the return of the milk was prompt, much to the gain of the infant.

With the proper treatment of breasts, abscesses of the breast should be rare, but after they have occurred and have received careful treatment with incision and drainage until the wounds are healed, there appears to be no sound reason for not permitting them to resume their normal function.

In a number of cases in which, as a result of fatigue, there was an apparent diminution of the milk-supply, the baby has been taken from the breast for a few days to enable the mother to secure a rest. The only precaution taken was to require the mother to express every three hours whatever milk she could through gentle pressure on the breast without undue traction on the nipple. In all these cases there has been a prompt return of the milk on resumption of breast-feeding.

Many mothers come to the milk stations with a lack of milk during the first month of the infant's life. For these mothers the giving of supplemental feedings for the night enables them to secure a better rest and after a week or two they are again able to nurse successfully during the entire twenty-four hours. The value of this form of mixed feeding has not been sufficiently appreciated. The continued nursing of the baby increases the maternal milk-supply and the artificial food may be gradually cut down in quantity until the breast yields the entire amount necessary to ensure the growth and development of the child. It is almost needless to state that the improvement in the youngster may be judged by the weekly gain in weight as well as the general reaction of the child to the ordinary routine of its life. Carefully supervised mixed feeding is a valuable adjunct in securing an adequate milk-supply during the first month of a child's life.

Artificial feeding during a siege of sore nipples will give the nipples opportunity to heal and there will be little likelihood of losing the milk-supply providing gentle massage is practiced at regular intervals. It is seldom necessary to keep the infant away from the breast for this purpose longer than two weeks. If the mother is careless and fails to keep up the practice of removing the milk regularly by massage it may take two weeks to secure the milk in its orginal abundance.

At times puerperal sepsis, influenza, moderate infections of short duration, may come to the mother, but these need not necessarily serve to separate the infant from its rightful milk-supply. The contagious diseases as diphtheria, scarlet fever, measles, etc., require the child to be taken from the breast. After quarantine has been raised, however, there should be another effort made to recall the mammary secretion. The most efficient method of reestablishing the function of the mammary glands is to have the child exert suction on the nipple. Massage is also very helpful. It is desirable to increase the dietary of the mother by the addition of sufficient food to supply the increased amount of nutrients that are to be taken by the infant through the milk. Milk, oatmeal and corn-meal form the most valuable adjuvants in producing a sufficiency of milk that is capable of nourishing the infant.

In variola, if the infant has been vaccinated and the breast of the mother is free from lesions, there is no practical reason for the routine discontinuance of the maternal nursing. Comby secured an adequate supply of breast-milk after an attack of scarlet fever lasting forty-four days. Marfan was successful after twenty-five days' cessation because of diphtheria.

There are times when the glandular activity is inhibited through disease, and under such circumstances the supply will not be reestablished. Naturally in those women whose breasts have been exhausted through the limit of activity of the glandular tissue it will be impossible to recall the milk for a long period of time. Under these conditions it is preferable to continue on mixed feedings, giving the breast-milk to the full extent of the potential breast-supply. Whether it is preferable to alternate the bottles and the breasts or to give a bottle after each nursing depends entirely on the circumstances attending each individual mother and child.

The extent to which the breasts may be developed through the action of nursing is well indicated by the experience of Budin, who had fourteen wet-nurses for forty weak children. At times he was able to secure a daily milk-supply of 2,840 gm. from one woman.

The rate at which milk returns to the breast after the cessation of its use is partially shown by the figures of Quillier, who estimated the daily amount of milk that was secured from the breasts of a woman after a month's disuse because of an abscess. On the first day, 20 gm. was obtained; 60 gm. on the second day; 90 gm. on the third day; 290 gm. on the eighth day. This serves to show the necessity of persistence in the application of the infant to the breast in order to secure an adequate milk-supply in the breast.

In the cases of puny infants, when it is possible, it is very desirable that the nipples be sucked by a stronger infant or the breast receiving insufficient oral massage will begin to have a decrease in its function and, before the puny child is able to draw on the nipples with efficient force, the milk will have disappeared. This, of course, causes a further delay in establishing the maternal nursing. In hospitals and milk stations this procedure is quite possible, but it is not impossible under other conditions, and the attempt is well worth while in the interest of the weak infant.

SUMMARY

Maternal nursing may be reestablished through the regular sucking of an infant, even though several months may have elapsed since the breasts were used for this purpose.

Mastitis, unless there is pus in the milk, does not contra-indicate breast-feeding nor do the mild infections.

After abscess of the breast or the contagious diseases every effort should be made to place the infant back on its mother's breast.

Mixed feeding or supplemental feeding is of great value while developing the maternal supply, especially during the first month.

To prepare a milk-supply for puny infants advantage accrues from putting older or stronger infants to the mother's breasts to regulate and develop the supply.

Every effort should be made to retain infants at the breast and physicians, milk stations and hospitals live up to their obligations to society only when they endeavor to maintain the maternal nursing for the longest possible period.

230 West Ninety-Seventh Street.

ATROPIN THERAPY IN DIABETES MELLITUS *

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The atropin therapy of diabetes mellitus has recently been advocated by Rudisch[1] and by Forchheimer.[2] Carbohydrate tolerance is, according to Rudisch, greater with atropin than without. The more striking results were obtained with atropin sulphate, though in some instances atropin methyl bromid was substituted.

The following two cases of diabetes mellitus were tested out with atropin sulphate. A constant weighed diet, as detailed in the protocols, was given. When the daily variations in the amount of glucose excreted had been reduced to a minimum, atropin sulphate was administered in increasing doses for a sufficiently long period of time to give the drug a chance to exert any action of which it was capable. With both subjects the experiments were continued until toxic effects were observed. Under these conditions the glycosuria should be diminished if atropin sulphate is capable of increasing the carbohydrate tolerance.

Any drug which modifies the carbohydrate metabolism may influence the formation of the so-called acid bodies, acetone, diacetic acid and beta-oxybutyric acid. If atropin diminished the utilization of glucose within the organism, the acid bodies would increase in the urine. Therefore there is some interest attached to the determination of these substances in a study of this kind. In one of the cases observed, small but persistent amounts of acetone and diacetic acid were present in the urine, as shown by previous qualitative tests. Any possible increase in these substances was measured by the ammonia output and its relation to the total nitrogen of the urine. Normally the amount of ammonia nitrogen excreted is about 5 per cent. of the total nitrogen. A rise in this percentage indicates an increase in the excretion of acid substances.

In these analyses the glucose was determined by Benedict's method,[3] the ammonia according to Folin, and the nitrogen by the Kjeldahl process. The presence or absence of acetone was established by the Legal reaction, that of diacetic acid by the ferric chlorid test.

TABLE 1.—URINE ANALYSES AND MEDICATION IN A CASE OF DIABETES MELLITUS (CASE 1)

Date, 1911	Urine in Twenty-Four Hours: Volume, c.c.	Glucose, Per Cent.	Glucose, gm.	Total Nitrogen, gm.	Ammonia, gm.	Ammonia N. in Per Cent. of Total N.	Atropin Sulphate, Grains per Dose	Doses per Day	Symptoms
3/18	1,460	2.2	23.4	9.1	.34	3.1*	0	.	
3/19	1,290	2.4	30.3	9.6	.45	3.9*	0	.	
3/20	1,720	2.8	47.5	8.9	.55	5.1	0	.	
3/21	1,680	1.9	31.1	9.9	.58	4.9	0	.	
3/22	1,080	2.1	22.9	7.7	.48	5.1	0	.	
3/23	1,200	2.0	23.5	9.7	.58	4.9	1/100	3	
3/24	1,320	2.0	26.7	9.8	.55	4.6	1/100	3	Mouth slightly dry.
3/25	1,800	1.5	26.7	9.9	.63	5.2	1/100	3	Cheeks flushed.
3/26	1,910	1.5	29.0	12.2	.79	5.4	1/100	4	
3/27	1,560	1.2	18.4	9.7	.57	4.9	1/50	3	
3/28	1,300	1.6	20.2	9.2	.65	5.8	1/50	3	
3/29	1,480	0.6	8.7	5.5	.43	6.5	1/50	3	
3/30	1,300	0.8	13.4	7.0	.54	6.3	1/25	3	Vertigo; very dim vision.
3/31	1,940	1.6	30.3	10.1	.81	6.6	1/25	2	
4/1	1,560	1.3	19.5	10.1	.66	5.4	1/25	2	Head "feels full."
4/2	1,730	1.9	32.0	10.1	.75	6.1	0	.	
4/3	1,200	2.9	35.4	8.7	.59	5.6	0	.	
4/4	930	1.8	17.1	7.8	.59	6.2	0	.	
4/5	1,175	2.1	24.9	12.6	.76	5.0	0	.	

* The initial low figures for ammonia may be regarded as the after-effects of bicarbonate of soda taken before admission to the hospital.

TABLE 2.—RECORD OF URINE ANALYSES AND MEDICATION IN A CASE OF DIABETES MELLITUS (CASE 2)

Date, 1911	Urine in 24 Hours: Volume, c.c.	Glucose, Per Cent.	Glucose, gm.	Atropin Sulphate, Grains per Dose	Doses per Day.	Symptoms
8/9	1,000	1.0	9.6	0	.	
8/10	740	1.1	7.8	0	.	
8/11	1,150	1.1	12.2	0	.	
8/12	860	1.0	8.6	0	.	
8/13	810	1.1	8.8	0	.	
8/14	.....	...	....	1/100	3	
8/15	980	0.6	6.2	1/100	3	Mouth slightly dry.
8/16	.....	...	....	1/100	3	
8/17	1,085	0.7	7.2	1/100	3	
8/18	1,145	0.7	8.1	1/100	3	Vision dim temporarily.
8/19	1,095	0.8	9.1	2/100	3	
8/20	1,550	0.5	8.2	2/100	3	
8/21	1,485	0.3	4.6	2/100	3	Mouth very dry.
8/22	1,340	0.3	4.0	3/100	3	
8/23	1,150	0.4	4.1	3/100	3	
8/24	1,690	1.0	16.6	3/100	3	
8/25	1,155	1.0	11.6	4/100	3	
8/26	1,800	1.7	29.9	4/100	3	
8/27	1,030	1.3	12.9	5/100	3	Face flushed.
8/28	2,360	0.4	9.9	5/100	3	
8/29	1,920	0.7	13.6	6/100	3	
8/30	1,720	0.4	7.1	6/100	3	
8/31	1,600	0.5	7.2	7/100	3	Mouth intensely dry.
9/1	865	1.0	8.3	7/100	3	Pupils dilated.
9/2	1,430	0.4	6.0	7/100	3	
9/3	1,300	0.5	5.9	0	.	
9/4	1,400	2.3	31.8	0	.	
9/5	1,045	1.1	11.1	0	.	
9/6	1,460	1.8	25.2	0	.	

CASE 1. *Patient.* A tailor, of Russian birth, aged 38, about two years ago began to suffer with polyuria, thirst, increased appetite and loss of weight. Glucose was discovered in the urine, but dietary restrictions were never observed for

very long periods of time. After being treated for one month at the Vanderbilt Clinic as an out-patient, he was sent to Dr. Wood's service at St. Luke's Hospital. The patient's urine gave constant positive reactions of moderate intensity for acetone and diacetic acid. He was placed on the following diet:

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* From the service of Dr. F. C. Wood, St. Luke's Hospital, New York.

[1] Rudisch, J.: THE JOURNAL A. M. A., Oct. 23, 1909, p. 1366.

[2] Forchheimer, F.: Am. Jour. Med. Sc., 1911, cxli, 157.

[3] Benedict, S. R.: THE JOURNAL A. M. A., Oct. 7, 1911, p. 1193.

Diet.—Breakfast: Coffee or tea with 1½ ounces of cream; two eggs cooked with ½ ounce butter; 3 ounces ham; one slice bread, weight exactly 1 ounce, with ¼ ounce butter.

Lunch: Bouillon with one raw egg; 3 ounces any lean meat, 1 ounce bacon; vegetables from list,[4] 3 ounces, with ½ ounce butter or oil; 1 ounce whisky or brandy; one slice bread, weight exactly 1 ounce, with ¼ ounce butter.

Afternoon tea with ½ ounce cream.

Dinner: Any clear soup; 4 ounces any lean meat; vegetables from list,[4] 3 ounces, with ½ ounce butter or oil; 1 ounce cheese, English, pineapple, Swiss or full cream-cheese; one slice white bread, weight exactly 1 ounce, with ¼ ounce butter; 1 ounce whisky or brandy; demitasse coffee.

Case 2. *Patient.*—A native of France, aged 59, foreman in a factory, was found to have sugar in his urine about four years ago. Only during the last year before examination had he been complaining of diabetic symptoms: occasional increased appetite and thirst. There had been some stiffness, pain and weakness in the legs. The neurologic department of the Vanderbilt Clinic diagnosed the case as one of multiple neuritis of diabetic origin. The urine occasionally showed a trace of acetone but no diacetic acid. After being observed for one month at the Vanderbilt Clinic, he was sent to St. Luke's Hospital. He was given the same diet as the patient in Case 1, except that 2 ounces of bread were ordered with each meal, instead of 1.

The above reports give no indication that atropin sulphate effects any change in the carbohydrate tolerance of sufficient importance to make the drug of clinical value in the treatment of diabetes mellitus.

157 West Seventy-Ninth Street.

WRIGHT'S SOLUTION WITH BIER'S HYPEREMIA IN INFECTIONS OF EXTREMITIES

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Infections of the extremities, especially of the fingers and toes, may eventuate in such distressing economic catastrophies that they should have a degree of care equivalent to that bestowed on serious abdominal or cranial injuries.

Taking for example a thecal whitlow, I have until recently followed the usual teaching of making a large incision and have even made it larger than at first sight seemed necessary because of the treacherous course of this infection. There followed, in severe cases, prolonged healing of the wound with ultimately more or less crippling. The patient was kept away from his work a long time, and was handicapped when he finally did return to work.

In an inaugural address on Bier's hyperemic treatment, Waterhouse[1] aims at "the employment of a less severe and less mutilating operation than would otherwise be necessary—thus, the required incisions may be few and small instead of many and extensive." In explanation of what he calls "preliminary puncture-incision," he says:

> In no case [of thecal whitlow] is a free incision requisite—a tiny incision, hardly more than a mere puncture, just sufficient to give exit to the pus, is all that is necessary. So soon as the puncture has been made the application of the constricting bandage rapidly, and far more certainly than any other method, gives rise to a ready discharge of pus and an improvement, painless and satisfactory, of the inflammatory process.

Not only have I found this method satisfactory, but I also have found its efficiency greatly increased by the following procedure. Having made the preliminary puncture-incision and applied the Martin bandage above the elbow or knee, the finger or toe, hand or foot is immersed in a vessel containing hot Wright's solution. The local hyperemia produced by the heated solution augments the passive hyperemia of the rubber bandage. The sodium citrate maintains the fluidity of the lymph and blood, thus preventing their coagulation in the depths and on the surface of the wound, as otherwise occurs. The sodium chlorid expedites osmotic transudation of serum from the engorged vessels. It is well, also, gently to irrigate the depths of the wound with this solution through a cannula at the outset.

Within a few minutes the pain is alleviated, and the improvement after the lapse of thirty minutes is astonishing. After pouring off the supernatant solution there will be seen at the bottom of the vessel myriads of pus-cells and necrotic particles. The rubber bandage is now removed, sufficient rubber drainage inserted, a drain-poultice of gauze saturated with Wright's solution applied, equalization of circulation established by a compression-pad of non-absorbent cotton, and the dressing completed by a muslin roller-bandage secured by pins and by elevation of the part. Before dismissal the patient is directed to obtain some sodium citrate and to make up the solution for home use by adding to a glass of hot water about two and one-half teaspoonfuls of common salt and a large teaspoonful of the citrate.[2] With this he keeps the dressing moist and warm. He is directed to procure a rubber bandage and to apply it, with the usual precautions, for thirty minutes every three hours. And finally, in the absence of septicemia, he is given an injection of a small dose of polyvalent stock bacterins of pyogenic organisms. In the presence of septicemia a strong dose of well-prepared antistaphylococcic serum may be injected. An antogenous bacterin is prepared for him as soon as possible.

I consider these measures the most rational, powerful and effectual at our command at the present time for the rapid mastery of these infections. Care should be taken not to use hydrogen peroxid until the wound becomes flat and shallow, and under no circumstances to squeeze the wound. I do not know but that it is a good plan occasionally to inject the wound gently with a weak solution of iodin.

The Martin bandage is applied above the elbow or knee, for below these points it cannot constrict the interosseous veins. It is spread over an area of four or five inches to lessen the liability of injury to large nerves. The limb below should be of a dusky-reddish hue, and the peripheral pulse should be plainly felt. The afflicted part should be painless, or at least any preexisting pain mitigated. If the pain is increased, the bandage is too tight.

Waterhouse states that in doubtful cases this constriction is diagnostic of the absence or presence of pus previous to incision. If there is no pus relief ensues in five or ten minutes. If there is pus great pain ensues in a minute or two.

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[4] Vegetables allowed were: Asparagus, beet-greens, Brussels sprouts, cabbage, cauliflower, celery, chicory, cresses, cucumbers, egg plant, endive, lettuce, mushrooms, radishes, rhubarb, salsify, spinach, string beans, tomatoes, vegetable marrow.

[1] Waterhouse: Brit. Med. Jour., Dec. 16, 1911, p. 1577.

[2] Crandon: Ann. Surg., 1910, lii, 541.

I have recently been baking limbs with the Martin bandage applied, thus combining active arterial with passive venous hyperemia, but have not thoroughly tried out this idea yet.

Everything possible should be done to restore function to fingers ravaged by pyogenic infection. Too often these patients are discharged with stiff and crippled digits. Judicious massage and passive motion often work wonders. More attention should be devoted to restoring mobility to ankylosed fingers by reconstructing tendons and joints. In the Transactions of the Fortieth Congress of the German Surgical Society last year,[3] Lexer, of Jena, writes:

> After suppurative destruction of the tendons of the fingers, small incisions are made under the skin and portions of the palmaris longus tendon from the same patient are transplanted. Homoplastic transplantations of not too thick tendons are just as feasible. These methods are established clinically and experimentally.

Being a vestigial muscle (often absent) the loss of the palmaris longus will not be noticeable. Tendon-sheaths might be supplied by transplanting portions of fascia lata, which recent reports[4] show to be very successful.

Not much will be gained, however, by transplanting tendons unless the joints functionate. It might be possible to restore these little articulations by the fascia-fat flap method, described at length by Murphy some years ago.

241 South Thirteenth Street.

GUNSHOT WOUND OF THE PREGNANT UTERUS

Herbert W. Fudge, M.D., Elmira, N. Y.

On account of its extreme rarity, the following case is reported:

History.—Miss H., a well-developed girl, aged 16, was brought to the Arnot-Ogden Hospital at 8 o'clock one evening. About 1 p. m. she had secured her brother's Winchester rifle, 32-40 caliber, and sitting on a low step in front of her house, placed the butt of the gun on the ground, the muzzle against her side and discharged the contents into her abdomen. A physician was called from a near-by town, who, after making an examination, applied an abdominal bandage and had her brought to the hospital, a distance of nine miles, in an ordinary farm wagon.

Examination.—The patient was found to be between eight and nine months pregnant. The bandages and clothing were saturated with blood. There was not a great amount of shock; pulse was 116 of fairly good quality, respiration 34, temperature 100.2. The bullet had entered about 7 inches to the right and on a line with the umbilicus; the opening, which was large enough to admit the index-finger, passed through the abdominal cavity and escaped 1 inch to the left and slightly below the umbilicus. A small portion of omentum was protruding from the wound of entrance, the surrounding skin being blackened with powder. Escaping from the wound of exit was from 6 to 8 inches of umbilical cord. Blood was slowly oozing from both openings.

Operation.—The patient was quickly moved to the operating-room, where hasty preparations for immediate operation were made. A median incision extending from the umbilicus to the pubes was first made. On opening the abdomen a full-term well-developed child was found to have been expelled from the uterus into the abdominal cavity, through a wound extending diagonally across the anterior aspect of the fundus. The baby was taken from the abdominal cavity, together with clots and a large amount of bloody amniotic fluid, and found to have been killed from a bullet wound through the back of the buttocks, shattering the spinal column and pelvic bones, and exposing the abdominal contents. The uterus was found firmly contracted but still contained the placenta. This was next removed without much hemorrhage. A portion of the membranes, having been caught in the cervix, was twisted into a cord and extracted as in an ordinary labor. The uterus was raised and large pads packed around it. An ugly blackened rent was found extending across its anterior surface, about 4 inches in length. There was not much bleeding, owing perhaps to the close contact of the muzzle of the gun, which seared the surfaces of the wounds. After cutting away the rough blackened edges of the uterine wound the surfaces were brought together with two rows of chromic catgut. The uterine sinuses began to bleed freely when trimmed, but this was quickly controlled by the sutures. The abdominal incision was closed by three rows of sutures, a large cigarette drain being left in the lower angle. Before suturing, the abdomen was flushed with a warm normal salt solution. The entrance wound was enlarged, the charred portions being cut away, the omentum returned to the abdominal cavity, the opening packed with iodoform gauze after putting in two or three sutures. The wound was cleansed as well as possible and also packed with the same material. The muscles and peritoneum of the abdominal wall were extensively lacerated. During the operation about 1 pint of saline solution was injected beneath the breasts, the patient's condition being good considering the extent of the injury and the time elapsing before operation. Gas-ether anesthesia was administered.

Postoperative History.—The Fowler position was maintained during the first ten days. On the day following the operation, the pulse was 130, temperature 101, respiration 32. There was very little abdominal pain. The temperature gradually subsided until the tenth day when it became normal and remained so. On the third day one grain of calomel in divided doses was given, followed by an enema. The bowels moved thoroughly and gave no further trouble. From the bullet wound of exit quite a free flow of pus began on the fourth day and continued until the tenth, when it ceased entirely. The cigarette drain was removed on the fourth day and the opening packed with iodoform gauze once daily. The external sutures were removed on the fourteenth day, and recovery from that time on was uneventful. The patient left the hospital twenty-five days after admission, entirely recovered.

A NEW DEVICE FOR HYPODERMIC MEDICATION

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In common with most physicians who use hypodermic medication extensively, I have for some time been dissatisfied with the ordinary hypodermic syringe.

Asepsis is uncertain, the making of the solution is time-consuming, and impossible where water is not available; the joints often leak; the piston occasionally sticks, and the needle becomes dull and rusty from boiling. I wished a syringe that could be used instantly, that was sterile, that contained within itself the desired drug in permanent solution.

I have, therefore, devised the following instrument which has replaced, in my practice and in that of a few confrères, the time-honored piston syringe, with detachable needle and accompanying assortment of tablets.

The cannula is permanently attached to the closed end of the collapsible tube. The tube itself is of pure tin, of extremely thin walls, and so constructed that the entire contents may be expressed, when closed, at the folded end, by thumb-and-finger pressure.

A paraffin seal, through which the solid silver or gold-plated stylet passes, closes the needle-end of the tube. The required drug in permanent solution is placed within the tube, which is then closed hermetically by being folded on itself at the larger end under pressure. It is then labeled and placed in a sterile covering ready for immediate use. Of course, the filling and closing of the tubes is done under aseptic conditions by a competent chemist.

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[3] Lexer: Supplement to Centralbl. f. Chir., No. 29, 1911; Ann Surg., 1912, lv, 138.

[4] Davis: Ann. Surg., December, 1911.

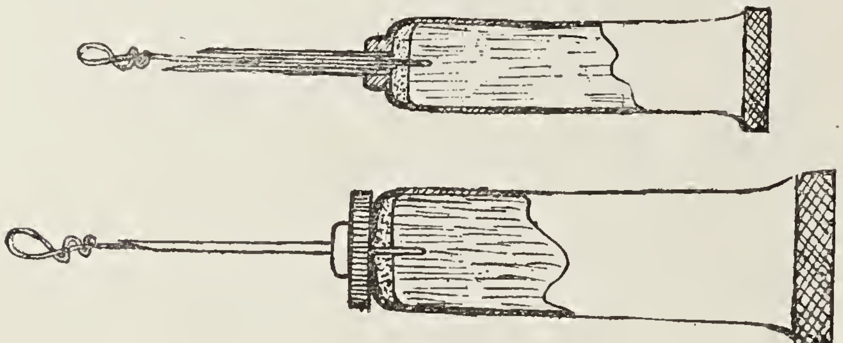
To use the syringe thus prepared, it is removed from its sterile covering and the stylet withdrawn, which withdrawal opens the contained seal.

The point of the syringe is elevated, and the base of the tube slightly compressed between the thumb and finger until the first drop of the solution makes its appearance at the needle's point, thus assuring the expression of any air within the tube.

The point of the needle is then passed through the prepared skin, and the thumb-and-finger pressure continued until the solution is transferred from the tube to the tissues.

The flattened tube and needle are, of course, thrown away after use, which appeals to the thoughtful patient.

I have had these collapsible hypodermic syringes made, filled, labeled and placed in a small pocket case containing one dozen assorted drugs and doses, and have found them not only a great convenience and time-saver, but in two accident cases in which water was not available I believe they have been life-savers.


Individual hypodermic syringes.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

EUCODIN.—Methyl-codein bromide.—Eucodin is methyl-codeine bromide, $C_{18}H_{21}O_3N(CH_3)Br$.

Eucodin is produced by treating solutions of codeine with methyl sulphate and potassium bromide.

Eucodin is a white powder, melting at 261° C. (501.8° F.), easily soluble in water, difficultly soluble in alcohol and insoluble in chloroform and ether. It corresponds to 80 per cent. of codeine and to its own weight of codeine sulphate. It crystallizes in water in large six-sided prisms.

Eucodin is not precipitated from its aqueous solution by the addition of potassium bromide. Eucodin dissolves in concentrated sulphuric acid (1.84) with effervescence and with formation of a light yellow solution (distinction from codeine). On warming eucodin with sulphuric acid and a little ferric chloride, a violet-blue coloration occurs. With formaldehyd-sulphuric acid, eucodin gives a brown color, which later becomes bluish-black (distinction from codeine). On the addition of potassium hydroxide to an aqueous solution of eucodin, a yellow color but no precipitate is formed. An aqueous solution of eucodin treated with potassium ferricyanide and ferric chloride does not immediately become blue (absence of morphine). On the addition of silver nitrate solution to an aqueous solution of eucodin, a yellowish curdy precipitate of silver bromide, which is gradually reduced to metallic silver, is produced. The addition of ammonia hastens this reduction. Eucodin should not leave a weighable residue on incineration.

Actions and Uses.—Eucodin is said to show a marked reduction in toxicity, as compared with codeine and especially diminution of the characteristic convulsive action of codeine. In animal experiments on frogs, rabbits and dogs eucodin showed some diminution in the narcotic action of codeine, while in comparison with codeine the convulsive action was insignificant.

It is said to be useful as a sedative as a substitute for codeine, especially in cough, where its action sometimes favors secretion.

Dosage.—0.06 Gm. (1 grain). It may be given in solution or in the form of tablets.

Manufactured by J. D. Riedel, Aktiengesellschaft, Berlin, Germany (Riedel & Co., New York). German patent Nos. 166,362 and 175,796. German trademark. No U. S. patent. U. S. trademark applied for.

Eucodin Tablets.—Each tablet contains eucodin 0.05 Gm. (5/6 grain).

EUSCOPOL.—Optically Inactive Scopolamine Hydrobromide.—Euscopol is optically inactive scopolamine hydrobromide, $C_{17}H_{21}NO_4.HBr$.

Euscopol is obtained from ordinary optically active scopolamine by treatment with a weak alcoholic solution of potassium hydroxide, subsequent purification of the resulting optically inactive base from which the hydrobromide (euscopol) is prepared.

Euscopol occurs as colorless crystals, easily soluble in water and alcohol, but slightly soluble in ether and chloroform. It melts at 181° to 185° C. The solution is optically inactive.

Excepting the optical inactivity and the difference in melting points, euscopol responds in general to the tests for the official scopolamine hydrobromide. The picrate of the optically active preparation crystallizes in thin needles, melting at 190° to 191° C., while euscopol picrate crystallizes in long indented tablets, while melt at 192° to 194° C. The picrate is prepared by adding 10 Cc. of a saturated aqueous solution of picric acid to a solution of 0.1 Gm. euscopol in 4 Cc. water. The resulting emulsion is dissolved by warming and the solution allowed to stand, whereupon crystals of the picrate gradually form.

If 0.1 Gm. euscopol be dissolved in 5 Cc. water and treated with 5 drops of a 1:1,000 potassium permanganate solution, the violet color should still be visible after five minutes (absence of apoatropin).

Actions and Uses.—It is claimed that euscopol has a milder action than ordinary scopolamin because of the absence of other alkaloids. It is employed as a substitute for the official scopolamine hydrobromide.

Dosage.—0.003 Gm. (1/200 grain).

Manufactured by J. D. Riedel, Aktiengesellschaft, Berlin, Germany (Riedel & Co., New York). German trademark. No U. S. patent. U. S. trademark applied for.

PHARMACEUTICAL PREPARATIONS ACCEPTED FOR N. N. R.

The following dosage forms of accepted proprietary articles have been accepted for N. N. R.:

Tablets, Oxyntin with Pepsin.—Each tablet contains Oxyntin .3 Gm. (5 grains) and is capable of converting 3,000 grains of egg albumin into solution if tested by the U. S. P. assay process.

Capsules, Oxyntin with Nux Vomica.—Each capsule contains Oxyntin .3 Gm. (5 grains) and represents approximately the Nux Vomica strength of 0.33 Cc. (5 minims) tincture of Nux Vomica, U. S. P.

Capsules of Holadin, Bile Salts and Phenolphthalein.—Each capsule contains Holadin 0.13 Gm. (2 grains), Bile Salts, Fairchild 0.03 Gm. (½ grain), Phenolphthalein 0.065 Gm. (1 grain).

Capsules of Holadin, Succinate of Soda and Bile Salts.—Each capsule contains Holadin 0.20 Gm. (3 grains), Sodium Succinate Exsiccated 0.20 Gm. (3 grains) and Bile Salts, Fairchild 0.03 Gm. (½ grain).

Capsules of Bile Salts, Succinate of Soda and Phenolphthalein.—Each capsule contains Bile Salts, Fairchild 0.065 Gm. (1 grain), Sodium Succinate, Exsiccated 0.20 Gm. (3 grains), and Phenolphthalein 0.03 Gm. (½ grain).

Money Value of Factory Sanitation.—That manufacturers are beginning to see the money-value to themselves of sanitary factory conditions is the opinion of P. W. Blair. Writing in *Domestic Engineering*, Mr. Blair says: "The manufacturer is realizing the benefits he can derive from his employees by a larger production of goods through the installation of a complete sanitary equipment placed in his plant in such a manner that it saves time and keeps his employees in the best of health."—*The Survey.*

Therapeutics

PUERPERAL ECLAMPSIA

One of the most terrible complications of pregnancy and parturition is puerperal eclampsia, or puerperal convulsions. Foster's medical dictionary gives "convulsions" as a synonym of "eclampsia," and defines eclampsia as "an acute affection occurring without structural lesion of the nervous system, characterized by general or partial convulsions with more or less complete loss of consciousness."

Some writers have extended the term "eclampsia" to include cases in which convulsions do not occur. Davis and Foulkrod (The Journal, Jan. 7, 1911, p. 11) say:

> We may have eclampsia with a typical picture without convulsions. In such cases the eclamptic seizure is manifested, (1) by a headache of agonizing, blinding type, in which the patient may become unconscious from the pain; or (2) perhaps a burning, substernal pain, which is, in our experience, an almost constant feature of the preeclamptic stage, and may also accompany the convulsive type; (3) as a form of blood disintegration in which the poison may produce an anemia as marked as pernicious anemia, and giving the same blood-picture and physical signs, perhaps somewhat more rapid in its course; (4) as an irritant poison to the blood-vessels, as well as to the blood, a condition in which the blood contains various unformed principles or such an excess of normal principles as to produce irritation and even disease and disintegration of blood-vessel walls, which conditions result in sharp hemorrhage from any of the mucous membranes, from the placental site either before or especially after delivery, and into the retina or brain substances; and (5) as a type of acute disintegration of liver substance simulating acute yellow atrophy; under such conditions other organs may also share in the degenerative process, but not so markedly as the liver.

The more general adoption of such views as those enumerated above has led many writers to include a discussion of eclampsia under the more general term of "the toxemia of pregnancy." "The eclamptogenic toxemia of pregnancy" is also a term that has been applied to the gravidal disease, which is characterized by the various symptoms of the preeclamptic stage, and which may or may not terminate in convulsions.

An unsuccessful effort has been made to include puerperal eclampsia among the infectious diseases, and this conception of the disease has been abandoned (J. E. Welch, The Journal, Oct. 23, 1909, p. 1365).

After it became recognized that puerperal eclampsia was usually associated with the presence of albumin and casts in the urine, it was the generally accepted belief that the convulsions were the result of inflammation or congestion, or at least of impaired function of the kidney, and that they were directly due to the presence in the blood of such products of metabolism as were ordinarily eliminated through the kidneys. But more extensive research during recent years has made it evident that this idea of the disease does not tell the whole story. While it is generally acknowledged now that puerperal eclampsia is of toxic origin, it has been found that convulsions may occur even though examination of the urine immediately prior to the occurrence has shown an absence of albumin and casts.

A pathologic study of the organs of patients who have died as a result of puerperal convulsions has shown that other organs as well as the kidneys are frequently seriously affected in this disease. The liver especially has been found to present serious lesions. Other organs affected are the spleen, the thyroid and the parathyroid glands.

It is not possible at the present time to say that any one of these organs is affected by definite pathologic change in all cases of puerperal eclampsia, although changes are found more commonly in the kidney than in any other organ (Welch, The Journal, Oct. 22, 1901, p. 1361, table). The most definite statement that it is possible to make at the present time is that they are caused by some toxin or toxins circulating in the blood which are due to some abnormal changes in the protein metabolism.

A few cases have been reported of convulsions occurring in the course of the development within the uterus of the so-called mole pregnancy.

There seems to be some reason for believing that the disturbance of metabolism may originate in the placenta.

Another possibility is that they may be associated with the entrance into the blood of the mother of some unusual products of the metabolism of the child.

Statistics indicate that puerperal convulsions occur once in between two hundred and three hundred cases of parturition. The maternal mortality is said to vary from 20 to 40 per cent., and the infant mortality from 30 to 60 per cent. A disease accompanied by such appalling mortality is deserving of most careful management.

It has long been taught that the urine of every pregnant woman should be made the subject of careful examination, at least once a month. But inasmuch as convulsions may arise without any abnormal condition being detected in the urine, it is necessary to make further examination of the patient in order to detect impending trouble of this character. Symptoms which should make one suspicious that his patient may suffer from convulsions are attacks of sharp pain in the head, or under the clavicle or sternum, or at the epigastrium; nausea and vomiting; restlessness or unnatural somnolence, and disturbance of vision. These may not exist in a very striking way, or for very long before the actual convulsion occurs.

The observance of the blood-pressure is of considerable importance in determining the likelihood of impending convulsions.

Dr. J. C. Hirst, of Philadelphia (*New York Medical Journal*, June 11, 1910, p. 1204), has reported at length his observations of the blood-pressure taken with the Faught instrument, of 100 non-pregnant women, the same observations of 100 normally pregnant women, and of thirty-nine women with eclampsia. He found the normal blood-pressure to be 112 mm.; the normal blood-pressure in healthy pregnant women, 118 mm. He found that a blood-pressure below 125 mm. could be disregarded; that a blood-pressure of from 125 to 150 mm. needed careful watching and moderate eliminative treatment, and that a pressure of over 150 mm. needed usually active eliminative treatment and would in all probability, especially if it showed a tendency to climb higher, require the induction of premature labor. C. S. Bacon, of Chicago, asserts (The Journal, Oct. 22, 1909, p. 1361) that he has not seen convulsions occur when the blood-pressure has not been above 160.

General edema is also a sign of the eclamptogenic disease. Slight or moderate edema of the lower extremities may be only a symptom of obstruction to the circulation from pressure on return vessels. General edema is probably due to increased blood-pressure and to changes in the vessel walls and is an important toxic symptom. It is shown not only by a soft swelling of the skin, but also by a rapid increase in the weight that is not accounted for by the quantity of food taken and assimilated. The determination of the weight increase is especially important in discovering "occult" edema which often precedes the more marked patent form.

The treatment of this condition must be considered first from the point of view of prophylaxis. In order to prevent the development of the toxemia which may ultimately prove serious the organs of elimination of every pregnant woman should act so thoroughly as to secure complete elimination of the ordinary products designed for excretion. The bowels should not be allowed to become constipated, and the action of the kidneys should be encouraged by the liberal drinking of water. As it is the protein metabolism which is believed to be chiefly at fault in this condition, the amount of meat allowed a patient should be limited. If there is any reason to believe that the patient is suffering from even a moderate degree of toxemia, meat should be entirely forbidden. The patient should be allowed to eat vegetables, fruits and cereals, and to drink milk. Moderate exercise should be insisted on, and warm baths should be taken several times a week, and warm clothing should be worn constantly so that the surface of the body may not be chilled, and especially the feet should be kept warm.

Just how much can be accomplished by such a line of treatment can never be definitely established, for if by careful management of the patient she passes through to a full-term delivery, and convalesces without a convulsion, one can never be certain that she would have had a convulsion had less care been exercised. In very many cases, however, convulsions come unexpectedly without any warning which has been recognized. When symptoms of toxemia cannot be controlled by diet and elimination, premature labor should be induced as a prophylactic measure.

The growing sentiment of the profession seems to be that when a convulsion has occurred the best thing to do is to remove the primary cause of the condition, which is the fetus in the uterus. The sooner delivery is completed, the better for the patient. If the convulsion occurs after labor has made some progress and the cervix is dilated, the fetus should be delivered at once, preferably by the application of forceps; if this is impracticable, by podalic version and delivery. But unfortunately in many cases labor has not commenced, or has made very little progress when the convulsion occurs. If labor has commenced and the cervix is partially dilated and obliterated, dilatation may be practiced. This may be done either by means of the fingers, or by various dilators, or by the rubber bag. If there is not urgent need of haste, the insertion of the rubber bag within the cervix and its dilatation with water produces dilatation in the most satisfactory way, but too much time must not be consumed by these rather slow methods.

If, as not infrequently happens, labor has not commenced when the convulsion occurs, if the cervix is long and hard and not dilated, or if the woman has a deformed pelvis, or if she is a primipara with a small and nondilatable vaginal canal, it is necessary to resort to abdominal cesarean section. This gives the woman a fair promise of life, and gives the baby an excellent chance.

Other procedures which have been recommended are vaginal cesarean section, which is strongly commended by H. D. Frey, of Washington, D. C., and Reuben Peterson, of Ann Arbor (The Journal, Oct. 22, 1911, p. 1365), and the operation known as laparo-elytrotomy (Thomas' operation) or extraperitoneal cesarean section. Except in multiparas with normal pelves, however, abdominal cesarean section is preferable.

While preparations are being made for the operation, or in case the surrounding conditions do not permit the severe delivery operation necessary, certain palliative measures may be employed. It has long been the custom, during a convulsion to administer an anesthetic, and chloroform has generally been the anesthetic chosen, but the recent careful investigations of the effects of chloroform on human subjects who have died after its administration, as well as on dogs which have purposely been put to death by its prolonged administration, have shown that chloroform is not without danger, and epecially to the organs which have been found to be affected in eclampsia. Consequently, there is a strong feeling at the present time that ether, rather than chloroform, should be the anesthetic chosen. It is not desirable, however, to give any anesthetic during the convulsion, for it cannot shorten the attack, and prevents the inhalation of air which is urgently needed. The anesthetic should be used only to prevent convulsions which seem coming on, or for operations.

Many advise the administration of from 1/6 to 1/2 gr. or more of morphin. This may be combined with 1/150 gr. of sulphate of atropin, 1/100 gr. of hydrobromid of scopolamin (hyoscin) (McPherson: The Journal, Oct. 22. 1909, p. 1363). These drugs diminish the convulsive attacks and may lessen the vascular pressure, and so relieve the strain on the heart. Some, however, condemn the use of morphin, saying that it hinders the action of the organs of excretion.

Some use viratrum viride, giving 5 minims of the tincture hypodermatically, and repeating a smaller dose of from 1 to 3 minims at intervals of one or two hours until the force and frequency of the pulse are materially diminished.

It has been the custom with many to produce diaphoresis. This may be accomplished by introducing hot air between the bedclothes, or by wrapping the patient in a wet blanket and placing hot bottles about her.

Some advise the administration of 1/10 grain of the hydrochlorid of pilocarpin in order to produce sweating. This is condemned by many on the ground that it depresses the heart. Furthermore, some condemn excessive diuresis, urging that the condition is due to the presence of toxins in the blood, and that by withdrawing the watery portion of the blood through the skin the solution of toxins in the blood becomes stronger and more likely to cause convulsions.

The action of the bowels should be promoted by giving Rochelle or Glauber's salts (it is as well not to use Epsom salts since it seems to be a fact that under certain conditions magnesium may be absorbed into the blood and cause poisoning), or by placing one or two drops of croton oil on the back of the tongue, if the patient is unable to swallow.

The action of the kidneys may be stimulated by giving the citrate of potassium in 15-grain doses, repeated every two hours.

Perhaps more efficient than any of these methods of elimination, but requiring skill in carrying it out, is the abstraction of blood from a vein and the intravenous injection of physiologic saline solution, as described in detail by Dr. F. J. Plondke, of St. Paul (The Journal, Jan. 14, 1911, p. 115). By withdrawing from 15 to

30 ounces of blood from the veins and introducing in the place of it from one to two quarts of saline solution, a certain amount of the toxin in the blood is removed and that which is left is greatly diluted, which is believed to be of advantage to the patient.

While the above suggestions for treatment presume that the convulsions have taken place before delivery has been completed, and while many times convulsions cease as soon as the uterus has been emptied, still, recent statistics of 409 cases of eclampsia, compiled by Lichtenstein (*Arch. f. Gynäkol.*, xcv, No. 1, p. 1) show that in nearly two-thirds of the cases convulsions are repeated or first occur after delivery. A very important fact brought out by this investigation seems to be that the reason that in so many instances convulsions cease after delivery is that a large amount of blood has been lost from the uterus. In other words, Lichtenstein thinks that there is not so much actual value in removal of the irritation from the uterus as in the fact that a large amount of blood carrying toxins is lost during delivery by the patient. Lichtenstein also thinks that the greater the amount of blood lost, the greater likelihood of the convulsions not recurring. This would then simply emphasize the value of venesection.

Once the uterus has been emptied the prognosis at once becomes more favorable, although in some cases it is impossible by any means at our command to avert a fatal result.

THYROID TREATMENT OF ECLAMPSIA

The treatment of eclampsia above outlined is orthodox and represents the consensus of the best opinion of this dire catastrophe of pregnancy. A mode of treatment based on the theory of the relation of hypothyroidism to eclampsia may also be presented for consideration. It seems proved that the poisoning and convulsions are only in part due to insufficiency of the kidneys; that the poisoning has something to do with disturbed protein and nitrogen metabolism. It is positively known that the thyroid gland, among its many functions, has to do with rendering some of the metabolic products of protein metabolism innocuous to the system.

It is a fact that the thyroid gland normally enlarges and hypersecretes throughout pregnancy. It is quite probable that besides its other necessary functions during pregnancy an important one may be, through its hypersecretion, an increased ability to counteract any bad effect that could occur from increased metabolism in the mother's blood, due to an increased nitrogen metabolism necessary for the growth and nutrition of the enlarging uterus and placenta and the metabolism of the growing fetus. If, for any reason, the thyroid gland did not furnish sufficient secretion for the extra nitrogen metabolism and the extra amount of excretory products circulating in the mother's blood, symptoms of intoxication must occur. These symptoms have been outlined in the above article as forerunners or indicators of probable future trouble, i. e., eclampsia. If to the above symptoms nausea, constipation, headache, restlessness and general irritability are added much increase in weight, especially fat, a tendency to slowing of the pulse, a tendency to decreased secretion of the skin and a drying of the skin, positive symptoms of subthyroid secretion are present. Hence, whether the kidneys show albumin, or casts, or neither, it is good treatment to interdict all meat and meat extracts to relieve from the danger of poisoning and poor excretion of this kind of nitrogen.

Also, if the above symptoms are present, it would seem sensible treatment to give 3 to 5 grains of thyroid once a day, the amount depending on how it affected the heart. If the heart was made more rapid, the dose should be reduced.

If the above symptoms were present only in mild form, or if the patient presented no apparent symptoms of subthyroid secretion, and yet the physician was suspicious of such a condition, 2 or 3 grains a day of sodium iodid might stimulate the thyroid to better activity.

Another indication that nitrogen or metabolic toxins are really the cause of eclampsia is shown by the fact that in many instances the convulsions do not occur until the mother is in labor, i. e., during the severe muscle work. On the other hand, many instances occur in which the convulsions do not take place until after the labor has been entirely finished, and the increased amount of toxins from muscle activity have been circulating in the blood for some minutes, or even a few hours.

With the above considerations, rational treatment of puerperal eclampsia would seem to be to prevent threatened convulsions with ether or narcotics; to evacuate the uterus as rapidly as possible without calling in muscular exertion and hence the production of more toxins by the mother, and to consider uterine hemorrhage as both prophylactic and therapeutic.

If it is impossible to evacuate the uterus immediately, or if the convulsions occur after delivery has been completed, venesection is certainly indicated, the amount to be determined by the condition of the patient; then the transfusion of physiologic saline, or, if deemed best, hypodermoclysis, besides the introduction into the colon of warm physiologic solution. Such treatment will dilute the toxins in the blood, fill the blood-vessels with liquid, improve the circulation and improve all excretions. In the meantime, large doses of thyroid administered by the mouth are considered by many obstetricians as a most valuable treatment of puerperal eclampsia. Large doses may be given, as 20 grains at once, and 10 grains given every three hours thereafter for several doses, if the convulsions recur.

Although advised by many obstetricians, care must be exercised in the administration of large doses of morphin. Large doses of morphin control the convulsions simply by stupefying the central nervous system. Morphin is one more toxin, however, added to the system. It may increase the coma, which generally follows these convulsions, and it interferes with some of the secretions and excretions. If a narcotic or anticonvulsant is advisable, and it often is, chloral administered by the rectum, or by the stomach if there is no vomiting, may be employed either alone or in combination with moderate doses of morphin. The dose by the rectum should be 20 or 30 grains at once.

A Prescription for Barber's Itch:

℞

	Gm. or c.c.		
Acidi sulphurosi	15		℥ss
Glycerini	30	or	℥j
Aquæ rosæ ....q.s. ad	100		℥xij

M. Sig.: For external use. Apply as often as necessary.

A Prescription for Ozena:

℞

Thymolis iodidi	
Olei ricini	
Collodii	1 part each

M. Sig.: To be applied on pledgets of cotton wool.—Foxino.

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[*For other information see second page following reading matter*]

SATURDAY, MARCH 16, 1912

THE FATE OF ABSORBED PROTEINS

The immediate destiny of our food intake after it leaves the alimentary tract in the guise of a digestion product is a problem of supreme interest. Between the moment of absorption and the ultimate elimination of the effete waste of our sources of energy there is a gap of ignorance which is only slowly being filled by the accumulation of knowledge in the domain of intermediary metabolism. The physiologic chemist can follow the carbohydrates a little way as sugars to the liver and the fats along the thoracic duct into the general circulation. But the fate of the nitrogenous bodies has proved to be an almost impenetrable mystery. We are no longer content to speak learnedly of their "conversion" into blood proteins during their passage through the intestinal wall. There is no real justification for this purely hypothetical explanation. The one conspicuous fact is the comparatively speedy excretion of urea following an intake of protein. Investigators have tried, with little avail, to find the nitrogenous representatives of this metabolized protein somewhere on their way from the intestine to the kidneys, where the nitrogen is ultimately eliminated. In the main they have eluded chemical pursuit. Neither as protein nor as amino-acid have they been detected. The observed increase in ammonia content of the intestinal wall and portal blood has lent probability to the view that the amino-acid fragments of protein are denitrogenized very early on their way into the organism proper, the nitrogenous groups being split off as ammonia which is then synthesized into urea in the liver. It is undoubtedly true that such an abstraction and conversion of ammonia can be accomplished by this organ; but how are the distant tissues of the body to replenish their protein store if all nitrogen is thus speedily removed from the nutritive system by its conversion into urea at the very portals of entry?

The story of progress in experimental science is much like that of the development of important industries. When a fruitful natural resource or working field is discovered it is exploited with the cruder methods so long as a good return is yielded. Ultimately the reward of effort may diminish to a point where further undertaking becomes unprofitable. If at such a juncture new and better methods of operation can be introduced, the precious metal which is still hidden in what hitherto had appeared as unpromising ore can be brought to light. So in science new methods of investigation always lead the way to progress. To-day we can record another step in advance as the result of an evolution of chemical technic for which Professor Folin is responsible. By making possible the estimation of minute quantities of the various nitrogenous substances—urea, ammonia, etc.—he has been enabled to follow the amino-acids in their journey into the organism.[1] In their preliminary contribution on this subject, Folin and Denis have apparently demonstrated that the blood promptly transports the amino-acids from the intestine to every tissue in the body. It is, after all, quite what one would expect, to find the amino-acids, which must at times serve as food materials, to be distributed precisely like other nutrient compounds. The products of digestion leaving the intestine lead to an unmistakable increase in the non-protein nitrogen of the blood; the amino-acids thus brought into the circulation may then be rapidly absorbed from the blood by the tissues.

Here, then, is a suggestion of what becomes of the amino-acids absorbed from the intestinal tract. "The muscles and other tissues as well evidently serve as a storehouse for such reserve materials. The existence of such a reservoir must be taken into account in our theories of protein metabolism, for it certainly ought to make at least some points clear which were not clear before. The peculiar lag extending over several days in the establishment of a constant level of nitrogen elimination when extreme changes are made in the nitrogen intake is probably due to a filling or a depletion as the case may be of the reservoir. The different results obtained when a single substance like creatin or an amino-acid is fed together with diets rich or poor in nitrogen would also be determined by the condition of the reservoir. When full the creatin is eliminated and the amino-acid augments the urea output; when nearly empty both are retained."

It is, perhaps, too early to speculate on the conception of protein metabolism here suggested wherein the non-protein nitrogen of the blood may "rise and sink like a tide with reference to absorption from the digestive tract." We may well be content for the moment to have followed the intake a step further into the hidden recesses of metabolism.

THE INFLUENCE OF CAFFEIN ON MENTAL AND MOTOR EFFICIENCY AND ON THE CIRCULATION

H. L. Hollingworth,[2] professor of psychology at Columbia University, gives a summary of an extended investigation soon to be published in psychologic journals, on the influence of caffein on mental and motor efficiency. The experiments were carried on in a specially equipped laboratory with the aid of six assistants and sixteen subjects, of both sexes, engaged for full-time service extending over a period of forty days. The most rigorous scientific method and precaution were employed throughout the investigation, the full details of which will appear in the complete report. Controls were employed among both the subjects and the assistants. These controls received capsules containing sugar of milk instead of caffein, and no subject knew whether or when he received caffein. The tests performed included motor efficiency measured by steadiness, coordinated movements, typewriting, etc., and mental efficiency measured by speed and accuracy of calculations, discriminations, and other mental processes. The same program of tests was performed for an hour five times each day. A condensed statement of the author's conclusions from 76,000 measurements and 800 efficiency curves with and without caffein follows:

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[1] Folin and Denis: Protein Metabolism from the Standpoint of Blood and Tissue Analysis, Jour. Biol. Chem., 1912, xi, 87.

[2] Hollingworth, H. L.: Therap. Gaz., Jan. 15, 1912, p. 1.

In the test for steadiness, in which the arm is held extended and any unsteadiness recorded by appropriate apparatus, doses of from 1 to 4 grains of caffein citrate produced a slight nervousness not apparent until several hours after the dose. A dose of 6 grains produced a marked unsteadiness which was greatest after three or four hours. The effect of caffein on motor processes was that of a typical motor stimulant manifested by a decided increase in the speed and accuracy of the movements. This effect began in from forty-five to ninety minutes and lasted from three to four and one-half hours. No secondary or after-effect was produced in the seventy-two hours during which the effects of single doses were traced. In the coordination tests, of which typewriting is one, caffein citrate in doses of from 1 grain to 3 grains produced stimulation and increase of speed while larger doses produced retardation. In typewriting, however, the quality of the performance measured by the number of errors both corrected and uncorrected, for the whole range of caffein doses, was superior to the quality yielded by the same subjects on control days, and the increase in speed produced by small doses was not gained at the expense of additional errors.

In the calculation tests, as well as in other tests of mental processes, all squads showed a pronounced stimulation following caffein. This stimulation amounted to from 10 to 20 per cent. of the initial performance, whereas the control days showed a corresponding decrease of the initial performance due to fatigue. The total effect of caffein was greater for these than for any of the other tests. The stimulation began about one hour after the dose and was still present at the close of the day's work six or seven hours later. No evidence of any secondary depression was found. Instead, the morning following the experiment showed without exception a clear improvement over the work of the morning preceding the experiment. This improvement was not due to practice, as it was never found in the case of the control days.

H. C. Wood, Jr.,[2] has studied the effects of caffein on the circulatory and muscular systems. The average of all his experiments on the circulation shows a slight increase in blood-pressure beginning one-half hour after the administration of caffein, reaching its maximum in two hours and amounting to an average increase of 2.2 mm. of mercury pressure. The slowing of the pulse-rate began soon after administration of caffein and remained almost constant at an average of five beats per minute slower than before caffein was given. These statements represent averages of experiments made on normal adults under test and control conditions. The doses of caffein citrate ranged from 1½ to 6 grains. Dr. Wood also tested the effects of caffein on the reflexes using the Lombard knee-jerk apparatus. The results he describes as unexpectedly striking. "In every instance there was a marked increase in the knee-jerk beginning about twenty minutes after the ingestion of caffein, reaching its maximum in from forty to sixty minutes, and remaining above normal throughout the whole course of the experiment."

As to the effect on muscular efficiency Wood, after reviewing the results of Hoch's, Kraepelin's and Shumburg's experiments on the muscular action of human subjects, adds a series of experiments on frog muscles, both caffeinized and normal, and sums up all the evidence with the conclusion that caffein "acts as a stimulant to the reflex centers of the spinal cord; it enables the muscles to contract more vigorously without producing a secondary depression, so that the sum-total of muscular work which can be done by a man under caffein is greater than that which can be done without it."

It is gratifying to have the effects on the human system of a drug like caffein so investigated by rigorous scientific tests at the hands of capable investigators; only in this way will there be provided an adequate basis for correct conclusions as to the possible dangers of the use of caffein-containing beverages.

THE PROBLEM OF THE FEEBLE-MINDED

Dr. Charles B. Davenport[1] defines feeble-minded persons as those who lack one or more mental traits that are socially important. All defectiveness is a persistent infantile condition of one or more characteristics; a failure of development of certain socially important traits. Putting aside the old legal definition of a feeble-minded person—that he was a person who could not count or number twenty pence, or could not tell who was his father or mother, etc., and the Binet-Simon tests of mental grading, as incomplete in the former instance and erroneous in the latter—Davenport says that feeble-mindedness as ordinarily understood consists in an aggregation of the defective traits that are socially important, and that it exists in all degrees. Any of the defects may occur isolated, or two or more of them together in one individual and such defectiveness is often not recognized as such; but it is the multi-defectives who constitute the main problem of the feeble-minded, or those who are socially inadequate. Among the well-known defects possessed by many individuals are word-blindness, figure-blindness, color-blindness, etc., or number-defectiveness, attention-defectiveness, memory-defectiveness, emotion-defectiveness, moral-defectiveness, and these defects are in general hereditary, and are the result of corresponding defects in the germ plasm of the parents. If both parents be mental defectives the combination of the germ cells will almost certainly result in a feeble-minded child.

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[2] Wood, H. C.: Therap. Gaz., Jan. 15, 1912, p. 6.

[1] Davenport, C. B.: The Origin and Control of Mental Defectiveness, Pop. Sc. Monthly, January, 1912, p. 87.

"Defects," in Davenport's belief, are not pathologic conditions, but are merely deviations from the normal conditions of the adult. Every person shows defects at some stage of his life and only gradually overcomes them. It is a well-known biologic principle that the child in his development passes through the same series of physical and mental stages that the successive generations reached in the adult stage in race development, and it may be inferred that man's remote ancestors did not go in the adult stage beyond the point where the infant man is now. Adult apes, nearest allies of our ancestors, show the same inability to talk, to dress, to regard property rights and to be considerate toward others that the infant shows, and the acquiring of social traits by the normal child follows much the same road as the evolution of social man from the ape stage. Feeble-mindedness is thus an uninterrupted transmission from our animal ancestors. It is not reversion; it is direct inheritance, with failure to develop beyond it.

Even in prehistoric times, Davenport says, there must have been at work a natural control of these defectives by the elimination of those incapable of meeting the ever-increasing complexities of civilization; and death from cold and hunger of those who had not acquired the trait of hoarding supplies, or by violence, of those who did not respect the property rights of others, eliminated many. To-day we have reversed this process of elimination of the unfit animal strains. We protect in institutions scions of weak stocks up to the period of reproduction and then set the individuals free with the result of producing large numbers of feeble-minded, who in turn are carefully nurtured up to the reproductive period, are again set free to reproduce, and so the stupid work goes on of preserving and increasing our socially unfit strains. Davenport calls attention to the reaction against this as in the instance of legislation enacted to permit the sterilization of defectives. A less drastic method would be the segregation of these individuals throughout the whole reproductive period. Davenport believes the method is not so important, yet some way must be devised to eliminate these defective family lines or they will prove disastrous to society. The eugenists have recognized this defect in our humanitarian methods, and are already endeavoring to reconcile or conform those methods to the requirements of eugenics, which seeks to eliminate the feeble-minded and defective by the propagation of the fit only.

Current Comment

MEDICAL VS. LAY ADVERTISING—A COMPARISON

A few weeks ago The Journal showed up the fraud and deception connected with the exploitation of a so-called rupture cure. Since the article appeared, we have received a letter from the representative of a high-class popular monthly magazine asking for copies of The Journal's exposé and containing the following statement:

> "I can assure you that had we known that he was a bogus advertiser his advertisement would never have appeared in our columns."

This incident is fairly typical of the attitude of the better class of lay journals toward fraudulent medical advertisements. On the other hand, The Journal has for some years past exposed fraudulent products whose advertisements are carried in supposedly reputable medical journals. There has been no question of the accuracy of The Journal's charges; had there been, it is perfectly sure that the Association would have been involved in litigation. The facts given by The Journal regarding various proprietary fakes are undeniable. In many ways, these "ethical" proprietaries are more fraudulent than many of the products that appear in lay journals, because they not only defraud the public, but also humbug the profession into whose hands the public entrusts its health. In spite of this, with two or three exceptions, the so-called independent medical journals continue to carry these fraudulent advertisements—and the spectacle of any of these journals cleaning up their advertising pages is so unusual that the two or three instances in which it has been done have called for special comment and praise from The Journal. All of which goes to prove that, generally speaking, the ethics governing medical journal advertising is rapidly falling behind that governing lay journal advertising. The reason? Either the lay publisher is more responsive to the wishes of his subscribers than is the medical publisher, or else the public has been more insistent than has the medical profession on the elimination of fraudulent advertising.

A NEW LIFE-SAVING FEATURE IN THE CONSTRUCTION OF TENEMENTS

Two structures recently erected on New York's east side are mentioned as examples of a new type of tenement buildings. It has been conclusively shown—by cold figures—that the old, crowded, insanitary tenement house in many instances yields a higher rate of interest on the money invested than buildings complying with hygienic principles, and it is therefore not to be wondered at that unsentimental big business has so long been deaf and blind to modern demands along these lines, and that it has been left for "four-per cent. philanthropy" to meet the need. One of the distinguishing characteristics of the buildings mentioned is the open stairway, the primary purpose of which is to do away with all interior passages and hallways and to provide each family with its own entrance from outside the building. In an article on "Modern Tenement Houses,"[1] J. A. Rawson describes and illustrates the construction of these stairways and points out, besides the sanitary value, their great usefulness in case of fire, evidence of which is the fact that it has been decided that no fire-escapes are required on New York tenements having such open stairways. Some of the prominent features of the open stairs are: 1. Each particle of material is fireproof. 2. White tile on the walls aids in catching and reflecting every ray of light. 3. The top of each stair-well is covered with a pergola, so that neither rain nor snow can find its way into the hole. An iron frame-work holds glass panels over the top and glass windows part way up the sides with numbered sections which can be opened when desired. Immediately under its roof the pergola is always open for ventilating purposes. In view of the comparatively recent great loss of life by fires in New York City, it is reassuring to know that that city is beginning to lead in improvement work of this nature.

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[1] Rawson, J. A.: Pop. Sci. Month., February, 1912, p. 191.

NOT A SQUARE DEAL FOR THE PHYSICIAN

In the Propaganda for Reform Department of this issue are given the results of an investigation carried on in the Association's laboratory to determine whether or not there is any chemical difference between acetphenetidin and phenacetin. As every physician knows, phenacetin was for some years the proprietary name of the substance known, chemically, as acetphenetidin. When the patent on phenacetin expired, the substance became public property. Nevertheless, the original patentees, the Farbenfabriken of Elberfeld Company, still list and sell the product under its proprietary name and also offer it under its chemical name. Under the proprietary name, the company demands more than five times the price it asks for the same product sold under its chemical name. The same anomaly is perpetrated in the United States by the only American firm that makes the product under both its proprietary and its chemical names—Lehn and Fink. Other American pharmaceutical houses sell the substance only under its official name. The investigations of the Association's chemists show that the only demonstrable difference between phenacetin and acetphenetidin is the price. *Verbum sat sapienti!*

THE THYROID AND MORAL RESPONSIBILITY

That patients suffering from exophthalmic goiter are often very irritable is well known; that this may also occur with those suffering with less marked degrees of hyperthyroidism is illustrated by a well-authenticated case in which a man, aside from a mild degree of tachycardia, showed almost no symptoms except a very quick and irritable temper which caused him on several occasions to be brought into the police court charged with wife-beating. Operation revealed a distinctly hypertrophied thyroid; its partial resection caused a disappearance of the tachycardia and a marked improvement in the man's disposition. This case led a wit to remark that if he ever got into difficulty on account of his quick temper he would plead that he was suffering from hyperthyroidism. Such a plea of partial irresponsibility on account of thyroidism (induced by taking thyroid tablets in excess) was actually made in a London police court recently.[1] We called attention some time ago[2] to the risks to health incurred by those who indulge too freely in thyroid or in some of the "antifat remedies" containing it; the cases just mentioned show that still other dangers beset those who try to get thin by this usually irrational method.

EPIDEMICS OF SO-CALLED INFLUENZA

Since the pandemic of influenza in 1889-90, when within one year the whole civilized world was afflicted with the contagion, there have been lesser outbreaks at irregular intervals in most centers of population. These epidemics of coryza, sore throat and bronchitis have usually been called influenza or "la grippe," because of the characteristic contagiousness of the infection, the persistence of the symptoms, and the tendency to prostration and mental depression. But this diagnosis has not been satisfactorily confirmed by bacteriologists. In the great pandemic, Pfeiffer and others found in the nasal and bronchial secretions "pure cultures of the influenza bacillus in all uncomplicated cases." Subsequent reports seem to indicate that the influenza bacillus is a common invader of the air-passages in a large group of other diseases, notably whooping-cough (Davis), phthisis and measles. There is no evidence that this bacillus is more prevalent in the local epidemics of influenza than in the ordinary catarrhal infections. For example, in 30 per cent. of unselected cases of acute and chronic bronchitis the patients harbored influenza bacilli (Lord), although no epidemic prevailed, whereas only 6 per cent. of the patients examined in a typical influenza epidemic showed these organisms (Ruhemann). The bacteria most often seen are pneumococci, diplobacilli and streptococci. The time has come for a more careful, systematic study of the etiology of these localized outbreaks. By means of improved cultural methods, investigations into the bacteriology of the mucous secretions, exudates and blood of influenza patients promise valuable results. A recent epidemic of "septic sore throat" in Boston was studied by Richardson[3] and others. They traced the contagion to a streptococcus that was spread by means of milk. Müller and Seligman[4] have recently carried out a study of an influenza epidemic among children in Berlin and conclude that the causative organism is a streptococcus differing so much from the ordinary germ that they use the term "grippe streptococcus." Davis and Rosenow,[5] in a bacteriologic study of the recent epidemic of sore throat in Chicago, have demonstrated as the exciting agent a streptococcus of peculiar characteristics which in many respects resembles the organism described by Müller and Seligman. It is interesting to note that these three epidemics, occurring during the last year in widely separated communities, have all been caused by the streptococcus. It is to be hoped that in the future such epidemics in various cities will be more systematically and carefully investigated.

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[1] Pharm. Jour. and Pharmacist, Feb. 24, 1912, p. 238.

[2] THE JOURNAL A. M. A., Oct. 14, 1911, p. 1290.

[3] Richardson, M. W.: Boston Med. and Surg. Jour., Dec. 14, 1912, p. 899.

[4] Müller and Seligman: Berl. klin. Wchnschr., 1911, xlviii, 1636.

[5] This issue, p. 773.

PROGRESS IN VITAL STATISTICS REGISTRATION

The Director of the Census has admitted Kentucky to the registration area of the United States for the year 1911. This makes the twenty-second state included and raises the population having accurate registration of deaths to 63 per cent. of the total population of the continental United States. The Kentucky law went into effect Jan. 1, 1911, so that it is a marked testimonial to the efficiency of the system of registration recommended by the Bureau of the Census that the results for the first year of its operation have entitled it to admission. Other states that have recently been included under the provisions of the model law are Ohio and Missouri, while the model bill has been passed by both houses of the Virginia legislature. Amendments to the present law, designed to bring it into more thorough compliance with the accepted system, are now being considered, on the recommendations of the State Board of Health, by the legislature of Maryland. Kentucky, however, is the only state south of the Ohio River to possess efficient registration of deaths, and the Bureau of the Census is actively engaged in recommending the passage of similar laws for other states of the south. A bill patterned after the model bill of the American Medical Association has just been passed by the legislature in Mississippi. This seems to be a good year for vital statistics. It is to be hoped that the example of these three southern states will be followed by all the others.

Medical News

ALABAMA

New Tuberculosis Camp.—A tuberculosis camp is to be erected on the site of the Red Mountain Camp, near Birmingham, within the next three months, with funds derived from the sale of Red Cross Christmas seals by the woman's auxiliary of the Antituberculosis Association of Jefferson County.

Civil-War Claim Allowed College.—In the omnibus claim bill recently passed by Congress, is an item of $4,200 for the medical department of the University of Alabama, Mobile, for the destruction of equipment and the use of the Mobile Medical College building during the Civil War by the federal troops for military purposes.

Rhett Goode Memorial Fund.—The friends of the beloved and lamented Dr. Rhett Goode, Mobile, to give expression of their affection for him, have decided to ask the alumni of the School of Medicine of the University of Alabama and the personal friends of Dr. Goode to unite in raising $1,000, to erect a suitable bronze tablet on the walls of the main building of the School of Medicine. Dr. T. H. Frazer, Mobile, is the treasurer of the fund.

DELAWARE

New Officers.—New Castle Medical Society: president, Dr. William Wertenbaker, New Castle; secretary, Dr. Albert Robin, Wilmington.

New Board of Health.—A new board of health has been appointed for Milford, consisting of Dr. William Marshall, Jr., Dr. J. G. Dawson, Dr. James P. Lofland, George H. Hall and George H. Roach.

Settlement Clinic Opens.—The first clinic of the new dispensary at the People's Settlement, Wilmington, was held January 29. Arrangements have been made to hold general clinics on Monday, Wednesday and Friday, and eye, ear and throat clinics on Tuesday and Thursday.

GEORGIA

College Transferred.—The old board of trustees of the Medical College of Georgia, Augusta, met March 6 and formally authorized the vice-presidents and secretary to convey to the University of Georgia the property and assets of the Medical College, in accordance with an act passed by the last state legislature.

New Officers.—Fourth District Medical Society, February 22: president, Dr. H. J. Goodwyn, Roopville; secretary, Dr. Homer Boatright, Carrollton. Warm Springs was selected as the next place of meeting.——Laurens County Medical Society: president, Dr. J. J. Barton; secretary-treasurer, Dr. A. R. Rozar, both of Dublin.

Personal.—Dr. L. B. Clarke has been elected president; Dr. C. W. Strickler, vice-president, and Dr. L. P. Stephens, secretary, of the medical board of Grady Hospital, Atlanta.——Dr. W. D. Jennings, Jr., has been appointed city physician of Augusta.——Dr. Raymond V. Harris has received a temporary appointment as assistant health officer of Savannah, and Dr. Marion R. Thomas has been appointed city physician, both of Savannah.

IDAHO

New State Officers.—Dr. William F. Howard, Pocatello, has been elected president; Dr. John Boeck, Boise, vice-president, and Dr. Edward E. Maxey, Boise, secretary, of the Idaho State Medical Association.

Medical Corps Reorganized.—Dr. William H. Tukey, Boise, has been commissioned as major, and Dr. Frederick A. Pittenger, Boise, captain, M.C., N.G., Idaho. The Medical Corps is to be reorganized on the basis of the Hospital Corps of the Army.

Indian School for Tuberculosis.—The school for tuberculosis for Indian children at Lapwai is now accommodating sixty-five pupils and more are to be accommodated in a short time. This institution takes Indian children suffering from tuberculosis from the states of Idaho, Oklahoma, Kansas, Minnesota, Washington, Oregon and Montana. About $15,000 is being expended in improvements.

Marriage Notice Was a Joke.—Dr. and Mrs. Charles B. Callard, Boise, write regarding the announcement of their marriage, which appeared in The Journal, March 2, that the notice in the Pocatello paper of their marriage was a joke, planned in extremely bad taste and carried out by acquaintances. Dr. and Mrs. Callard were married at Franklin, Neb., Dec. 26, 1906, and have lived in Boise for five years.

ILLINOIS

Vital Statistics for 1910.—The November 1911 number of the Illinois State Board of Health monthly bulletin just issued, gives in detail the vital statistics for 1910; there were 66,171 deaths reported for the year; 73.1 per cent. came from cities and villages having an aggregate population of 57.4 per cent. of the total population of the state. It is estimated that during the year there were 132,342 persons ill, who not only were unable to care for themselves, but required attention of others. Typhoid caused 1,039 deaths, or 122 more than for the previous year; measles 549, an increase of 164; scarlet fever 576, an increase of 59; whooping cough 448, a decrease of 55; diphtheria 1,332, an increase of 331; pellagra 60, a decrease of 34; tuberculosis 7,049, a decrease of 29; cancer 3,948, an increase of 252; diabetes 600, an increase of 8; meningitis 665, a decrease of 53; acute poliomyelitis 77; cardiac diseases 5,796, an increase of 104; pneumonia 8,838, an increase of 1,611; diarrhea and enteritis 6,309, an increase of 623; nephritis 4,065, a decrease of 354; suicides 875, an increase of 18; deaths from external causes 5,384, an increase of 921. Of these 290 were homicides. This bulletin also gives a tabulated statement showing the total number of deaths in the chief age periods and the percentage of the three most important causes of death in each period for the year; the report of deaths by counties with the variation as compared with 1909; the total number of deaths in cities and in comparison with 1909; the total number of deaths by months of males and of females, and the total number of deaths from classified causes by counties; the total reported deaths by counties by principal causes; the total report of deaths from classified diseases by sex, color, nativity and social condition; the total report of deaths from classified diseases by ages; the total report of deaths from classified diseases by months, and the reported deaths from principal causes from 1902 to 1910 inclusive. A table of returns of births for the year by counties is also included.

Chicago

Pay for Birth Registrations.—The first voucher in payment for the registration of a birth, after about nine years of delay, was issued March 9.

Incoming Vessels Bring Typhoid.—At a hearing before Colonel George A. Zinn, U. S. Army, March 9, on an appeal made by the sanitary district trustees to the War Department, asking better sanitation on ships within a radius of the intake of the drainage system, Health Commissioner George B. Young declared that many cases of typhoid in Chicago may be traced to unsanitary conditions on incoming vessels. It is expected that a bill will be introduced in Congress for the correction of this evil.

Visit of Dr. Noguchi.—Dr. H. Noguchi of the Rockefeller Institute, who has done important work in syphilis, visited Chicago from Saturday until Wednesday. He delivered the Fenger-Senn Memorial Lecture on The Luetin Skin Reaction in Syphilis, before the Chicago Medical Society, and demonstrated about twenty patients showing the luetin skin reaction whom he had inoculated on the previous Saturday. This reaction requires from twenty-four hours to four days to appear and adds another and less complicated test of the presence of syphilis than the Wassermann reaction or the modification of it devised by Dr. Noguchi.

INDIANA

Small-Pox at Winslow.—Twenty cases of small-pox from Winslow, Pike County, have been reported to Dr. J. N. Hurty, state health commissioner.

Dispensary for Sick Children.—A dispensary for sick children will be erected at the Fairview Summer Mission, near Indianapolis, and it is expected will be open by June 1. A donation for this purpose of $1,000 has been received from the estate of Alfred Burdsall.

Doctors' Club.—The Vanderburg County Medical Society, at its meeting February 13, appointed a committee of five to devise ways and means whereby a doctors' club may be established at Evansville, having in connection with it a modern laboratory and medical library.

County Society Publication.—At the meeting of the St. Joseph County Medical Society, February 27, it was announced that a monthly bulletin is to be issued, containing the program of the society and discussion of current work. Dr. C. E. Varier, South Bend, is in charge of the bulletin, which will be issued in April.

Personal.—Dr. L. R. Miller, Winslow, is reported to be ill with small-pox.——Dr. Benjamin S. Potter has been reappointed superintendent of the Asylum for the Incurable Insane, Julietta.——Dr. Gustave A. Petersdorf, Indianapolis, sustained painful contusions in a runaway accident, February 27.——Dr. Harry S. Leonard, Indianapolis, is reported to be critically ill with septicemia, due to an operation wound.——Dr. R. L. Sensenick, South Bend, has been elected president of the South Bend Public Welfare League.——Dr. W. H. Hoppenrath, Elmwood, was seriously injured in a runaway accident, February 20.

MARYLAND

Quarantine Lifted.—The scarlet fever quarantine in Smithburg, which included the closing of schools, churches and the prohibition of public gatherings, has been lifted.

Fire at State Hospital.—Fire on March 7 destroyed a large frame building on the grounds of the Maryland Hospital for Negro Insane, Crownsville. The building had been used as the temporary quarters for about seventy inmates, pending the completion of the new hospital. All the patients were removed in safety.

Baltimore

Physicians' Orchestra.—The Physicians' Orchestra, conducted by Dr. Charles F. Nolen, is to be made permanent. Membership is limited strictly to members of the Medical and Chirurgical Faculty of Maryland. Dr. B. Merrill Hopkinson is to have charge of the chorus.

Health Exhibition a Success.—The Health Exhibition conducted by the Medical and Chirurgical Faculty of Maryland at Osler Hall for the past three weeks, closed March 9. It was the most successful exhibit ever held in Baltimore and drew large crowds, both of children and adults.

Holman Association.—At a public meeting of the Holman Association, which has for its purpose the promotion of rural nursing, hygiene and social service, February 28, Dr. William H. Welch presided, and among other speakers were Miss Lydia Holman, Oxford, N. C., the founder of the Association; Misses Mabel Boardman and Jane A. Delano of the American Red Cross; Mr. Gifford Pinchot, formerly head forester of the United States, and Dr. Henry M. Hurd, formerly superintendent of Johns Hopkins Hospital.

President Remsen's Trip.—Dr. Ira Remsen, president of Johns Hopkins University, attended the annual banquet of the New York Alumni Association, March 6. On March 9 he was the guest of honor at the first annual banquet of the Alumni Association of Georgia, and on the same day a reception was tendered him by the University Club of Atlanta. On March 11 he spoke before students and faculty of the Georgia School of Technology, and on March 12 he addressed the students of the University of Georgia, Athens.

Personal.—Dr. Ward Huber has resigned as resident physician of the University Hospital to take a similar position in the James Walker Hospital, Wilmington, N. C.——Drs. W. W. Ford and Thomas R. Brown have returned from abroad.——Dr. Raymond C. Hussey has resigned from the charge of the Tuberculosis Hospital, Bay View, to take a position in the State Tuberculosis Hospital, Sabillasville.——Dr. C. P. Strauss, South Baltimore, who has undergone six operations for throat diseases, is reported now to be convalescent.——Dr. John H. Hogan has succeeded Dr. William W. Hobson, resigned, as chief of the accident department of Mercy Hospital.

MASSACHUSETTS

Hospital Dedicated.—On March 8, Winchester dedicated its new municipal hospital. The building is four stories in height and contains accommodations for twelve patients and quarters for superintendent and nurses.

Harvard Medical School Changes.—Dr. James J. Putnam, professor of nervous diseases since 1893, and Dr. Edward H. Bradford, professor of orthopedics, have resigned.——Dr. James J. Minot has been appointed exchange professor to Germany.

Small-Pox on Liner.—The 538 steerage passengers of the Cunard steamer *Ascania* were brought to Gallup's Island, Boston Harbor, because of the presence of a case of small-pox. All the passengers were vaccinated, and so far no new cases have developed.

New Sanatorium Officers.—Sharon Sanatorium, an institution for women of limited means and in the early stages of tuberculosis, has reelected Dr. William T. Sedgwick, president; Drs. Vincent Y. Bowditch and L. Vernon Briggs, directors, all of Boston; Dr. Bowditch, medical director, and Dr. Walter A. Griffin, Sharon, resident physician.

Hospital Addition.—The Robert Dawson Evans Memorial Building, the latest addition to the Massachusetts Homeopathic Hospital, Boston, was dedicated March 6. It is designed for special research work and the good fellowship among medical men of Boston was evident, as at the dedicatory exercises, addresses were made by Drs. W. B. Cannon, F. B. Mallory, C. P. Putnam and E. E. Southard of Harvard Medical School, and Dr. T. Leary, of Tufts Medical School.

Chemist Dead.—Charles Robert Sanger, Ph.D., professor of chemistry and director of the chemical laboratory at Harvard University, died in Cambridge, February 25, following a nervous breakdown, aged 51. He served as assistant in chemistry in Harvard University in 1881 and 1882, and from 1884 to 1886 was professor of chemistry in the United States Naval Academy, Annapolis, Md. From 1886 to 1892 he occupied a similar position in Washington University, St. Louis, until 1899, when he returned to his alma mater.

Legislation Passed and Pending.—The Committee on Public Health is having urged on its attention a bill to create dental nurses who may be properly registered and may assist in the care of children's teeth.——Because of the many fraudulent schools of optometry, optometrists are having difficulty in framing a bill.——The antivaccinationists have failed to secure favorable consideration from the legislature.——The effort of the Massachusetts Medical Society to secure a definition of what constitutes the practice of medicine, has been rejected by the Committee on Public Health.——Medical experts and consumers are urging vigorously the Ellis Milk Bill, which will place the supervision of the production of milk in the hands of the State Board of Health.

MICHIGAN

Personal.—Samuel T. Douglass, Detroit, has been appointed a member of the Board of Health to succeed himself.——Dr. Jean A. Vernier has returned from California and resumed practice in Detroit.

County Sanatorium Plan.—The Alger County Board of Supervisors has under consideration the establishment of a sanatorium for incurable consumptives.——The Baldwin Tuberculosis Sanatorium has doubled the number of its rooms and by June 1 plans to have improvements made that will increase the capacity of the institution to one hundred.

Founders' Day Celebrated.—Founders' Day of the Medical Department of the University of Michigan was celebrated February 22. Dr. Lewis S. Pilcher, Brooklyn, a graduate of the class of 1866, delivered the address of the evening on "Antitoxin Against Commercialism in Medicine." Following the address, a reception was held in honor of Dr. Pilcher and Mr. Frederic G. Hallett of London, England.

Conference of Tuberculosis Workers.—The Grand Rapids Anti-Tuberculosis Society held a conference of state workers, February 24, to discuss tuberculosis and its prevention, and in the working out of this problem, addresses were delivered by Dr. R. L. Dixon, Lansing, secretary of the state board of health, on "Cooperation in the Antituberculosis Crusade"; by Harvey D. Brown, Ph.D., state lecturer of the Wisconsin Antituberculosis Association on "Methods in the Antituberculosis Battle and Exterminating Tuberculosis"; by Dr. Collins H. Johnston, Grand Rapids, president of the Michigan Association for the Prevention and Relief of Tuberculosis on "Milestones of Progress."

MINNESOTA

Hospital Association Incorporated.—A Hospital Association has been incorporated at New London, to establish and manage a hospital at that place.

Physicians Join Civic Association.—The membership rolls of the Civic and Commerce Association of Minneapolis contained the names of eighty-two physicians.

Destruction of Medical Building.—Millard Hall, the medical and dental building of the University of Minnesota, was recently destroyed by fire, with a loss of $60,000.

Typhoid at Two Harbors.—Two Harbors is experiencing a severe typhoid epidemic. The doctors report fifty-four known cases, and in addition to this there are many suspects. An investigation of the city water-supply is being made by representatives of the State Board of Health.

Medical Tenants Honor Landlord.—One hundred and four physicians of St. Paul, who have offices in the new Lowry Building, gave a banquet, February 24, in honor of Horace Lowry, president of the investment company, which erected the building. Dr. J. W. Chamberlin was toastmaster.

Pathologic Society Organized.—On February 20 the Minnesota Pathologic Society was organized at the Pathologic Building of the University of Minnesota, with the object of qualifying the state and discussion of pathologic problems. Residents of the state of Minnesota who are actively interested in some branch of pathologic work are eligible to election as active members. About ninety have signified their intention to become charter members of the association, and the following officers have been elected: president, Dr. A. S. Hamilton, Minneapolis; vice-president, Dr. J. S. Gilfillan, St. Paul; secretary, Dr. H. E. Robertson, Minneapolis; treasurer, Dr. J. F. Corbet, Minneapolis; and censors, Drs. F. L. Adair, Minneapolis, R. H. Mullin, Minneapolis, and H. A. Tomlinson, St. Peter.

MISSOURI

New Officers.—Boone County Medical Society: president, Dr. M. D. Lewis; secretary-treasurer, Dr. A. W. Kampschmidt, both of Columbia.

Addition to Tuberculosis Camp.—Dr. W. S. Wheeler, health commissioner of Kansas City, has been authorized by the hospital and health board to purchase a tent of sufficient size to accommodate the overflow at the outdoor clinic and the tuberculosis pavilion. The tent is to be erected near the General Hospital.

Personal.—Dr. G. W. Belshe, Trenton, who disappeared March 1, was found wandering in a field, March 5, about six miles from Trenton, a physical and mental wreck, emaciated and half frozen.——Dr. A. M. Shaw has succeeded Dr. J. L. McDermott as police surgeon at the Walnut Street Police Station, Kansas City.——William C. Teichmann, formerly city chemist of St. Louis, has been appointed U. S. consul at Mannheim, Germany.——Dr. Orville J. Sloan, Neosho, has been commissioned first lieutenant, M.C., N.G., Mo

St. Louis

Trachoma in St. Louis.—A resolution was introduced by Dr. James Stewart, supervisor of hygiene of the board of education, at the meeting of the St. Louis Medical Society, March 2, asking that trachoma be made a reportable disease.

Commemorate Opening of Old Medical School.—The St. Louis Medical History Club at its meeting, February 22, commemorated the laying of the corner stone of Kemper University in 1840, the first institution dedicated to medicine, west of the Missouri River. The address was made by Dr. H. M. Whelpley.

MONTANA

New Officers.—Silver Bow County Medical Association: president, Dr. A. E. Anderson; secretary, Dr. Alfred Karsted, both of Butte.

New President State Board.—Dr. Daniel J. Donohue, Glendive, has been elected president of the State Board of Health of Montana, vice Dr. William Treacy, Helena, deceased.

Sanatorium Sold.—The Bozeman Sanitarium has been formally transferred to the Methodist Deaconess Board of Montana for $10,000. The institution will, from this time on, be operated as a public hospital.

NEBRASKA

New Officers.—Custer County Medical Society, February 13: president, Dr. B. E. Robinson, Arnold; secretary-treasurer and delegate to the state society, Dr. F. W. Buckley, Broken Bow.

Tuberculosis Dispensary for Omaha.—The dean of Trinity Cathedral, Omaha, has offered two rooms in the Gardner Memorial Hall for a tuberculosis dispensary to be established by the Visiting Nurse Association, and $750 is already available for use in the dispensary.

Bids for Tuberculosis Hospital.—The Board of Public Lands and Buildings on February 10 opened the bids for the new tuberculosis hospital to be erected at Kearney. The lowest bid for the building was $11,867, and for the plumbing $2,900. According to the plans the building will cost about $14,000 and is to be completed in 120 days from the letting of the contract and is to consist of a central two-story portion with two one-story wings. There will be twenty rooms for patients.

NEVADA

New Officers.—White Pine County Medical Society: president, Dr. Albert F. Adams; secretary-treasurer, Dr. William T. Gleason, both of Ely.

Personal.—Dr. Reinhard K. Hartzell, Reno, has been appointed a member of the Reno Board of Health, vice Dr. Archibald L. Rice, resigned.——Dr. William F. Boylan, National, has been appointed government physician at the Indian School, McDermitt.

NEW YORK

State Hospital Site.—Options have been secured on 902 acres at Marcy, as a site for the new Utica State Hospital for the Insane. The purchase price of this site is about $115,000.

Monthly to Be Quarterly.—The *Hospital and Sanitary Record*, a journal which has been published monthly in Canandaigua by local practitioners, will hereafter be published quarterly after each regular meeting of the Ontario County Medical Society. The editorial staff will be made up of representatives of the County Medical Society, County Laboratory and Oak Mount Hospital.

Personal.—Dr. Jeremiah MacDonald, Binghamton, fell while leaving a train and severely sprained his ankle.——Dr. Edward W. Mulligan has been appointed chairman; Dr. Joseph R. Culkin, vice-chairman, and Drs. Charles R. Barber, David B. Jewett, Lucius L. Button and Ralph R. Fitch have been appointed members of the Rochester Chamber of Commerce Committee on Public Health.——Dr. Benjamin Van Campen, Olean, was thrown from his sleigh in a runaway accident, February 26, and fractured a finger.

Health Association Asks Appropriation.—The Rochester Public Health Association has addressed a memorial to the mayor, which was presented by Dr. Montgomery E. Leary, February 7, and which asks for an appropriation of $5,000 in the tax levy to compensate the association in part, at least, for the large amount of free service given by it to the public. This has included the maintenance of the free dispensary and the open-air school, the examination of school children, the maintenance of the day camp in summer for incipient cases of tuberculosis and the educational work which has been carried on by the association.

New York City

Women May Be Ambulance Surgeons.—For the first time in the history of Bellevue Hospital, the authorities have decided to allow women to take the examination for ambulance service.

Harvey Society Lecture.—The last of the present course of Harvey Society Lectures will be given at the New York Academy of Medicine March 24, when Dr. W. S. Thayer of Johns Hopkins University, Baltimore, will speak on "Malaria."

Milk Stations in New York.—The Department of Health now has thirty-three infants' milk stations, nineteen of which are in Manhattan, twelve in Brooklyn and two in the Bronx. A total of 3,011 babies is being cared for by these institutions.

Free Lectures on Public Health.—Drs. Abraham Jacobi, Grace N. Kimball and John F. Huber delivered lectures February 21 in the series being given under the auspices of the Hygiene Committee of the New York Federation of Women's Clubs and the Public Health Education Committee of the New York County Medical Society.

Osteopaths Must Not Sign Death Certificates.—Charles F. Bandel, while president of the State Society of Osteopaths two years ago, signed a death certificate and, when it was refused by the registrar of records in the Health Department of Brooklyn, suit was brought. The Court of Appeals on March 8 sustained the decision of the lower court and upheld the right of the New York City Board of Health to prescribe that certificates of death must be signed by a medical practitioner.

Lectures at the New York Skin and Cancer Hospital.—A course of lectures is to be given in the out-patient hall of the New York Skin and Cancer Hospital on Wednesday afternoons at 4:15, beginning on March 13 and continuing until April 24. The first six lectures will be delivered by Dr. L. Duncan Bulkley, whose subject will be "Diet and Hygiene in Diseases of the Skin." The last lecture of the series will be given by Dr. William Seaman Bainbridge on "Some Recent Methods of Treatment of Malignant Diseases."

Personal.—Dr. James R. Hayden was operated on March 2 for appendicitis and is reported to be doing well.——Dr. Otto Kiliani has returned from Europe, where he has been studying carcinoma.——Drs. Philip G. Cole and John S. McCallum, who are about to leave Harlem Hospital, were given a dinner by the staff, February 29.——Dr. John J. McAllister is ill at his home in Scarsdale from septicemia, due to an autopsy wound. ——A patent has been allowed Dr. Adoniram B. Judson for the improvement on a machine for picking and breaking ice, coal, ores and other substances.

Sea Breezes for Cripples.—A movement has been started for the care and treatment of crippled children or those in a state of convalescence after operations which proposed to become national in extent. It was inaugurated through the efforts of several well-known women in New York and Brooklyn and plans to establish a chain of homes along both the Atlantic and Pacific coasts in order that there may be accommodations for children of inland cities all over the country. Branch homes have already been established at Sheepshead Bay, Seattle, Denver, Tampa and San Francisco. Branch societies have been formed in many cities and towns throughout the country.

Where Doctors are Needed.—The regular meeting of the New York Academy of Medicine on the evening of March 7 was given up to listening to addresses by medical missionaries. Secretary Robert E. Speer of the Presbyterian Board of Foreign Missions, Dr. Edward E. Hume, secretary of the Yale Medical School in China, and Dr. Wilfred M. Post of the American Hospital at Konia, Turkey, told of the need for physicians in these countries and the opportunities that awaited the physician who was willing to go. In Persia there are only thirty doctors to 9,000,000 population; in Korea, only thirty-six physicians to a population of 12,000,000; in Chili there is an average of one physician to every 3,225 of the population; in Bolivia, one physician to every 10,000 of the population; not a single physician to 5,000,000 South American Indians. In Chili 80 per cent. of the children die before they reach the age of two years. Dr. Post, in telling of the conditions in Persia, said there was an area larger than New York State and an immense population where there was neither physician nor hospital.

Feeble-Minded Children in Schools.—The New York Society for the Prevention of Cruelty to Children some time ago appointed a committee to investigate the subject of abnormal and feeble-minded children. The results of the investigation show that there are in the city of New York at the present time 7,000 distinctly feeble-minded children. There are about an equal number of idiots and imbeciles who do not attend school. These classifications do not include borderline cases or morally defective children, which would probably bring the number of feeble-minded children in the public schools up to 10,000. Recent census statistics show that 30 per cent. of the feeble-minded children in the general population of the United States are the progeny of aliens or unnaturalized citizens. These investigators think therefore that at least 3,000 of the 10,000 feeble-minded children in this city are the offspring of the 9,000,000 aliens who have come here during the past ten years. The committee urges the enactment of legislation whereby all children may be subjected to a preliminary examination as to their mental development, before being admitted to the schools, and from time to time thereafter, and whereby all children coming before the children's court be subjected to a similar examination. They also urge that an institution be provided for the care of feeble-minded children and that more watchfulness be employed to prevent the admission of such children with immigrant families. Congress has been urged to appropriate sufficient funds to make this greater care possible.

NORTH CAROLINA

Sanatorium Incorporated.—Mount Olive Sanatorium has been incorporated at Mount Olive, with a capital of $25,000, to provide an institution for the treatment of diseases and teaching and training of nurses.

Nurses' Home.—At the last annual meeting of the North Carolina State Association of Registered Nurses, steps were taken for the erection of a nurses' home at Black Mountain, for which a site of two and a half acres has been donated by Dr. Isaac J. Archer, Black Mountain. The committee announced that only $2,000 additional were required for the erection of the first building.

Hospital for Elizabeth City.—The Pasquotank, Camden and Dare County medical societies, at a recent meeting, discussed the movement for the establishment of a hospital in Elizabeth City. They agreed as to the necessity of the hospital and are anxious to have it located in Elizabeth City, but they do not feel called on to furnish all of the money for its establishment and maintenance. The matter is to be considered later by the Chamber of Commerce and other organizations of Elizabeth City.

OHIO

Physicans Ill.—Dr. G. R. Schuster, Dayton, who has been seriously ill with pneumonia, is reported to be improving.——Dr. W. V. Blythe, Youngstown, is ill with influenza in the City Hospital.

Lucas County Tuberculosis Hospital.—The directors of the Lucas County Infirmary, Toledo, have adopted resolutions transferring $10,000 to the county commissioners to enable the latter to advertise for bids for the construction of the County Tuberculosis Sanatorium.

Tuberculosis Hospital Decision Reversed.—The Circuit Court in the case of the county commissioners of Darke County against the State of Ohio, regarding the proposed tuberculosis hospital in Darke County, has reversed the action of the lower court regarding the sale of the land for the hospital, but upholds the unconstitutionality of the trustees in appointing a superintendent, hiring nurses and furnishing the hospital for tuberculosis patients.

Personal.—Dr. W. D. Micklethwait, Portsmouth, is suffering from an infected punctured wound of the foot.——Dr. A. C. Taylor, Cleveland, was rendered unconscious in a collision of automobiles, February 27.——Dr. W. W. Smith, Portsmouth, was operated on in Christ Hospital, Cincinnati, February 29, for the removal of a tumor from a tendon of the left leg.——Dr. J. W. Sorrick was stricken with cerebral hemorrhage at his home in Kenmore and is reported to be in serious condition.——Dr. Joseph P. Baker has been reelected president of the board of health of Findlay.——Dr. Earl Gilliam is erecting a one-story office building for physicians in East State Street, Columbus.

Hospital Notes.—St. Elizabeth's Hospital, Youngstown, has concluded the purchase of a residence property adjacent to the institution and having on it a residence which will be used as a nurses' home.——The board of managers of Springfield City Hospital has decided to add twenty-six rooms to the institution.——Good Samaritan Hospital, Zanesville, has increased the accommodation for patients from seventy to eighty and asks for donations for the equipment of the new rooms.——Eight physicians of Delphos met recently and organized as a hospital organization, with Dr. Manford M. Hixson as president; Dr. Norman E. Brundage, vice-president, and Dr. Ezra Burnett, secretary and treasurer.

Cincinnati

Clinic for Defective Children.—Dr. William Ravine, chief medical inspector of the public schools, has been placed in charge of a clinic to be opened at the Raschig School for the treatment of school children who are physically or mentally defective or abnormal.

Personal.—Dr. Arch I. Carson has been promoted to chief surgeon of the police and fire departments, vice Dr. Thomas C. Minor, deceased. Drs. William E. Savage and Carleton G. Crisler have been appointed his assistants.——Drs. W. W. Anderson, C. J. Kehm, Charles North and George Hermann have resigned as examining physicians for the civil service commission.——Dr. Frances Hollingshead has been appointed assistant superintendent of the House of Refuge.——Dr. Walter Griess has resigned as surgeon of the Police Department.

Higher Medical Education.—The Cincinnati Medical Civic Association has appointed the following committees to take up the aggressive action desired in the campaign for a higher medical education in Cincinnati and a betterment of the conditions now prevailing: medical education; municipal health administration and medical school inspection; national board of health; meetings, lectures and popular instruction methods; health legislation; food and drug legislation; antituberculosis; milk commission; social science work and ethics, and cooperation with other civic bodies and the Red Cross.

OREGON

Hospital Dedicated.—The new Sacred Heart Hospital, Medford, was dedicated with formal ceremonies, February 17. The chief address was made by Dr. E. Barton Pickel.

Personal.—Dr. J. R. Wetherbee, Portland, was operated on at Good Samaritan Hospital, Portland, January 29.——Dr. Charles Hines has been appointed postmaster of Forest Grove.

County Societies May Unite.—At the meeting of the Marion County Medical Association held in Salem, February 19, the plan was discussed of uniting the medical associations of Polk, Yamhill and Marion counties into one association, and a committee was appointed to confer with the representatives of the other associations as to the advisability of the plan.

PENNSYLVANIA

State Asylum Completed.—The State Homeopathic Insane Asylum at Rittersville, which has been under construction for ten years at a cost of $2,200,000, was practically completed on March 3. The work of furnishing the institution will be started at once.

Changes in State Vaccination Commission. — Ex-Governor Samuel W. Pennypacker and George Wharton Pepper have resigned and their places have been filled by the appointment of Messrs. Henry O. Lippincott, Philadelphia, and Edward A. Woods, Pittsburgh. The commission organized March 8, electing Mr. Emil Rosenberger, chairman, and Mr. Lippincott, secretary. Weekly meetings are at first to be held to lay out the plan of work of the commission, and later the testimony of witnesses will be taken.

Coatesville Schools Closed.—In order to correct false reports concerning the prevalence of other communicable diseases in Coatesville, Dr. C. J. Hunt, the state physician, has made the following report of such cases now in the city: "Mumps, six; whooping cough, seven; diphtheria, one; measles, no cases since January 1; scarlet fever, no cases since January 1." On account of the fact that more than 400 pupils, or about 22 per cent. of the attendance of the borough schools, have been absent on account of their own illness or illness at home, the School Board has decided to close the schools for twenty days, opening again on March 25. The principal and one of the teachers of the High School are ill with typhoid fever.

Philadelphia

Fire in Medical College.—Fire in the basement of the Jefferson Medical College, due to an overheated incinerator, February 15, was extinguished with slight damage to the building.

Hospital Clinical Society Organized.—The staff of the Episcopal Hospital met February 19 and organized the Episcopal Hospital Clinical Society, electing Dr. Francis W. Sinkler, president, and Dr. E. G. Alexander, secretary-treasurer.

Gift to College Library.—A gift of $1,000 toward the chemical library of the Medico-Chirurgical College was announced March 6. The donors, each of whom gave $250, are Dr. William H. Greene, former treasurer of the college, and three trustees.

New Dispensaries Opened.—The new dispensaries of the Medico-Chirurgical Hospital were opened for public inspection March 7. The building, which is immediately opposite the hospital, has a frontage of 59 feet and depth of 144 feet, and has a floor space of about 10,000 square feet. Almost all of the rooms are lighted by sky-lights from above, thus ensuring privacy and abundant illumination. At one end of the building is a large waiting-room, from which a corridor extends the length of the building and on each side are rooms for treatment of the various classes of disease.

TENNESSEE

New Officers.—Giles County Medical Society: president, Dr. W. D. Abernathy; secretary, Dr. J. A. La Rue, both of Pulaski.

Clinic for Colored Surgeons.—Dr. Daniel H. Williams, Chicago, conducted a surgical clinic during the second week in February, at the Meharry Medical College, Nashville.

Health Officers' Conference.—A meeting of the city and county health officers has been called by the secretary of the State Board of Health, to be held in Nashville, April 2-4.

Personal.—Dr. A. M. Gamble, Maryville, has succeeded Dr. J. R. Rathmell, Chattanooga, resigned, as a member of the State Board of Health.——Dr. John R. Muse, Lexington, is reported to be critically ill.

Physicians Aid Associated Charities.—Fifty physicians of Memphis have agreed to contribute twenty-five calls each a year to the poor of the city, the calls to be made deserving cases so certified by the associated charities.

Society Protests Against Change of Hospital Management.—At a recent meeting of the Knox County Medical Society, resolutions of protest were adopted against the proposed ordinance placing the management of the Knoxville General Hospital with the board of city commissioners.

Small-Pox.—The secretary of the State Board of Health is said to have issued quarantine orders against Dunlap and other sections of Sequatchie County, where there are said to be more than one hundred cases of small-pox.——Epidemic small-pox is reported in West Point, Lawrence County, where twenty-seven cases have been found. Quarantine has been established and vaccination ordered.

Changes in State Health Board.—At the meeting of the State Board of Health in Nashville, March 1, Dr. R. Q. Lillard, Lebanon, was elected to succeed Dr. J. A. Albright, Nashville, as secretary; Dr. H. H. Shoulders, Nashville, was appointed assistant secretary; Dr. R. E. Fort, Nashville, was elected president to succeed Dr. T. E. Abernathy, Chattanooga, and Dr. A. M. Gamble, Maryville, was elected vice-president to succeed Dr. Louis Leroy, Memphis.

Antituberculosis Work.—The Davidson County Tuberculosis Hospital, near Nashville, is almost completed and will be ready to receive patients within the next two weeks.——The Chattanooga Antituberculosis Association has decided to establish a sanatorium on Stringer's Ridge and the work will be commenced April 1. A number of lean-tos will be erected, each of which will accommodate eight patients. The first building to be erected will be the administration building and the other buildings of the group which include the dispensary, kitchen, laundry, dining-room, etc., will next be made ready.

WISCONSIN

Small-Pox at Merrillan.—The schools of Merrillan are reported to have been closed on account of small-pox.

New Officers.—Langlade County Medical Society: president, Dr. Michael J. Donohue; secretary and treasurer, Dr. John C. Wright, both of Antigo.

Hospital Notes.—Dr. Joseph Schneider, Milwaukee, has purchased land near the courthouse, on which he will erect a free hospital for diseases of the eye.——The county board of Racine County has appropriated $10,000 for a county tuberculosis sanatorium.——The out-patients' department of St. Mary's Hospital, Milwaukee, has been opened and the staff appointed. The following officers of the staff have been elected: president, Dr. James A. Bach; vice-president, Dr. Arthur T. Holbrook, and secretary, Dr. Hans Reinhardt.——

At the annual meeting of the Beloit Hospital Association, the expenditures were shown to have exceeded the receipts by only $1,000, which is a relatively favorable showing. The following officers were elected at the meeting: president, Dr. Arthur C. Helm; vice-president, Dr. William J. Allen; secretary, Dr. Myron G. Spawn, and treasurer, Dr. Ernest C. Helm, all of Beloit.

GENERAL

Change in Editor.—Prof. Selskar M. Gunn, assistant professor in the department of biology and public health in the Massachusetts Institute of Technology, has been appointed editor of the *Journal of the American Public Health Association*, vice Burt R. Rickards, resigned.

Another Leper.—Medical affidavits were sent to Congress March 7, by the chairman of the board of supervisors of Stockton County, California, showing that Edward Fickert, a veteran of the Spanish-American War, is afflicted with leprosy and is in quarantine at the County Hospital.

Conservation of School Children.—A conference for the conservation of school children, under the auspices of the American Academy of Medicine, will be held in Drown Memorial Hall, Lehigh University, South Bethlehem, Pa., April 3 and 4. The subjects to be considered by the conference are deficient and backward children, conservation of school children, the teaching of hygiene and medical inspection.

Urges Naval Medical Reserve Corps.—Rear Admiral Charles F. Stokes, Surgeon General of the Navy, in an address before the Medical Society of the District of Columbia, February 21, advocated the establishment of a medical reserve corps for the Navy, similar to that established recently in the Army, that in case of necessity the government might have a sufficient number of physicians conversant with the technical details of the service.

First Aid.—A journal known as *First Aid*, the official organ of the First Aid Association of America, has appeared, with headquarters at Arlington, Mass. The first number contains a tribute to Clara Barton, a brief report of the sixth annual meeting, notice of the establishment of the international committee, the announcement of the appointment of Dr. Frederick H. Moss, Boston, as the head of the medical department, and reports of subordinate organizations.

Delegates to Tuberculosis Congress.—Dr. Henry Barton Jacobs, Baltimore, secretary of the National Association for the Study and Prevention of Tuberculosis; Dr. Livingston Farrand, Boonton, N. J., executive secretary of the association; Dr. Charles L. Greene, St. Paul; Dr. G. Walker Holden, Denver; Dr. Gerald B. Webb, Colorado Springs, and William H. Baldwin, Washington, all directors of the national association, have been delegated to represent the United States at the seventh international congress on tuberculosis, to be held in Rome, April 14-20.

Bequests and Donations.—The following bequests and donations to hospitals are announced:

Thomas Morgan Rotch, Jr., Hospital, Boston, $1,000, by the will of Joanna Rotch, Milton, Mass.

Lafayette, Ind., Home Hospital, $100,000, by the will of John Peter Kile.

Roosevelt Hospital, New York City, $15,000; Presbyterian Hospital, New York City, $1,000, by the will of Margaret E. Mitchell.

Tuberculosis Preventorium for Children, Farmingham, N. J., $1,000, donation from Eugene Meyer.

German Hospital, New York City, $2,000; St. Mark's Hospital, St. Francis Hospital and German Poliklinik, New York City, each $1,250, proceeds of the German Charity Ball.

Albany Hospital, $10,000, by the will of Anderson D. Lawrence.

Bushwick and East Brooklyn Dispensary, $20,000; Brooklyn Home for Consumptives and German and Brooklyn Hospitals, $5,000 each, by the will of Henry Batterman.

German Hospital, New York City, $5,000, from the Ladies' Aid Society, to endow a free bed.

FOREIGN

Death of Negri, of Rabies Fame.—Professor A. Negri of the University of Pavia, Italy, has died. He discovered in the tissues of rabies the bodies called by his name which permit the early diagnosis of the disease. Negri also demonstrated that malaria can be eradicated by thorough treatment between epidemics of those affected.

Preventive Medicine in the Italian-Turkish Campaign.—When the Italians occupied Tripoli, cholera and malaria were found prevailing, as many as 130 native victims of cholera being buried in one day. Vigorous measures were instituted at once by the Italian medical officers. Temporary hospitals and two bacteriologic stations were erected and the medical corps, aided by the Italian Red Cross, soon had the cholera sick isolated and all arrangements made for taking care of the corpses to prevent contagion. The epidemic was soon under control and is now practically stamped out, according to a communication published in the *Policlinico*, February 18. The medical chief of staff, General Sforza, had lemons given out daily to all the soldiers, and each was given a piece of phenolized soap and was required to wash his hands with it before eating, and to singe in a flame the spoons, fork and knife. Soldiers were not allowed to eat dates or other food bought of strolling peddlers. They were required to refrain from excesses in eating and drinking, especially from liquor, and to wear a piece of flannel over the abdomen to prevent local chilling. They were forbidden further to use water taken from wells without first adding to it from fifteen to twenty drops of tincture of iodin to each liter, or bromin tablets. Each corps was provided with Berkefeld filters and the water of the various fountains was tested, and if found suspicious its use was forbidden. About four hundred casks, each with a capacity of 400 liters, were distributed at various points and kept filled with pure water from the Serino. Then pumping engines were set to work at the wells outside the city which supply pure water, and piping was laid as the old surface method of bringing the water to town was defective. All persons arriving in the city were subjected to a medical examination, and the food supplied the soldiers was kept at a high standard both in regard to quality and quantity and the soldiers were supplied freely with clean clothing, etc. A few cases of small-pox having been discovered, the entire population, civil and military, was vaccinated and there have been no further cases. The prophylaxis of malaria was energetically carried on, not only by screening the barracks and giving quinin systematically but by digging a straight channel for the water courses, thus draining the swamps, while stagnant water was coated with oil. Eighty of the 150 cases of malaria were recurrences of malaria contracted in Italy. These malarial soldiers were given vigorous quinin treatment and then sent back to Italy, so that they would not infect the mosquitoes. Prophylaxis of venereal diseases was mainly by medical inspection of prostitutes, a hospital with thirty beds and a dispensary being set aside for those with venereal disease. The health of the troops is said to be excellent, actually averaging better than in army circles in Italy. Admissions to the hospital are rare and deaths are extremely infrequent. The United States, it will be remembered, was at war with Tripoli in 1801-1805, and the city of Tripoli is generally cited as an example of an African hotbed of disease and insanitation, although much has been done to improve it in the last few years.

LONDON LETTER

(From Our Regular Correspondent)

London, March 2, 1912.

A Section of the History of Medicine at the International Medical Congress

The program of the International Medical Congress which is to be held in London in 1913 has been already given in a previous letter to The Journal. It was originally intended that there would be twenty-two sections, which seemed to include all the possible specialties into which medical science could be divided. The establishment of yet another section, one on the history of medicine, is, however, to be recommended to the permanent commission by the executive committee.

Discovery of the Development of the Parasite of Kala-Azar

Surgeon-General Bannerman, I.M.S., late director of the Bombay Bacteriological Laboratory, and now of the Madras presidency, has telegraphed to Prof. Sir Ronald Ross of the Liverpool School of Tropical Medicine, that Capt. W. S. Patton of the Indian Medical Service, assistant director of the King Institute of Preventive Medicine, Madras, has discovered the complete development of the parasite of kala-azar in Indian and European bedbugs. This disease is very deadly in southern Europe, the Sudan and tropical Asia, and many efforts have been made during the last five years to find the mode of its transmission. Kala-azar was long regarded as a peculiarly deadly form of chronic malaria, causing chronic irregular fever, enlargement of the spleen and liver, great wasting, and, in perhaps ninety-nine out of every 100 cases, death. It was, and is, endemic in China, India, the Sudan, and probably other tropical regions; in fact, cases have been known in some of the Greek islands, and even in Sicily. In Assam some years ago it appeared as an epidemic, and spread slowly up the Brahmaputra Valley, killing practically the whole population in village after village, and receiving the name "kala-azar," or black fever. Sir William Leishman of the Army Medical School discovered the parasite of the disease in human tissues, and it was evidently quite unlike the parasite causing malaria. Captain Patton, after experiments with various animals, found that the parasite reached a certain degree of development in the stomach of the bug, which he suggested might be the transmitter of the disease; but he also proved that the parasite could be developed to a similar stage in a test-tube. Moreover, Dr. Wenyon of the London School of Tropical Medicine has shown that similar developments can be reached in the stomach of a mosquito (*Stegomyia fasciata*). All that has been certain hitherto is that the disease is probably transmitted by a blood-sucker or dirt-eater, such as a bug, mosquito, tick, flea, louse or fly.

An American investigator, Dr. Wright, has made the curious discovery that the same parasite, or one almost exactly like it, is responsible for the disease known in the various parts as the Sind sore, Delhi boil, Bagdad boil, or *bouton d'orient*—an ulcer which sometimes reaches a diameter of 3 or 4 inches; lasts five or ten months, heals gradually and leaves the patient proof against future attacks.

Leprosy in London

The discovery that a leper, an inmate of one of the London infirmaries, had left the institution and that his whereabouts could not be traced has given rise to some alarm. It was subsequently discovered that he had died from chronic bronchitis. The local government board has issued a request for full information of every case of leprosy in the British Isles. There are probably always twenty to thirty cases of leprosy in London. The lepers live at home and move about unrestricted, the existence of the disease being quite unknown to the people with whom they come in contact. There appears to be no danger whatever of contagion, for no cases of transmission have come to light.

Prohibition of the Use of Preservatives in Milk

The local government board has drafted regulations prohibiting the use of preservatives in milk and defining the conditions under which they may be used in cream. These regulations apply not only to milk and cream produced in this country but also to that imported from abroad. The board appears to have been guided to a certain extent by the recommendations of a committee appointed in 1901, which recommended that the addition of preservatives to milk should be made an offense and that only boron preservatives should be allowed in cream in an amount not exceeding 0.25 per cent. Under the term "milk," to which the prohibition applies, are included separated, skimmed, condensed and dried milk, but as the sale of condensed milk would be seriously impeded if the use of sugar were prohibited it is provided that "neither cane nor beet sugar shall be regarded as a preservative." With regard to cream, there must not be added to it any thickening substance or any preservative, if the cream contains less than 40 per cent. of milk fat. To cream which contains this percentage of fat or more the only preservatives which are allowed are (1) boric acid, borax, or a mixture of these, or (2) hydrogen peroxid, in an amount not exceeding 0.1 per cent. by weight. Dealers in cream must state on the label that the cream is preserved and name the preservative. In tea-shops and other refreshment rooms it will not be necessary to label the cream-jugs if a conspicuous notice is displayed in each room stating that the cream used is preserved, or if this is stated on the bills of fare.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Feb. 23, 1912.

A Death from Salvarsan

At the last session of the Société française de dermatologie et de syphiligraphie, Dr. Balzer, physician of the Paris hospitals, and Mlle. Coudat reported a case of a patient who had a chancre on the chin and mucous plaques in the throat, but no other apparent lesions. He received a first injection of 0.3 gm. of salvarsan; a little fever and some nausea resulted. A second injection of 0.3 gm. made a week afterward produced no trouble until four days later, when delirium appeared with carphology, inequality of the pupils, stiffness of the neck and epileptiform convulsions. A lumbar puncture drew out a liquid rich in albumin and poor in leukocytes. The patient fell into coma and died on the third day. A second lumbar puncture showed arsenic in the cerebrospinal fluid.

Nine other patients who had received injections at the same time as the previous patient had no complications. The solution, therefore, cannot be blamed. Dr. Balzer believes that there is an unequal distribution of arsenic in the system, the nervous centers having an especial affinity for this product.

Deaths

The deaths are reported of Dr. Etienne Cestan, professor of the surgical clinic at the Faculté de médecine de Toulouse, and of Dr. Charles Guende, professor of the ophthalmologic clinic at the Ecole de médecine de Marseille.

Measures Against Alcoholism

The Chamber of Deputies recently passed on a project to limit the number of licenses to sell liquor. Unfortunately, since the wine merchants are politically important, the majority of the deputies, 361 against 155, defeated this limitation. This vote made a strong impression on public opinion and especially on the medical profession. It is to be hoped that our deputies may soon take the opportunity to rehabilitate themselves. The chamber is soon to consider a bill to prohibit absolutely the transportation and sale of absinthe. M. Schmidt, deputy from the Vosges, has made a report on this question showing that the consumption of absinthe has made alarming progress.

It is in the departments of the south that the most absinthe is consumed. These departments represent 23.5 per cent. of the total population of the country, but they consume 65 per cent. of the total amount of absinthe used. The sober region; that is to say, where the consumption of alcohol, bitters and absinthe is the lightest, includes the departments of the southwest. The population there is 12 per cent. of the total population. In these three regions the proportion of insane or victims of alcohol are given in the following figures calculated per 10,000 inhabitants:

	Men	Women
Sober region	0.85	0.26
Region addicted to alcohol	2.23	0.90
Region addicted to absinthe	2.24	1.22

Moreover the alcoholic insane may be classified as follows, according to the drink that they consume:

0.26	per	cent.	habitually	drink	absinthe.
2.53	"	"	"	"	other aperients.
5.51	"	"	"	"	sweetened liquors.
53.20	"	"	"	"	brandies, etc.
2.53	"	"	"	"	cider.
0.31	"	"	"	"	beer.
22.57	"	"	"	"	wine.

It appears also from M. Schmidt's report that violence and juvenile criminality increases with the consumption of alcohol and spirits. Classifying by regions the murders and murderous assaults for the three periods of 1874 to 1884, 1884 to 1894 and 1894 to 1904, the following is obtained:

		Sober Region	Region Addicted to Alcohol	Region Addicted to Absinthe
Murders	1874-1884	0.24	0.44	0.89
Murders	1884-1894	0.22	0.53	1.03
Murders	1894-1904	0.30	0.52	1.20
Murderous assaults,	1874-1884	0.26	0.28	0.38
Murderous assaults,	1884-1894	0.25	0.35	0.49
Murderous assaults,	1894-1904	0.18	0.41	0.51

French Universities and Foreign Countries

The professors of the University of Dijon have just unanimously passed a resolution calling for a university congress to organize the French universities more closely and to extend their influence abroad. There has just been founded under the auspices of the France-Amérique committee (The Journal, Feb. 12, 1910, p. 549) a league to foster French interests in America, which has for one of its objects to make known to the public of the two Americas the value of our general culture and practical instruction.

Reopening of the Medical School

The Faculté de médecine has been opened to the students of the first and second year from the first of March.

The Enrolment of Weaklings in the Army

M. Quesnel, senator of the Seine-Inférieure, called the attention of the minister of war to the disadvantages of the enlistment of unfit men in the army, which causes the return to their families of 20,000 enlisted men per year. The minister admitted that the temporary enlistment of men unfit for military service should be avoided. He is, therefore, considering a bill for the formation of two or more councils of revision in departments where such a measure may be warranted by the large number of young men recommended for return to civil life on account of physical unfitness. Meanwhile, the minister has ordered improvement in examination.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Feb. 23, 1912.

Personal

Professor Bonhöffer of Breslau has accepted the chair of neurology in Berlin as the successor of Professor Ziehen.

Professor Golgi of Pavia has been elected corresponding member of the Royal Prussian Academy of Sciences.

Professor Hermann, the physiologist of Königsberg, and Professor A. Kossel of Heidelberg have been elected as honorary members of the Belgium Academy of Sciences.

A few days ago Professor Finkler, formerly professor of hygiene at the university of Bonn, died at the age of 59. He was formerly assistant of Pflüger and joined the Bonn faculty in 1877, becoming assistant of Professor Rühle, and director of the clinic for internal medicine, and he conducted the medical policlinic from 1888 to 1893. By appointment of the minister of medical education, he represented the German universities at the world's fair in Chicago. After the close of the fair he spent a long time in America for purposes of study. On his return he became professor extraordinary of hygiene in Bonn, and in 1895 a regular professor. Corresponding to his varied training, his scientific works pertain to the fields of physiology and also clinical medicine and hygiene. Of his clinical articles his large work on acute inflammations of the lungs is worthy of notice. Among his bacteriologic articles, that on the cholera vibrio redounded less to his credit, as on account of it he came into conflict with Robert Koch; the so-called Finkler-Prior vibrio proved not to be identical with the cholera bacterium. Of late years he had been interested in the production of a cheap albumin food preparation. In this way he became the originator of tropon, the well known foodstuff prepared from the meat residues of the meat extract manufacture. He had already resigned his position on account of illness, and Professor Kruse, who was his assistant for many years, had succeeded him.

Campaign Against Sleeping Sickness in German East Africa

The director of medical affairs in the imperial colonial office, Professor Steudel, has returned from his journey of investigation through the sleeping sickness district in German East Africa. He regards the outlook for overcoming sleeping sickness in East Africa as favorable. It is reported that a number of important scientific observations were made on his tour.

The Student Certificate of Dismissal Abolished

The difficulties, mentioned in my previous letter, between Hasse, the professor of anatomy at Breslau, and the students has been terminated by the minister of education. The strike of the students, as was to be expected, has been condemned by the minister, but, as a matter of fact, their demand was granted, for the department has organized a parallel course in anatomy. It will be no mistake to consider this innovation as the beginning of the end of Professor Hasse's teaching. This strife has brought about a very satisfactory important innovation. The starting point of the conflict, which as is well known, consisted in the fact that Hasse refused to give a number of students whom he disliked their certificate of dismissal, has given the department occasion to investigate anew the entire arrangements for giving certificates, and the result of this investigation was naturally the decision that the certificate of dismissal shall be abolished in future in the Prussian universities. From now on it is only necessary that the university instructor shall certify to the students who are attending his lectures at the beginning of his course, and no longer at the end. Originally the latter arrangement was made in order to hold the student to a diligent attendance on the lectures, for the right was given to the university instructor to refuse the certificate of dismissal to those students who he knew had not regularly attended his lectures. Everyone knew that this rule was chiefly important for the small universities. Even in the medium-sized universities, but still more in the large universities, it is, as may easily be understood, impossible for most university instructors to keep a record of the individual students among their crowd of hearers and, as experience showed, it not rarely happened that of all the lectures of a professor a student attended, only the first and last for the purpose of getting his certificate of entrance and dismissal. Indeed, in some cases even this was not necessary; not infrequently it happened that a student got himself represented at these formalities by a comrade, who did not even have to belong to the same department of the university.

A New Woman Professor

Mrs. Rabinowitsch-Kempner of Berlin has received the title of professor. The new professor, who moreover is not a physician but a zoologist, was director of the bacteriologic laboratory at the Woman's Medical College, Philadelphia, 1896-8. In scientific circles she has received a well deserved recognition by a large series of bacteriologic studies which she carried on especially under the direction of Robert Koch in the institute for infectious diseases of this city. After the death of Koch, she left this institution (it is said as a result of differences between the director and her husband, who also worked in the institute), and took up work in the pathologic institute conducted by Professor Orth. While Mrs. Rabinowitsch is not the first woman in Germany who has received the title of professor, still this distinction is noteworthy. (Her predecessors are a woman anthropologist in Kiel and a zoologist in Bonn.) The distinction may be regarded as a product of our woman's movement and this also in a personal sense, since, as I happen to know, certain Berlin ladies of great social influence have taken great pains to secure the conferring the title of professor on Mrs. Rabinowitsch-Kempner, appealing to the authorities in the department of education. A peculiar relation between husband and wife is created by this appointment, as the husband has merely the title of doctor of medicine. With us it is the well known custom for the wife to be called by the title of the husband (for example, Frau Professorin); perhaps it will come to pass under the influence of the woman's movement that women will so frequently receive higher positions than their husbands that the men will be contented to bear the titles of their wives. Although it is not gallant as a rule to betray the age of a lady, we will, it is to be hoped, not draw down on us the wrath of our new professoress when we state that Mrs. Rabinowitsch-Kempner was born in 1871, and is therefore now at the age of 40.

Improvement in the Milk Trade

A meeting of the German agricultural council, a few days ago, took up the objectionable features that have developed in the milk business, and made plans for their improvement. The amount of cow's milk produced annually by German agriculture is estimated at 21,000,000 liters. In Berlin in 1894 there were consumed daily 0.24 and annually 81 liters per capita, and in 1910 0.32 daily and 117 liters annually. In order to counteract the abuses that have been disclosed in the sale of cow's milk and the associated damage to the interests of agriculture, a sketch of a law was proposed by which the conditions for the trade in milk should be made as far as possible uniform throughout the entire German empire. The details of this plan were entrusted to a committee.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Feb. 23, 1912.

Endeavors to Regulate Medical Fees

There is at present no fixed tariff for medical fees in this city, and, therefore, it often happens that the public and their medical advisers differ in opinion as to the proper fees to be paid for medical services. The practitioners also resent the fact that specialists, especially those who are just at the beginning of their career as docents, are very moderate in their charges. Therefore in one of the Vienna medical societies the suggestion was thrown out that a new tariff binding on all practitioners should be worked out and that a minimum fee for specialist's services should be fixed, with a specified sliding scale, according to the nature, the time and quality of the medical intervention. The tariff should be promulgated by the Medical Council, which already now is recognized by the public as the judge in all conflicts arising out of the abovementioned conditions. With the increased cost of living, which may be safely estimated at 30 per cent. during the last five years, the present fees are not what they ought to be: a compensation for time and services. Another point was raised in the discussion: The payment of the practitioner should not be simply a matter of so many visits at a certain figure per visit, but it should be fixed according to the actual service rendered to the patient. If a doctor treated and cured, for instance, a patient with a severe case of pneumonia or otitis media or angina or typhoid, he should be entitled to an inclusive fee, just as well as the surgeon operating on a hernia or tumor or an appendicitis, or for an amputation. This view is gaining ground slowly among the profession here, but the public is not yet "up to it."

Unveiling of a Tablet in Memory of the Late Professor Escherich

A few days ago a memorial tablet for the late specialist in diseases of children, Professor Escherich, was unveiled in the Home for the Protection of Infants (Säuglingsschutz), of which this scientist was the chief founder and first director. This tablet is only the forerunner of a larger memorial to be created shortly in the clinic for children's diseases. At the abovementioned ceremony, a numerous gathering of former pupils and collaborates of the deceased, from both the clinic and the Säuglingsschutz, paid due homage to the memory of their beloved teacher.

Reception on Account of Washington's Birthday

As usual the American ambassador gave a reception on Washington's birthday in his fine residence in this city, which was attended by some 300 Americans just now staying here. A fair percentage of the guests belonged to the American Medical Association of Vienna, that lively, flourishing and most useful association of eminently practical doctors who control, one may say, the entire postgraduate work in the Vienna hospitals as far as classes given in the English language are concerned.

An Outbreak of Microsporon Disease in Vienna Schools

For about two years, there has appeared in the schools of this city a disease of the hair of the scalp which formerly had not been known here. It is the same epidemic which has been observed and studied in Paris and the etiology of which has been traced to a microsporon. Professor Riehl, head of the clinic for dermatology, lectured before an audience of officers of public health on the results of his investigations conducted on about 1,000 children affected by the disease. He thinks that prophylactic measures are simple and efficient, and that by a little care propagation is easily stopped. To attain this result, however, early recognition is important. The scattered areas of broken hair, the whitish scutula-shaped scales on the head are not to be forgotten if once seen. In his experience, *x*-rays and disinfection by an antiseptic hair-wash gave excellent results, and he found that children of all classes and all standards of life were affected. In order to stamp out the disease, cooperation of teachers, doctors and hospitals was indispensable, as otherwise the expensive treatment could not be carried out in many cases of reduced means. Segregation of infected children Professor Riehl did not think necessary, as a well-fitting dressing of the head was sufficient to prevent any transmission.

Marriages

Joseph Arliss Worthington, M.C., U. S. Army, to Miss Aileen Therese Martin of East Orange, N. J., at Monterey, Cal., February 19.

William K. Loughridge, M.D., Portland, Ore., to Miss Myrtle Claire Lester of Walla Walla, Wash., February 16.

Oscar Bernhardt Lambert, M.D., Escanaba, Mich., to Miss Clare Frances Engelhardt of Milwaukee, Wis., March 4.

Arthur Edward Ewens, M.D., Atlantic City, N. J., to Miss Florence Lane Johnson, at Atlantic City, February 27.

John Carl Hill, M.D., Boise, Ida., to Miss Elizabeth Whitehill of Morgantown, W. Va., February 20.

Gregory L. Higgins, M.D., Sayre, Pa., to Miss Estelle M. Arnold of Mercersburg, Pa., February 23.

Walter Jacob Brunner, M.D., Westfield, Ia., to Miss Edith Gillin of Sioux City, Ia., February 21.

Robert W. Dunlap, M.D., Shantung, China, to Miss Alice L. Logan of Pittsburgh, February 8.

Roche W. Hogeboom, M.D., to Miss Cornelia L. Hall, both of Springfield, Mo., February 17.

Charles Lindley Steer, M.D., to Miss Mary E. Vandeven, both of Lima, O., March 5.

Michael J. Dowd, M.D., to Miss Agatha Prichard of Greeley, Neb., February 20.

Deaths

Leonard Weber, M.D. University of Erlangen, Germany, 1860; a member of the American Medical Association; professor emeritus of general medicine in the Post-Graduate Medical School, New York City; one of the founders and first president of St. Mark's Hospital; formerly visiting physician to St. Francis' Hospital; died at his home in New York City, March 1, from heart disease, aged 74. At a meeting of the board of directors of the Post-Graduate Medical School resolutions of eulogy and regret were adopted.

Henry Nelson Winton, M.D. University of California, San Francisco, 1885; Jefferson Medical College, 1889; for the last two years head of the department of chemistry of the Oakland College of Medicine and Surgery, and for fifteen years prior to that time professor of medicine in the University of California; died at the Oakland College of Medicine, February 20, from heart disease, aged 49.

Robert W. Walmsley, M.D. Tulane University, New Orleans, 1881; of New Orleans; formerly a member of the American Medical Association; a specialist in physical diagnosis; for seventeen years surgeon for the New Orleans Railway Company and for several years a member of the surgical staff of the Charity Hospital; died in New Orleans, February 27, several days after a surgical operation, aged 55.

Raymond J. Powers, M.D. Marion-Sims College of Medicine, St. Louis, Mo., 1895; a member of the American Medical Association and a practitioner of Ogden, Utah, for forty-five years, and member of the Board of Health and city council; formerly president of the Weber County Medical Society; a veteran of the Civil War; died in the Dee Memorial Hospital, Ogden, February 21, from senile debility, aged 66.

Joseph J. McCoy, M.D. Western Reserve University, Cleveland, 1881; a member of the American Medical Association and for several years a member and clerk of the school board of Steubenville, Ohio; local surgeon of the Wheeling and Lake Erie, Wabash, Pittsburgh Terminal, and Steubenville, Marietta and Ohio Valley Railroads; died at his home February 21, from angina pectoris, aged 55.

Elmer Brown Borland, M.D. Western Pennsylvania Medical College, Pittsburgh, 1887; a member of the American Medical Association and formerly professor of hygiene and dietetics in his alma mater; active in the campaign against tuberculosis; formerly a practitioner of East End, Pittsburgh, and later a resident of Edgewood; died in that place, February 24, from heart disease, aged 50.

August C. Schnetzler, M.D. Toledo (Ohio) Medical College, 1898; for seven years a practitioner of Toledo; assistant surgeon Cincinnati, Hamilton and Dayton Railroad; physician to St. Vincent's Hospital and a member of the associated staff of the Toledo Hospital; thereafter a resident of Los Angeles, Cal.; died at his home in that city, February 21, from tuberculosis.

William Thomas Kensett, M.D. University of Vermont, Burlington, 1894; for six years a medical missionary of the Methodist Episcopal Church in the Malay Peninsula and later a practitioner of Bakerstown and Pittsburgh, Pa.; a member of the staff of the Pittsburgh Free Dispensary; died at his home in Pittsburgh, March 3, from pneumonia, aged 45.

Henry Sinclair Castleman, M.D. College of Physicians and Surgeons, Baltimore, 1882; a member of the West Virginia State Medical Association; who underwent operation in a Baltimore hospital several months ago and who had not regained his former health and strength; died suddenly at his office in Martinsburg, March 1, from heart disease, aged 53.

Calvin Brooks McQuesten, M.D. Dartmouth Medical School, Hanover, N. H., 1864; acting assistant surgeon U. S. Army in 1864 and 1865; a practitioner of New York City for more than thirty years, but for ten years a practitioner of Hamilton, Ont., his native city; died suddenly while being taken to the Hamilton City Hospital, February 19, aged 74.

Henry C. Lapp, M.D. University of Buffalo, N. Y., 1865; a member of the Medical Society of the State of New York and the Gross Medical Club; for twenty-five years a member of the Buffalo Normal School Board and for thirty years of the Clarence School Board; died at his home in Clarence, March 1, from heart disease, aged 76.

Amos Graves, M.D. Tulane University, New Orleans, 1868; a member of the State Medical Association of Texas and Bexar County Medical Society; medical director of the San Antonio and Aransas Pass Railway; died at his home in San Antonio, March 9, from acute nephritis.

Joshua Francis Lewis, M.D. Harvard Medical School, 1887; of Malden, Mass.; for twenty-four years a member of the State Board of Charity and deputy superintendent and superintendent of the adult poor; died at the Massachusetts General Hospital, Boston, February 26, from heart disease complicating asthma, aged 57.

Nathaniel H. McGirk, M.D. St. Louis Medical College, 1858; surgeon in the Confederate service throughout the Civil War; for twenty years government physician on the Island of Trinidad and for more than twenty years a practitioner of Pleasanton, Texas; died at his home, February 2, from pneumonia, aged 83.

Isaac Newton Grubb, M.D. New York University, New York City, 1869; a member of the Medical Society of the State of Pennsylvania; a veteran of the Civil War and for several years a school director and member of the common council of Thompsontown; died at his home, February 9, from pneumonia, aged 71.

Henry Shaw Etheridge, M.D. Eclectic Medical Institute, Cincinnati, 1861; a member of the Medical Society of Virginia; a Confederate veteran; a member of the board of supervisors and physician to the poor of Norfolk County, Virginia; died at his home in Port Norfolk, February 24, from pneumonia, aged 72.

Jean Baptiste Vinceslas Chagnon, M.D. New York University, New York City, 1860; McGill University, Montreal, 1861; one of the most esteemed French-Canadian physicians of New England; for more than thirty years a practitioner of Fall River; died at his home, February 22, from cerebral hemorrhage, aged 74.

John William Parsons, M.D. Harvard Medical School, 1865; a member of the American Medical Association and a trustee and member of the staff of Portsmouth (N. H.) Cottage Hospital; a surgeon of volunteers during the Civil War; died at his home in Portsmouth, February 28, from pneumonia, aged 70.

John Miller Moore, M.D. New York University, New York City, 1891; who entered the United States Navy in 1892; was made surgeon in 1905 and left the service three years later, is reported to have been found dead in bed at a hotel in New York City, January 29, from heart disease and suffocation, aged 43.

Adolph Feldstein, M.D. University of Prague, Bohemia, 1864; elected treasurer of the Philadelphia Jewish Hospital in 1865; resident physician until 1873, superintendent from 1873 to 1876; visiting physician to the institution from 1876 to 1909; died at his home in Philadelphia, February 28, aged 71.

William Monroe Moore, M.D. Bellevue Hospital Medical College, 1896; founder of the Buffalo Park Sanitarium, Pawnee, Okla.; died at his home in that city, February 21, from the effects of a gunshot wound of the brain, believed to have been self-inflicted with suicidal intent, aged 50.

James H. Hewitt, M.D. University of Buffalo, N. Y., 1865; surgeon of the One Hundred and Forty-Seventh Pennsylvania Volunteer Infantry during the Civil War; for more than forty years a practitioner of Summerfield, Ill.; died at his home in Lebanon, Ill., February 25, aged 71.

Arthur Kendrick MacDonald, M.D. University of Pennsylvania, Philadelphia, 1875; for many years official physician and medical adviser to the Princeton (N. J.) University Athletic Association; died at his home in Princeton, February 28, from heart disease, aged 60.

Leon Millard Fleming, M.D. Long Island College Hospital, Brooklyn, N. Y., 1887; head of the medical department of the Pullman Palace Car Company; formerly a practitioner of Brooklyn; died suddenly at his home in Chicago, February 23, from heart disease, aged 45.

Joseph Lawrence Nevin, M.D. New York Homeopathic Medical College, New York City, 1878; for more than thirty years a practitioner of the Hudson Heights section of Jersey City, N. J.; died in a hospital in New York City, February 26, from peritonitis, aged 58.

John Loring Furber, M.D. American Medical College (Eclectic) Cincinnati, 1857; formerly chairman of the committee of medical legislation in Kansas for the national and state eclectic associations; died at his home in Blackwell, Okla., February 19, aged 75.

Sarah Fitzwater Tyson, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1889; a member of the Medical Society of the State of Pennsylvania; died at her home in Norristown, March 2, from heart disease, aged 50.

M. E. Augustus McKechnie, M.D. Louisville (Ky.) Medical College, 1897; formerly a member of the American Medical Association; at one time health officer of Seattle; died at a hospital in Vancouver, B. C., February 22, from nephritis, aged 51.

William Raymond Hitchcock, M.D. New York University, New York City, 1898; assistant surgeon to the New York Orthopedic Hospital and Dispensary; died at his home in New York City, February 25, from pneumonia, aged 41.

Martin H. Mayfield, M.D. St. Louis College of Physicians and Surgeons, 1893; formerly of Springfield, Mo.; and a member of the American Medical Association; died at his home in Hollis, Okla., March 1, from nephritis, aged 49.

John A. Luther, M.D. American Eclectic Medical College, Cincinnati, 1879; a veteran of the Civil War; for nearly half a century a practitioner of Scalp Level, Pa.; died at his home, February 20, from cerebral hemorrhage, aged 65.

James R. Williams (license, Washington, 1890); formerly a member of the American Medical Association and Kentucky State Medical Association; died at his home in Benge, Wash., February 20, from cerebral hemorrhage, aged 43.

Charles H. Jones, M.D. Southern Medical College, Atlanta, Ga., 1880; formerly mayor and chairman of the board of health of Dahlonega, Ga.; died at his home in that city, February 21, from cerebral hemorrhage, aged 56.

Josiah Hamilton Goddard, M.D. College of Physicians and Surgeons, New York City, 1861; a member of the Massachusetts Medical Society; died at his home in Orange, February 21, from cerebral hemorrhage, aged 81.

Walter Forward Reynolds, M.D. Rush Medical College, 1875; a member of the Nebraska State Medical Association and for many years a practitioner of York; died at his home in Huntington Beach, Cal., February 24, aged 66.

Severn Parker Nottingham, M.D. Jefferson Medical College, 1861; surgeon in the Confederate service throughout the Civil War; died at his home in Eastville, Va., February 20, from cerebral hemorrhage, aged 71.

Andrew Hull Parker (license, Illinois, years of practice, 1883); of Evanston; for forty-five years a practitioner of Chicago; died in the Evanston Hospital, February 29, after a surgical operation, aged 77.

James H. Noble, M.D. Hahnemann Medical College, Chicago, 1871; of Eau Claire, Wis.; senator from the Twenty-Fourth Wisconsin District from 1905 to 1907; died in Roswell, N. Mex., March 1, aged 61.

John Henry Baker Denton, M.D. New York University, New York City, 1871; of Freeport, Long Island, N. Y.; at one time president of the school board; died in St. Petersburg, Fla., February 26, aged 61.

Hugh Thompson Kirby, M.D. Medical College of the State of South Carolina, Charleston, 1907; a member of the South Carolina Medical Association; died at his home in Loris, February 25, aged 28.

Lee McAuley, M.D. Missouri Medical College, St. Louis, 1898; a member of the Illinois State Medical Society; formerly of Grafton, Ill.; died at his home in Hardin, Ill., February 21, aged 48.

Frank G. Burnett, M.D. New York University, New York City, 1885; a member of the Rhode Island Medical Society; died suddenly at his home in Pawtucket, March 3, from heart disease, aged 51.

John Patrick Curley, M.D. Harvard Medical School, Boston, 1878; of Newport, R. I.; died in SS. Peter and Paul Rectory, Fall River, Mass., February 20, from nephritis, aged 55.

Amanda Harriett Kempton, M.D. Boston University School of Medicine, 1882; of Newport, N. H.; died recently and was buried in Newport, February 17, aged 74.

Erastus L. St. John, for forty-eight years a practitioner of Ohio; died at the home of his son in Cleveland, January 21, from senile debility, aged 77.

James B. Hanna, M.D. University of Louisville, Ky., 1870; died at his home in Bethpage, Tenn., February 24, from cerebral hemorrhage, aged 64.

Edwin Greene, M.D. Kentucky School of Medicine, Louisville, 1882; the oldest physician of Arcadia, Fla.; died at his home, February 24, aged 65.

James Reagan Jump, M.D. Tennessee Medical College, Knoxville, 1896; died at his home in Lenoir City, Tenn., February 23, from tuberculosis.

Manley Clemont Warren, M.D. Jefferson Medical College, 1900; died at his home in Buchanan, Ky., February 20, aged 35.

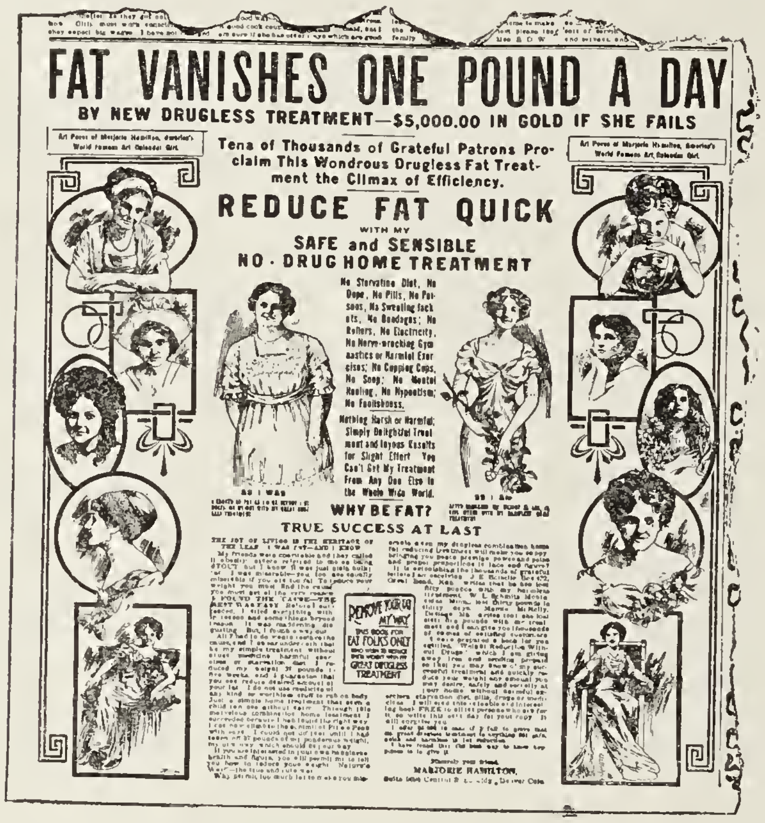
The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

MARJORIE HAMILTON'S OBESITY CURE

A Dietless, Drugless System That Calls for Both Drugs and Dieting

Women's fashions in the past few years have had the effect of giving a wonderful stimulus to one branch of quackery—the "obesity cure" fakers. The desire to be slender—and slender to a degree often far beyond that compatible with good health—has caused thousands of women to throw away money on so-called reduction treatments that are either dangerous or worthless—sometimes both. Thyroid extract was the basis of many of the fat reducers first put on the market and is still used in some of them. The public has been fairly well educated to regard this powerful drug with suspicion and it is becoming increasingly difficult to sell remedies of this type. Quackery, being nothing if not versatile, has taken advantage of the trend of public opinion to advertise "treatments" for obesity that are "drugless."



FAT VANISHES ONE POUND A DAY

BY NEW DRUGLESS TREATMENT—$5,000.00 IN GOLD IF SHE FAILS

Art Poses of Marjorie Hamilton, America's World Famous Art Calendar Girl.

Tens of Thousands of Grateful Patrons Proclaim This Wondrous Drugless Fat Treatment the Climax of Efficiency.

Art Poses of Marjorie Hamilton, America's World Famous Art Calendar Girl.

REDUCE FAT QUICK

WITH MY

SAFE and SENSIBLE

NO-DRUG HOME TREATMENT

No Starvation Diet, No Dope, No Pills, No Poisons, No Sweating Jackets, No Bandages; No Rollers, No Electricity, No Nerve-wracking Gymnastics or Harmful Exercises; No Cupping Cups, No Soap; No Mental Healing, No Hypnotism; No Foolishness.

Nothing Harsh or Harmful; Simply Delightful Treatment and Joyous Results for Slight Effort. You Can't Get My Treatment From Any One Else in the Whole Wide World.

AS I WAS

WHY BE FAT?

AS I AM

TRUE SUCCESS AT LAST

REMOVE YOUR FAT MY WAY

THIS BOOK FOR FAT FOLKS ONLY

GREAT DRUGLESS TREATMENT

Sincerely your friend,
MARJORIE HAMILTON.

Fig. 1.—Photographic reproduction of a quarter-page Marjorie Hamilton advertisement in the Chicago *Tribune,* Feb. 25, 1912.

THE DISCOVERY

Marjorie Hamilton of Denver, Colo., calls herself a "specialist on the art of reducing superfluous flesh and double chin." She claims to be the "Originator of the Famous Quadruple Combination System of Fat Reduction" which is "perfectly simple" and "simply perfect." Marjorie Hamilton offers to make your "fat vanish one pound a day" and she urges you to "write her at once and learn the anguish she felt when her girlish beauty started to develop to abnormal proportions." Needless to say, Marjorie Hamilton, before discovering her marvelous "Quadruple Combination System," had tried everything in the obesity-cure line. They were all worthless, she says, including the treatments suggested by reputable physicians. This did not surprise her, however, for she has discovered that "most physicians are more or less [which?] subject to obesity than any other class."

Marjorie tells us, that, confronted by the hopelessness of all previous methods of fat reduction, she studied "into the long weary hours of night and tried experiment after experiment." Further, she says: "I began the study of every scientific volume I could lay my hands on regarding the cause of superfluous flesh." "At last with patient effort," she found what she sought, a "cure" for fatness, and she is willing to share her secret with others that are afflicted—price $15.00.

As a result of her scientific study, Marjorie Hamilton discovered the following basic fact:

> "Fat, therefore, is simply thickened nutrition."

But the "Quadruple Combination System of Fat Reduction" has its limits; even its originator admits this: "Do not send for my treatment, if you wish to reduce more than seventy pounds." It is true that elsewhere in her advertising, Marjorie Hamilton offers to reduce your weight 150 pounds; but consistency is not to be expected in a mail-order faker.

As is usual in such cases, sales are stimulated by scare methods. That is to say, the fears of the obese are played on. The following silly falsehood, as an example:

> "Any moment, without warning, the tight bands of fat around a fat person's heart are liable to clutch the heart, stop it from beating, and thus instantly end life. Fat people are continually dropping dead from heart strokes caused by fatty degeneration of the heart."

THE PERSONNEL

And here it is worth while, for the purpose of showing the ramifications of quackery, briefly to refer to the individuals that are conducting this fake. Marjorie Hamilton's name is Mrs. Walter C. Cuningham. In 1909, Cuningham with his previous wife, Evelyn, was conducting a mail-order bust-developer and wrinkle-eradicator concern in Chicago under the name of Evelyn Cuningham. At that time Marjorie Hamilton was the wife of the employee of a board-of-trade broker. In the latter part of 1910, W. C. Cuningham sold his interest in the Evelyn Cuningham Company and incorporated another bust-developing, wrinkle-eradicating and fat-reducing mail-order concern, the Della Carson Company, also of Chicago. Later, he disposed of this company also and, having obtained a divorce from Evelyn, married Marjorie Hamilton, who had in the meantime got a divorce from her husband. The two went to Denver where they organized Marjorie Hamilton, Inc. While Marjorie advertises that she is "at the head of this great business" and further brags that "no man bosses me," it is, of course, Cuningham who dominates the disreputable enterprise. So much for the personal elements of the story.

A FAMILY LIKENESS

In going over the advertising matter of the three companies—Evelyn Cuningham Co., Della Carson Co. and Marjorie Hamilton Co.—one finds some internal evidence of the connection between the three. For instance, this from one of Evelyn Cuningham's heart-to-heart letters (printed by the thousand) to a woman in need of a wrinkle eradicator:

> "I do wish that I was master enough with the pen to bare my very soul to you so that you could see in all its nude horror the anguish women feel when unattractive."

And this from Marjorie Hamilton's booklet bewailing the lot of the fat woman:

> "I do so wish that I was master enough with the pen to bare my very soul to you so that you might see in all its nude horror the anguish I felt when I was once fat and unattractive."

THE FABLE OF THE TWO FRIENDS

And again! Della Carson—who sold mail-order treatments for developing the bust—had, so she tells us, "a girlhood friend" who married. After a while the girl began to lose the freshness of her beauty. But let her tell it:

> "The petals were falling from the flower of girlhood—and the evening of beauty had arrived. Little by little the husband paid less attention to his helpmeet . . . he was spending his evenings and his money on actresses [Presumably plump ones!—Ed.]; he was haunting stage doors and the gaily-lighted cafés. He was drinking with women of the half-world—was throwing himself away in the revelry of dissipation."

This, if we are to believe Della, was the horrible position in which her "girlhood friend" found herself. The presumption is, of course, that had she sent for Della's bust developing "treatment" home would have been happy once more.

Now, mark the coincidence! Marjorie Hamilton also had "a beautiful girl friend"—so she says. She, too, married but, unlike Della's friend, instead of losing in weight, she gained. "After two years of married life, she grew stout." The husband of Marjorie's friend, while evidently having a different standard of beauty from that held by the husband of Della's friend, was affected in a similar way. Thus, according to the booklet issued by Marjorie Hamilton:

> "The petals began falling from this flower of girlhood and the evening of beauty had arrived. Little by little the husband paid less and less attention to her . . . He was spending his evenings and money on actresses [Presumably thin ones:—Ed.]. He was haunting stage doors and gayly-lighted cafés, drinking with women of the half-world; was throwing himself away in the revelry of dissipation."

Here, of course, the presumption is, that, all that was needed to win back the erring husband was for the neglected wife to send in $15 for Marjorie Hamilton's "Famous Quadruple Combination System of Fat Reduction."

The fitting climax to these two sad stories is thus portrayed—the wording is practically identical—both by Della Carson of Chicago in her booklet that was issued before Cuningham left Chicago and by Marjorie Hamilton of Denver in her latest pamphlet dealing with the suffering obese. The family likeness is strong:

THE PATHETIC CLIMAXES

WHAT DELLA SAID:	WHAT MARJORIE SAID:
"It has been man's domain to abide by the law of selection—and he worships what he can see and what pleases him most. In the reaches of that Sargasso Sea of Wasted Life—the tenement sections of a city—we find no girlish beauty. The hovels are filled with the starving women who didn't care or couldn't understand—who believed that men love for the sake of the woman herself—and that the outward appearances mean but little. And over there in that grim building we call the morgue—solemn and shrunken and still on the marble slabs—are the bodies of women who didn't believe—but who found that it is but a short step from twilight to night—and that the rose that bloomed in the Garden of Yesterday met only yesterday's needs."	"It has been man's domain to abide by the law of selection—and he worships what he can see and what pleases him most. In the reaches of that Saragossa (*sic*) Sea of Wasted Life—the tenement sections of a city—we find no girlish beauty. The hovels are filled with the starving women who didn't care or couldn't understand *what it meant to them to grow fat and lose their attractiveness* [Italics ours.—Ed.]—who believed that men loved them for the sake of the woman herself and that the outward appearances mean but little. And over there, in that grim building we call the morgue, solemn and shrunken and still on the marble slabs, are the bodies of women who didn't believe—but who found that it is but a short step from twilight to night—and that the rose that bloomed in the Garden of Yesterday met only yesterday's needs."

HOW MARJORIE HAMILTON LOST HER FAT

At the time that Della Carson was selling bust-developers, wrinkle-eradicators and what not, she also had, as a side-line, a "fat-reducing treatment"—thus being able to play both ends against the middle. At that time, it seems, Marjorie Hamilton was afflicted with obesity so, it is alleged, she took the Della Carson treatment; what more natural? And here is the testimonial that Della Carson publishes as having come from Marjorie Hamilton in consideration of the marvelous results she was able to obtain:

> "*My Dear Miss Carson:*—I now write to congratulate you on the wondrous merit of your beauty treatments. They are indeed remarkably quick in action. I have never before known of an external fat reducing treatment to work so rapidly. It beats all the poison pills so many fat people use. With your fat treatment it is simply necessary to sponge the fat parts of the body with your delightful preparation. It seems to fairly eat up the superfluous flesh. I shall gladly recommend your splendid treatments to my friends. You may use this letter with my picture if you wish.
>
> Sincerely yours,
> Marjorie Hamilton.

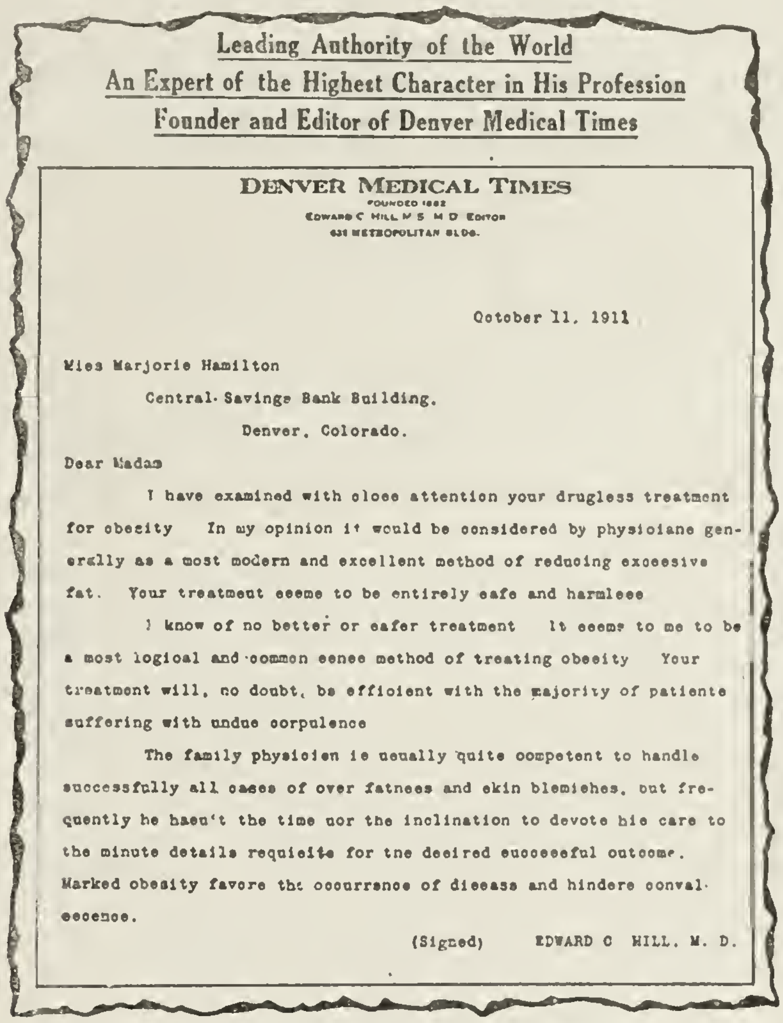
ANSWERING THE ADVERTISEMENTS

The full inwardness of this testimonial will be appreciated better after the Marjorie Hamilton treatment for obesity has been described. But to return to the subject: Being desirous of reducing your weight, you write to "Marjorie Hamilton, Inc.," for particulars regarding her "Quadruple Combination System." The first of the inevitable form-letters comes, in which the marvels of the "system" are dwelt on in detail. At the end of the letter is the postscript, so dear to the hearts of the mail-order faker, in which a "special offer" is made: "As you are one of the first in your vicinity" Marjorie Hamilton will reduce her regular price of $15 to $10. As a matter of fact, it seems to make no difference how many persons have written from one locality, each individual is "one of the first in your vicinity" and gets the benefit of the "special offer."

THE FORM-LETTER SERIES

Accompanying the first letter, which is in imitation typewriting, is a "reduced offer coupon," also in facsimile of typewriting, which is supposed to be sent in with the $10, if you are foolish enough to part with that amount of money. As a matter of fact, you can count on your $10 being taken whether you send the coupon or not. Should you wait a month, form-letter number two arrives in which you are offered the "treatment" for $5. Should you still remain obdurate, form-letter number three comes in which you are given the opportunity of getting the "system" for $3 cash, "and the names of one or more fat people in any locality." You are still not convinced and wait twenty days more, at which time you receive a letter offering to "send you my large complete combination $15 treatment" for $5. This rise in price is only temporary, however, and four weeks later form-letter number five comes, in which the cost of the "treatment" has been reduced again to $3. You still are unconvinced and wait another month. Form letter number six arrives and opens with the following paragraph:

> "I intend to send you free and deliver to your very door, all charges prepaid, my complete $15 combination treatment for the reduction of fat. You needn't send me even a dollar for the treatment: you may have it with my compliments."



Leading Authority of the World
An Expert of the Highest Character in His Profession
Founder and Editor of Denver Medical Times

DENVER MEDICAL TIMES
FOUNDED 1882
EDWARD C HILL M S M D EDITOR
631 METROPOLITAN BLDG.

October 11, 1911

Miss Marjorie Hamilton
Central Savings Bank Building,
Denver, Colorado.

Dear Madam

I have examined with close attention your drugless treatment for obesity In my opinion it would be considered by physicians generally as a most modern and excellent method of reducing excessive fat. Your treatment seems to be entirely safe and harmless

I know of no better or safer treatment It seems to me to be a most logical and common sense method of treating obesity Your treatment will, no doubt, be efficient with the majority of patients suffering with undue corpulence

The family physician is usually quite competent to handle successfully all cases of over fatness and skin blemishes, but frequently he hasn't the time nor the inclination to devote his care to the minute details requisite for the desired successful outcome. Marked obesity favors the occurrence of disease and hinders convalescence.

(Signed) EDWARD C HILL, M. D.

Fig. 2.—Of course Marjorie Hamilton has testimonials! Here is one that she sends out to prospective victims. It is from a physician who is said by Marjorie Hamilton to be the "leading authority of the world," the editor of the *Denver Medical Times!* The *Denver Medical Times* derives no small part of its receipts from the advertisements of proprietary humbugs.

There is only one requirement: you must send in the complete "names and addresses of five fat people." Before you get through this letter, however, you find that there is a "string" tied to the offer, for the postscript reads:

> "P. S.—In reading this letter I notice my stenographer made a mistake about sending no money, but of course you must send $1 only, and agree to recommend my treatment for one year after your fat is gone."

Marjorie Hamilton having, apparently, reached rock-bottom, a money order for $1 is sent for the "Famous Quadruple Combination System of Fat Reduction." In due time, the "system" arrives. It consists of forty pages of reading matter indifferently printed in imitation typewriting on poor quality paper, foolscap-size, and stapled in manuscript form. The paper is folded on itself twice and is tied with a piece of red tape.

WHAT THE ADVERTISEMENTS SAY

Before describing the essential elements of the Marjorie Hamilton so-called treatment, it is worth while summing up what, according to the advertising matter that is sent out in order to sell the treatment, it is claimed *not* to be. The following quotations will help to make this clear:

> "With My Method of Treatment You May Remove Double Chin or Excess Fat Without Medicines. There Are No Drugs to Ruin the Stomach, No Horrible Dieting, No Ridiculous Fasting, No Nerve-Racking or Harmful Physical Culture Exercises, No Poison Internal Remedy, No Harmful External Preparation of Any Kind to Rub on the Skin or Body, No Turkish Baths, No Sweating, No Apparatus on the Body, No Weakening Methods."
>
> "By my system of treatment you may eat all you desire."
>
> "Every part of my treatment is pleasant."
>
> "You are shown how to reduce as much as a pound a day . . . without taking into your system any drug, without starving yourself and without taking up terrible gymnasium work."
>
> "I do not purge you nor give you any drugs whatever to take."
>
> "You eat all you want."
>
> "No drug store prescription to have filled."
>
> "No harmful drugs or terrible massaging; no sweating; no painful physical culture exercises; no starvation diet; no nothing to take internally; no poison stuff to rub on the body, and none of the old, ridiculous, harmful drug methods are used."
>
> "I do not use medicine of any kind or worthless stuff to rub on the body."

These quotations indicate to a certain degree the tone of all the letters and other advertising matter put out by Marjorie Hamilton, Inc. The average reader, the uncritical reader, of such matter—and it is the average, uncritical reader whose money goes to swell the coffers of Marjorie Hamilton, Inc.—gets an impression of the "Famous Quadruple Combination System of Fat Reduction" something like this:

First, that the "system" does not call for any dieting.

Second, that no purging is necessary.

Third, that there are no drugs to apply to the surface of the body.

Fourth, that no special exercises are needed.

Fifth, that no drugs need be taken internally.

THE FAMOUS QUADRUPLE SYSTEM

Now, what are the facts? Summed up, the "Famous Quadruple System of Fat Reduction" comprises essentially the following:

First, rectal enemas of warm water and glycerin to be taken twice a week.

Second, white bread, potatoes and pastries must be given up.

Third, the "Healthtone-Obesity Bath Powder" must be applied to "the fat parts or whole body twice daily."

Fourth, the patient must take "a good long walk each day."

Fifth, she must "give up the drinking of any liquids at meal time.

Sixth, the juice of half a lemon must be taken in water four times a day.

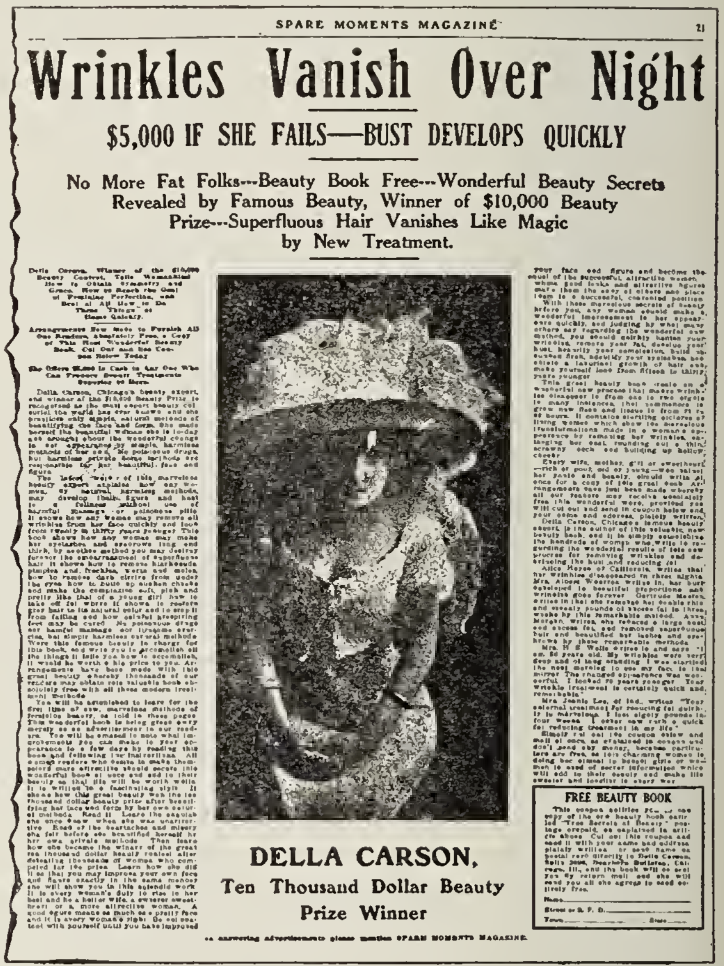
Seventh, exercises, of which several are described, are to be taken and a certain amount of work each day done with Indian clubs and dumb-bells.

Eighth, "those desiring a more rapid reduction of weight" should purchase Kissingen or Vichy tablets and drink water in which they have been dissolved.

Such then, in brief, is the "Famous Quadruple Combination System of Fat Reduction." It is for this that $15 is asked—and, if you wait long enough, $1 accepted. That it contains nothing new is evident. That purging, whether by means of enemas or salines, will reduce weight in some cases, everyone knows. That by restricting the intake of carbohydrates—starches and sugars—the likelihood of increasing in weight is diminished, everyone also knows. That by certain exercises, adipose tissue may be removed, no one need be told.

THE REPEAT ORDERS

The joker in the whole treatment, however, lies in the "Marjorie Hamilton Healthtone-Obesity Bath Powder." A package of this comes with the "Combination System." It is a gift! It is sent with Marjorie Hamilton's compliments! Yet undoubtedly it is the one thing on which the Hamilton concern depends for "repeat" orders. In fact, the first letter that the victim gets after having purchased the "Quadruple Combination System" is one devoted to the praise of the Healthtone-Obesity Bath Powder. This powder is supposed to dissolve the fat with which the victim is afflicted. Evidently this powder is not so strong or efficacious as the one sold by Della Carson and alleged to have been used by Marjorie Hamilton in reducing her fat. While Della's powder is said to have reduced fat without the aid of purging, dieting or exercising, Marjorie's powder is but a part of a complicated "system" to effect the same result.



SPARE MOMENTS MAGAZINE 21

Wrinkles Vanish Over Night

$5,000 IF SHE FAILS—BUST DEVELOPS QUICKLY

No More Fat Folks---Beauty Book Free---Wonderful Beauty Secrets Revealed by Famous Beauty, Winner of $10,000 Beauty Prize---Superfluous Hair Vanishes Like Magic by New Treatment.

DELLA CARSON,
Ten Thousand Dollar Beauty Prize Winner

FREE BEAUTY BOOK

Name.__________
Street or R. F. D.__________
Town__________ State_____

Fig. 3.—Greatly reduced facsimile of one of the Della Carson advertisements. The Della Carson Company was organized by W. C. Cuningham after he had disposed of the Evelyn Cuningham concern and before he had started the Marjorie Hamilton Company. In a testimonial published by the Della Carson Company, and alleged to have been written by Marjorie Hamilton, the latter claims to have reduced her weight by means of the Della Carson "system."

The following highly imaginative description of how the Healthtone-Obesity Bath Powder works appears in the letter just referred to:

> "A pleased user writes and says: 'My bathroom is on the west side of my house. I have been taking my baths with Healthtone Obesity Bath Powder in accordance with your instructions. I select the afternoon as the most appropriate time for my own needs. I have noticed that the sunlight falling aslant the water, has shown a peculiarly oily surface—as though some sort of grease had been thrown on the water. It came from my pores. It was the oil resulting from the destroyed fat globules. I wondered what it amounted to in weight—and took some olive oil as an experiment. I measured it out carefully, pouring it onto the surface of the same amount of clean water. Fully two ounces were required to produce the same glazed effect on the water. I figure, therefore, that your Healthtone Obesity Bath Powder actually withdraws two ounces of fatty accumulations from my pores at each daily bath!"

Is it any wonder that the seeker after slimness desires more of this wonderful fat dissolving powder? To such as want it, Marjorie Hamilton will send a half-pound package for only $1. This mixture was submitted to a cursory examination in the Association's laboratory and here is the chemist's report:

HEALTHTONE-OBESITY BATH POWDER

A specimen of the Marjorie Hamilton Healthtone Obesity Bath Powder examined in the Association's laboratory was found to be a reddish-brown perfumed powder. It is soluble in water with which it forms a slightly turbid reddish-brown alkaline solution. The microscope showed the powder to consist of several distinct substances. Chemical tests indicated that the powder consists chiefly of sodium carbonate with smaller amounts of magnesium sulphate, potassium nitrate and possibly sodium sulphate. Or to tabulate:

Sodium carbonate (washing soda).
Magnesium sulphate (Epsom salts).
Potassium nitrate (saltpeter).
Sodium sulphate (Glauber salts).

Not that the bath powder is the only side-line carried by Marjorie Hamilton, Inc. The company also has for sale a rubber fountain syringe "at the price of $2."

A SUMMARY

To recapitulate: here we have a concern advertising, as something new to the United States, a "system" of flesh reduction that is older than the oldest inhabitant. On the specious plea that every part of the treatment is pleasant, the victim is persuaded to part with her money only to find that she must purge, diet, and carry out a system of exercises. This, too, in spite of the fact that, either inferentially or directly, she has been led to believe that none of these methods forms part of the "treatment." She is told—*before* she sends her money—that neither the internal nor external use of drugs is part of the "treatment"; she finds—*after* she has sent her money—that the use of saline purgatives internally and of a strongly alkaline powder externally, are part of the "system." She is told—also before she sends her money—that she may eat all she desires; she finds—after she sends her money—that she must give up, among other things, "white bread, potatoes and pastries." She is told—once more, before sending her money—that it is unnecessary to take up "terrible gymnasium work"; she finds—of course, after sending her money—that exercises with and without dumb-bells and Indian clubs are part of the "system."

Will the "Famous Quadruple Combination System of Fat Reduction" reduce weight? The question can be answered Yankee fashion: Mr. Sharp, a man familiar with the late Mr. Barnum's aphorism, advertised a "sure method of exterminating roaches." He would sell his secret with such apparatus as was necessary, to all who would remit $1. Those who "bit" received two small blocks of wood with the following instructions: "Place the roach on the lower block, superimpose the upper block and apply pressure."

Will Marjorie Hamilton's "Famous Quadruple Combination System of Fat Reduction" reduce weight? In reply we ask: Will Mr. Sharp's device exterminate roaches?

THE RELATIVE PURITY OF ACETPHENETIDIN AND PHENACETIN

Until six years ago the chemical product known as phenacetin was patented both as to process and to product. As the patent ran out at that time, anyone, of course, could manufacture it. It was placed in the Pharmacopeia under the name "acetphenetidin." It is on the market now under both names, "phenacetin" and "acetphenetidin." The price of the former is five times[1] that of the latter, hence it is rather important to know whether or not one is, in any way, better or purer than the other. The original patentees or manufacturers, the Farbenfabriken of Elberfeld Company, market the product under the name "phenacetin" and also under the official name "acetphenetidin," the former at about 33 cents an ounce and the latter at about 6 to 7 cents an ounce. Evidently these people believe that acetphenetidin is all right since their price-list says: "Our product is of the highest standard of purity," and in another place: "On account of the low price of acetphenetidinum. U. S. P., it is especially suitable for the manufacture of medicinal specialties, such as headache powders, etc." Remember that it is the manufacturers of phenacetin who say this.

The question arose whether or not phenacetin differs from acetphenetidin. If it does, then physicians should know it. An inquiry was addressed to Farbenfabriken of Elberfeld Company and also to Lehn & Fink, two firms which market the product in this country under both names, asking in what respect the two products differ. No answer was received from either firm. With the object of answering the question our chemists have investigated the preparations on the market, both those sold under the name "phenacetin" and those under the official title "acetphenetidin." The following is a summary of their report[2]:

THE CHEMISTS' REPORT

Physical Appearance.—All the specimens were found to be fine white crystalline powders, differing somewhat in appearance as follows: Four specimens—Acetphenetidin (Farbenfabriken), Phenacetin (Specimen 1[3]—Farbenfabriken), Phenacetin (Specimen 2[3]—Farbenfabriken) and Acetphenetidin (Squibb)—appeared very much alike, each being a very fine crystalline powder, differing only slightly as to fineness. Five other specimens—Phenacetin (Lehn & Fink), and Acetphenetidin, U. S. P. (Lehn & Fink), Acetphenetidin (Merck), and two specimens of Acetphenetidin (Powers-Weightman-Rosengarten), had the same general appearance, each consisting of a fine crystalline powder containing a considerable proportion of large rectangular plates. Three specimens—Acetphenetidin (Mallinckrodt) and two specimens of Acetphenetidin (Powers-Weightman-Rosengarten)—had the same general appearance being a moderately fine and homogeneous crystalline powder. When examined microscopically with a low-power lens the Mallinckrodt product appeared to consist principally of rectangular prisms and the Powers-Weightman-Rosengarten product to be made up largely of plates.

Identity.—All of the specimens when tested side by side responded to and complied with the identity tests of the United States, British, German, Swiss, Dutch, Swedish, Spanish, and Danish pharmacopeias. The reactions given by the several specimens were all the same, showing no difference in any case.

Melting-Points.—As a further proof of identity and similarity the melting-points of the different specimens were taken and found to be: Acetphenetidin (Farbenfabriken), 134.2 C.; Phenacetin (Specimen 1—Farbenfabriken) 133.7 C.; Phenacetin (Lehn & Fink), 134.7 C.; Acetphenetidin (Lehn & Fink) 134.9 C.; Acetphenetidin (Powers-Weightman-Rosengarten), (1) 134.3 C., (2) 133.6 C., (3) 134.7 C., (4) 134.7 C.; Acetphenetidin (Squibb) 134.2 C.; Acetphenetidin (Merck), 134.8 C., and Acetphenetidin (Mallinckrodt), 134.2 C. The melting-point is given as 135 C. in the British, French and Spanish pharmacopeias, and as 134 to 135 C. in the United States, German, Swiss, Danish, Swedish and Dutch pharmacopeias. Thus all comply with the standard given in our pharmacopeia and most foreign pharmacopeias with two exceptions and those respectively only 0.3 C. and 0.4 C. low.

Absence of Acetanilid.—The absence of acetanilid in all the specimens was indicated by the bromin test of the United States, British, German, Swiss, Dutch, Swedish and Danish pharmacopeias.

Absence of Carbonizable Matter.—The absence of carbonizable matter was shown in all specimens by the sulphuric acid test of the United States, British, German, French, Swiss, Dutch, Swedish and Spanish pharmacopeias.

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[1] Phenacetin is listed at 33 cents an ounce, acetphenetidin at 98 cents a pound in quarter-pound lots.

[2] The full details of analysis will be published in the annual report of the Chemical Laboratory.

[3] "Specimen 1" is a specimen of the product regularly sold in this country. "Specimen 2" is a specimen of a product sold in England and whose resale in this country was prohibited by the manufacturers.

Water-Soluble Matter.—All specimens when tested for excess of water-soluble matter came well within the limit (0.50 per cent.) set by the French pharmacopeia, the greatest amount being 0.20 per cent.

Ash.—When heated, all the specimens were found to yield practically no ash, the residues from 1 gm. samples weighing in no case more than 0.0004 gm.

Absence of Paraphenetidin.—When tested by the methods of the United States, British, German and French pharmacopeias, the absence of an impurity of paraphenetidin was shown in all specimens, with the exception of one specimen obtained from Powers-Weightman-Rosengarten Co., which gave a positive, though not strong, reaction and two other specimens of the same firm which reacted still more faintly. While this firm's product alone gave any reaction whatever when the U. S. P. test for paraphenetidin was applied with the test of the Swiss pharmacopeia, all but Acetphenetidin (Mallinckrodt), Acetphenetidin (Merck) and one specimen of Powers-Weightman-Rosengarten Co. gave positive, though very faint reactions, indicating that the majority of specimens, including those of the original manufacturer, contain a minute trace of this impurity.

Our findings regarding the product of Powers-Weightman-Rosengarten Co. having been communicated to this firm, their correctness was acknowledged. At the same time the firm wrote: "All that we have on hand now gives negative tests for paraphenetidin, and we believe our present records are correct when we state that all lots which we are supplying now, and have been supplying for sometime past, answer all U. S. P. requirements."

The above results arranged in tabular form to facilitate comparison of the various specimens are herewith appended:

TABLE SHOWING RESULTS OF ANALYSES OF VARIOUS SPECIMENS OF ACETPHENETIDIN AND PHENACETIN *

Name	Physical Appearance	Melting-Point (Corr.) C.	Water-Soluble Matter in Per Cent.	Ash, Per Cent.	Paraphenetidin, U. S. P. Test †	Paraphenetidin, Swiss Test †
Acetphenetidin (Farbenfabriken).	Very fine homogeneous crystalline powder.	134.2	0.17	0.02	—	+
Phenacetin (Farbenfabriken) (1).	Very fine homogeneous crystalline powder.	134.5	0.10	0.01	—	+
Phenacetin (Farbenfabriken) (2).	Very fine homogeneous crystalline powder.	133.7	0.06	0.00	—	+
Phenacetin. (Lehn & Fink).	Fine crystalline powder, not uniform.	134.7	0.11	0.02	—	+
Acetphenetidin (Lehn & Fink).	Fine crystalline powder, not uniform.	134.8	0.13	0.00	—	+
Acetphenetidin (P. W. R.) (1).	Homogeneous crystalline powder.	134.3	0.19	0.03	+	+
Acetphenetidin (P. W. R.) (2).	Homogeneous crystalline powder.	134.7	0.16	0.02	+	+
Acetphenetidin (P. W. R.) (3).	Homogeneous crystalline powder.	134.7	0.14	0.02	+	+
Acetphenetidin (P. W. R.) (4).	Fine crystalline powder.	133.6	0.20	0.01	—	—
Acetphenetidin (Squibb).	Fine crystalline powder.	134.3	0.19	0.00	—	+
Acetphenetidin (Merck).	Fine crystalline powder.	134.8	0.15	0.03	—	—
Acetphenetidin (Mallinckrodt)	Fine crystalline powder.	134.2	0.11	0.01	—	—

* In all cases identity was confirmed; acetanilid was absent; carbonizable matter was absent.

† In this column plus indicates presence; minus, absence.

This examination would appear to demonstrate that the chemical substance, para-acetphenetidin, whether sold as acetphenetidin, U. S. P., or as phenacetin, is practically identical. The impurity of the product of some of the specimens coming from Powers-Weightman-Rosengarten Co. is too slight to be considered dangerous. Furthermore, a comparison of the "lot numbers" indicates that this firm has been improving its product steadily so that in the future its assurances of an unimpeachable product may be relied on. Inasmuch, therefore, as acetphenetidin complies with all the pharmacopeial requirements as to identity and purity, in just the same way as phenacetin, which sells for as high as five times the price of acetphenetidin, physicians need not hesitate in using the title of the U. S. P. "acetphenetidin" when prescribing this product.

Association News

THE ATLANTIC CITY SESSION

Announcement of Committees and Hotels for the Next Annual Session of the Association in June

Dr. W. P. Conaway, 1723 Pacific Avenue, Atlantic City, is chairman of the Local Committee on Arrangements for the next annual session of the American Medical Association, at Atlantic City, N. J., June 4 to 7, 1912.

HOTEL HEADQUARTERS

The following hotels have been selected as the various headquarters:

General Headquarters: Marlborough-Blenheim.
House of Delegates: Traymore.
Practice of Medicine: Dennis.
Surgery: Chalfonte.
Obstetrics and Gynecology: Haddon Hall.
Ophthalmology: Strand.
Laryngology, Otology and Rhinology: Seaside.
Diseases of Children: Traymore.
Pharmacology and Therapeutics: Dennis.
Pathology and Physiology: St. Charles.
Stomatology: Young's.
Nervous and Mental Diseases: Brighton.
Dermatology: St. Charles.
Preventive Medicine and Public Health: Shelburne.
Genito-Urinary Diseases: Rudolf.
Hospitals: Rudolf.

CHAIRMEN OF SUBCOMMITTEES

The following are the names and addresses of the physicians who are chairmen of the various subcommittees of the Committee on Arrangements:

Finance: George Scott, 1109 Pacific Ave.
Entertainment: J. C. McVay, 707 Pacific Ave.
Section Entertainment: Bernard R. Lee, 901 Pacific Ave.
Hotels: W. E. Darnall, 1704 Pacific Ave.
Halls and Meeting Places: David Berner, 1509 Pacific Ave.
Section Meeting: Samuel Barbash, 1902 Pacific Ave.
Program: Jay I. Durand, 1616 Pacific Ave.
Printing: I. E. Leonard, 2842 Atlantic Ave.
Badges: Thomas G. Dunlap, 921 Pacific Ave.
Scientific Exhibit: W. J. Carrington, Ryanhurst Apts.
Registration: H. T. Harvey, Morris and Atlantic Aves.
Information: M. S. Ireland, 23 S. California Ave.
Alumni Entertainments: W. C. Wescott, Delaware and Pacific.
Postoffice and Telephones: E. C. Chew, 603 Pacific Ave.
Commercial Exhibit: Edward Guion, 34 S. N. Carolina Ave.
Ladies' Entertainment: Mrs. W. Blair Stewart.

Correspondence

An Appeal for a Monument in Honor of John Morgan, Founder of the First Medical School in the United States

To the Editor:—John Morgan was born in Philadelphia, in 1735. He received his A.B. degree from the College at Philadelphia, now the University of Pennsylvania, in 1757. He was graduated doctor of medicine from the University of Edinburgh, and became a licentiate of the Royal College of Physicians of London, and later a fellow of the Royal Society.

During the revolutionary period, Dr. Morgan was director-general of the hospitals and physician-in-chief of the American Army. He was also a member and secretary of the American Philosophical Society of Philadelphia, and in 1787 a fellow and one of the founders of the College of Physicians of Philadelphia, and later one of its censors.

In 1765, he persuaded the trustees of the College of Philadelphia to organize the first medical school in America, and in this institution he became a professor and lectured for three years. He was thus in the fullest sense the father of medical education in the United States of America.

He died Oct. 15, 1789, and lies buried within St. Peter's Church, Philadelphia. No monument marks the place where his remains repose, and it seems desirable to the Philadelphia medical alumni of the University of Pennsylvania that the name of John Morgan should be fittingly honored by some appropriate monument.

It is believed that the medical profession in general in the United States, and all who directly or indirectly have owed anything to medical education, will heartily approve of this movement. Much has been done to commemorate the heroes of war, but to few men indeed does the country owe a heavier debt than to John Morgan, who is certainly the undisputed parent of our first medical school, and therefore of medical education throughout the country. It is hoped, therefore, that all medical institutions here and elsewhere may be in sympathy with this commemorative movement and unite with us in suitably marking the last resting-place of John Morgan, and erecting a monument in memory of his great services to the medical profession.

Subcommittees (a list of which will be published later) have been formed in various parts of the country for the purpose of soliciting financial aid from those interested in the undertaking.

EDGAR FAHS SMITH, M.D., S. WEIR MITCHELL, M.D., WILLIAM OSLER, M.D., WILLIAM PEPPER, JR., M.D., CLARENCE PAYNE FRANKLIN, M.D.

SWITHIN CHANDLER, M.D., Chairman, Philadelphia.

Bronchoscopy

To the Editor:—The interesting report (THE JOURNAL, Feb. 17, 1912, p. 467) of a few cases of "Tacks and Nails in the Air Passages; Bronchoscopy," by Dr. E. Fletcher Ingals, emphasizes and vividly portrays "the heart-breaking delays, the extreme anxiety for the patient and the knowledge that prolonged operations of this kind are dangerous, while failure may spell death for the patient, place the operator under such circumstances under an indescribable stress." The subsequent dangers of edema of the upper air-passages or even of edema of the lung and of a fatal bronchitis or bronchopneumonia are referred to.

I know of one case in a New York hospital in which death resulted in a child of about 1 year, as the bronchoscope was introduced. The difficulties of bronchoscopy, even in such expert hands as Ingals', are well shown in the cases cited, though the site of the foreign body was located by a radiograph.

The time occupied in clearing the field of blood, mucus, pus, etc., is considerable. The danger of the foreign body slipping from the grasp of the forceps is evident, necessitating renewed search and further manipulation. The prolonged anesthesia is not without its incidental disadvantages.

In Case 1, after prolonged effort to control bleeding and to clear the field, occupying one hour, the tack was brought to view and grasped. Too large to be drawn into the bronchoscope, it was withdrawn with the instrument but escaped at the glottis. Further search, continued for a half hour, failed to find the tack. When the instrument was withdrawn, the tack was discovered in the mouth. In another case he had a similar experience. Case 2 necessitated a second operation, fifteen days later, preceded by a tracheotomy, in order to remove the tack which had slipped out of the grasp of the forceps at the first attempt and taken a new position. In the third case, one of eight years' standing, unusual difficulty was experienced from an obstruction 3 cm. below the glottis, necessitating a low bronchoscopy.

It may be presumption on the part of a general practitioner to dare to criticize the work of an expert. Contrast, on the other hand, the picture of the removal of a foreign body by means of the fluoroscopic screen as described by myself and Dr. R. T. Morris in *Surgery, Gynecology and Obstetrics*, May, 1910, pp. 524-529.

The patient is placed on a wooden table (the *x*-ray tube beneath) and after a low tracheotomy has been performed, a pair of forceps is passed down to the site of the foreign body. The shadow picture on the fluoroscopic screen placed against the anterior chest enables the operator to direct the forceps to the desired spot with a minimum of trauma to the delicate mucous membrane. The presence of bronchial secretion of mucus, mixed pus, pus or blood in no way interferes with the manipulation. In my own case, the exposure to the *x*-rays as timed by Dr. Hirsch did not exceed two minutes. The entire operation in Dr. Morris' case occupied thirty minutes.

I adopted this method at the suggestion of Dr. I. S. Hirsch. Subsequently, we found that Dr. Samuel Lile had suggested the method in a short article in the *Virginia Semi-Monthly*, Feb. 8, 1901.

Dr. Maurice D'Halluin, Lille, France, a few years ago, proposed as new the same procedure. Dr. Morris' case and my own, it is true, were recent cases. It may be argued that in cases of long standing, this method may not be as easy; that possibly there may be serious hemorrhage from the granulations, etc.

I notice that in Dr. Ingals' Case 2, he was compelled to push the forceps blindly through the granulations in order to seize the tack. Four times the forceps slipped and the last time, as the tack nearly reached the glottis, it again slipped and a second operation was necessary fifteen days later.

If such an accident occurs when a fluoroscopic screen is used, the body can be easily located by the shadow on the screen and removed promptly. The hemorrhage from granulation tissue, though profuse, is not dangerous as a rule. The fact that a preliminary tracheotomy is required is not a valid objection, for in two of Ingals' cases similar measures were necessary.

FRANCIS HUBER, M.D., New York.

[The above was referred to Dr. Ingals, who says:]

To the Editor:—This method has been employed occasionally since the early days of bronchoscopy, and at times must be a great help. This article, however, would lead the average man to suppose that if he was to use the fluoroscope, there would be very little difficulty. Such an impression would be very unfortunate. Some cases of bronchoscopy are very easy, and others, like the selected ones that I referred to, are difficult. The more one does of this work, the greater is his appreciation of the difficulties.

E. FLETCHER INGALS, Chicago.

Epidemic of Small-Pox in Alaska

To the Editor:—Last summer, at the opening of the Yukon river navigation, an outbreak of small-pox occurred at Dawson, the infection probably brought by some early traveler from the "outside." Much inconvenience to the steamboat companies and the traveling public was caused by the quarantine which it was necessary to set up against Dawson. But prompt measures taken by the Canadian health officer, Dr. Thompson, and the American army surgeon, Dr. Suggs at Fort Egbert (Eagle), just across the boundary line, were effectual in preventing the spread of the disease down the 2,200 miles of open river, and up the many tributaries.

To this statement there is one exception: the joint American and Canadian survey parties engaged in delimiting the boundary between the United States and Canada, along the 141st meridian, got out of Dawson before the disease had declared itself, and proceeded to their point of operations on the Porcupine River some 600 miles from Dawson. Someone in the train of this expedition must have carried the infection, for shortly after its arrival at the Rampart House, small-pox broke out among the natives.

Dr. Gilbert Smith, surgeon of the American survey party, was fortunately on the spot, and at once took action against the spread of the disease. Sending an express to Dawson, the Canadian authorities immediately invested him with full power as provisional territorial health officer, and with most commendable promptness succeeded in getting to him an experienced nurse, a detail of the Northwest Mounted Police, and full medical and other supplies, within nine days after word had been received. A little later they despatched material and workmen for the building of a hospital with a capacity of ninety beds.

At present, Jan. 15, 1912, the epidemic still rages at the Rampart House, but by the most energetic measures and observation of the strictest quarantine, it has been confined to that locality. The natives to the number of 120 have been segregated on an island of the Porcupine River, and are fed and cared for by the Canadian government. So far, there have been ninety-eight cases, of whom forty have recovered and been discharged at this date. Discharged families are furnished with entire new outfits, all their old stuff being burned, and they are allowed to depart only after a period of detention and thorough inspection.

One of the officers of the Episcopal mission in Alaska, Archdeacon Stuck, happened to be at Fort Egbert when the outbreak occurred at Dawson, and was able to secure by telegraph an immediate despatch of sufficient vaccine points to vaccinate all the natives on the Yukon and its tributaries. The medical missionaries at their several stations and the trained nurses at missions where there are no physicians have vaccinated in the past summer close to 3,000 Indians. At this place, I myself vaccinated upward of 400. So we feel that our Indian charges have been afforded such protection as medical science can command. But the whole interior of Alaska owes a deep debt of gratitude to Dr. Gilbert Smith for his strenuous and successful efforts to confine the disease on the upper Porcupine River, and to the Canadian government for so promptly and efficiently backing him. During the season of navigation, the United States government maintained a quarantine under my charge near the mouth of the Porcupine River, four miles from here. And now that the winter trails are established, it seems necessary to resume this preventive measure.

Reports from the Rampart House indicate that the disease is of an especially virulent type. To quote Dr. Gilbert Smith: "The epidemic has been of a most virulent type, the skin lesions especially profound, accompanied with extensive destruction of tissue, in consequence of which pitting will be marked in various cases. Mr. Lee, the nurse at the hospital, who has had considerable experience in the work, asserts that he has never seen cases that can compare, even in the Orient." Under the circumstances, it is a very remarkable tribute to the efficiency of the measures that have been taken for the treatment of the disease that so far there has been only one death. It should be mentioned that on the first outbreak on the Porcupine every native was immediately vaccinated.

We have good hope that by spring the disease will have worn itself out by the exhaustion of material, and that the interior of Alaska will be spared this dreadful scourge, the thanks for its disappearance being due in chief measure to Dr. Gilbert Smith.

GRAFTON BURKE, M.D.,
Medical Missionary, Fort Yukon, Alaska.

Chinosol

To the Editor:—It is unfortunate and an injustice to our valuable antiseptic "chinosol," that many physicians (thinking that chinosol has been condemned by the Council on Pharmacy and Chemistry of the A. M. A.) will not read the literature which is sent to them and will not listen to the things our representatives say when they call. The facts are that chinosol has been accepted by the Council for "New and Nonofficial Remedies" and the investigation of that body goes to show that chinosol is a powerful antiseptic, slightly more so than is bichlorid of mercury; it is also non-poisonous. We think it only fair that you should publish this statement.

CHINOSOL COMPANY, New York.
CHARLES ROOME PARMELE, President.

Thermometer Swallowed Without Harm

To the Editor:—Carelessness of physicians in general practice in making reports of unusual occurrences is to blame for the loss of much valuable information. But each one thinks his case is probably only one among many others and fails to report it. So of the fever thermometer swallowing act, reported in the January and February numbers of THE JOURNAL; possibly there are many such cases. In August, 1891, a nurse carelessly placed a thermometer in the mouth of one of my patients delirious from typhoid fever. Patient immediately *chewed it up* and swallowed it. No serious results followed. Patient is living to-day and has not paid his bill, not even for the thermometer. At the time, I mentioned the case to Dr. A. J. Banker of this city and he informed me that one of his patients had swallowed a thermometer and that when passed per rectum it registered 104, his case occurring only a short time before mine. Neither of us considered our cases worthy of report at the time.

GEORGE T. MCCOY, M.D., Columbus, Ind.

A Finger-Guard

To the Editor:—After reading the article on a finger-guard in THE JOURNAL, March 2, p. 628, I submit my device. A No. 10 or a No. 11 veterinary capsule, hardened in a formaldehyd solution, with holes cut as desired to allow ventilation of the finger, makes a very strong, light and transparent finger-guard, capable of being fastened in place by adhesive plaster.

CHARLES W. SIMISON, M.D., Hawley, Minn.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ETHICS OF ACCEPTING A POSITION ON A CHURCH DISPENSARY

To the Editor:—In a large city there is no free dispensary of any kind at which poor people may receive medical attention. In one section of the city, where there are many poor people, a church has taken up the matter and established a free dispensary and asked three reputable physicians to give their services for a short period, one each day. Is there anything unethical or wrong in these physicians giving their services to such an institution?

H. R. V.

ANSWER.—No, provided the services are limited to persons worthy of the receipt of charity. Our correspondent does not intimate in what material respect, if any, this dispensary differs from one organized under any other auspices. Perhaps, at first sight, it seems a little out of the usual field of a church to take up a work of this kind, and yet the fact that in such a large city there is no free dispensary proves that the local organizations in whose provinces this work would seem to fall more naturally are guilty of a neglect of duty. Moreover, those who wish the church to be guided by earlier and more "spiritual" ideals usually forget that it was in the foundation and operation of just such practical works as hospitals and asylums that the early church expressed its spiritual fervor and proved its right to existence.

The live church of this generation is the servant of the community. As an exponent of the higher life it does not content itself with holding, on Sunday and perhaps once in the middle of the week, services limited exclusively to the spiritual side of man's nature. The live church realizes that it cannot minister effectively in the spiritual way without some regard to the physical and mental condition of the people. The spirit which the church presumably embodies is responsible for the establishment of hospitals, orphanages and various other organizations for the relief of physical distress, but the work usually is carried on by independent bodies, the function of the church being to keep the flame of brotherly love alight in the hearts of men. Thus it may take up almost any problem of humanity that is disregarded in the community and either directly or indirectly work for its solution.

There is room for vastly more helpful cooperation between the medical profession and the church. The present campaign for the education of the public on hygiene and sanitation is one avenue in which both could cooperate with remarkable effectiveness. The church needs the medical profession just as much as the medical profession needs the church, and before the church is blamed very seriously for some unwise attempts in the direction of the Emmanuel movement, the medical profession could afford to take a little blame for not having done more in the endeavor to prevent a condition becoming so acute that the church felt—in spite of the lack of technical training by many of its leaders—that it must attack the problem. In many a community conditions are such that, if a church wished to have some lectures on public health and prophylaxis, it could not secure the services of the best men because of professional jealousies. The medical profession is in danger of being left in the rear, if it does not set its course to take advantage of the prevailing currents of cooperation which are carrying so many organizations on toward the haven of success. It is a common thing for several churches in the community, formerly antagonistic or at least studiously independent, now to cooperate in attacking various community problems. Merchants cooperate in securing agreements to close their places of business certain afternoons or evenings. Many other instances show that the value of cooperation and presenting a united front are realized. If the medical profession is to stand for a high ideal of better health and hygiene for the people, jealousies and friction must be laid aside, or at least hidden from manifestation.

All of which is respectfully submitted to the medical profession. Most of it may have little to do with our correspondent's question, but it needs to be said and this seemed a good opportunity.

A SUBSTITUTE FOR MERCURIC CHLORID IN THE DISINFECTION OF HANDS

To the Editor:—As bichlorid makes my hands very rough, I would like to know what is the best thing to use to disinfect my hands for operating-room and for office treatment. O. W.

Answer.—If bichlorid irritates the skin as it does with some individuals, its use should be discontinued. In the preparation of the hands thorough scrubbing with a good soap and hot water is by far the most important part of the procedure. If this be properly done and the hands then washed in 60 to 70 per cent. alcohol further attempts at chemical sterilization may safely be dispensed with.

Much fetichism is frequently seen displayed in the use of alcohol. To hold out the palms of the hands to have a few drops of alcohol poured into them, as is so frequently done, is as absolutely useless as would be an incantation. The hands must be washed in the alcohol and a soft brush used. The hands then should be thoroughly dried, dusted with sterile powder and dry, sterile rubber gloves put on. The most delicate hands will almost certainly stand this treatment and if the method is properly carried out it is perfectly safe and reliable.

ACUTE EPIDIDYMITIS

To the Editor:—What is the most probable etiologic diagnosis in the following case? The patient has an exquisitely acute epididymitis, the enlargement of the whole testicle being that of about a fist in size. There is extreme tenderness in the deep perineum; the freshly voided urine contains many shreds, variously shaped, some sinking to the bottom of the vessel. There is no history of any direct injury, nor of any acute infectious disease like mumps, etc.; the patient on several occasions denied ever having had gonorrhea, but is finally brought to acknowledge having had an attack four years ago. The patient asserts that the epididymitis is due to lifting a pail of coal. J. H. B.

Answer.—Acute epididymitis is nearly always due to one or two factors, viz., gonorrhea and tuberculosis. Tuberculous epididymitis is of slow development. It occurs most frequently in the head of the epididymis and runs a rather prolonged course. Accompanying it there is usually a tuberculosis of the vas deferens, the seminal vesicles and the prostate. It may even involve the trigone of the bladder. Tuberculosis of the vesicle and prostate gives practically no symptoms, but an involvement of the bladder gives the symptom of frequent urination. On palpation through the rectum the prostate and vesicles, when they are involved in a tuberculous process, usually have a nodular feel and are not particularly tender. These nodules are small and scattered over the surface of the gland.

Gonorrheal epididymitis is almost always secondary to a gonorrheal seminal vesiculitis. If in every case of gonorrheal epididymitis a rectal examination is made, an enlargement of the seminal vesicle will practically always be found. This seminal vesicle, in contradistinction to the tuberculous vesicle, is prone to be quite painful, particularly at the commencement of the disease. The prostate may or may not be involved; it may or may not be tender to pressure. The urine will contain shreds of various kinds, and may be cloudy and contain pus. In acute disease of the testicle, due to metastatic abscess or to mumps, the process is limited to the testicle itself. The epididymis is free; there is no pain in the perineum; there are no shreds in the urine. Hence, in this particular case the probable etiologic diagnosis would be that of acute gonorrheal epididymitis, complicated with an acute gonorrhea and seminal vesiculitis.

Trauma, from the lifting in this case, is very common before the onset of an epididymitis due to gonorrhea. For instance, a man with acute gonorrhea is playing cards. He rises and strikes his testicle gently against the edge of the table. The result is a typical gonorrheal epididymitis. Another man with acute gonorrhea plays golf all day and becomes very tired. During the night he is awakened with pain in his testicle and has a typical acute gonorrheal epididymitis. So the lifting was a contributing cause only.

TINCTURE OF CHLORID OF IRON

To the Editor:—Is there any way to prescribe tincture of chlorid of iron in such a diluent or vehicle that no harm could be done to the teeth and that therefore the usual caution to take through a tube and to rinse out the mouth need not be given? When a patient is told to do this it at once excites alarm and often the medicine will not be used. The Weld Syrup Tr. Ferri Chlor. is said to be a preparation which will not harm the teeth. Can any non-proprietary preparation be compounded, including the usual dose of tincture of chlorid of iron, which will not be corrosive as to the teeth, so that it may be taken without the ordinary directed precaution of using through a tube? X. Y. Z., Oneida, N. Y.

Answer.—So far as known there is no way in which tincture of chlorid of iron can be prescribed so that it will not be more or less injurious to the teeth—if it remains chlorid of iron. It may be assumed that if it does not injure the teeth when given in ordinary dilution, some chemical change has occurred and the substance given is no longer chlorid of iron. If, therefore, one desires to use the chlorid of iron for its local effects on the throat, the stomach or the intestines, it is necessary to give it through a tube or largely diluted, in order to prevent injury to the teeth. If one does not desire the stimulating action of chlorid of iron but wishes to give a ferric salt, there are a number of official preparations which can be used for this purpose, such as the scale preparations, iron and ammonium citrate, soluble ferric phosphate or pyrophosphate. The National Formulary contains a preparation called tincture of citrochlorid of iron. This is prepared by gently heating ferric chlorid and sodium citrate together and when cool adding alcohol and water. In this case a chemical change occurs, so that while the preparation contains about the same amount of iron as the official tincture of ferric chlorid, it is no longer a chlorid of iron.

We are not informed as to the composition of the Weld syrup but we think it fair to assume that if it will not injure the teeth, it is because some modification of its chemical composition has been made. Simply to secure the constitutional effects of iron, the use of Bland's pill of ferrous carbonate seems to be the most satisfactory method. The use of palatable preparations is to be encouraged but physicians should always understand that a modification of the disagreeable properties of such a preparation may involve a change of character which will nullify the therapeutic value. This is conspicuously true as to the colorless tinctures of iodin which do not contain elementary iodin and are incapable of securing the local effects for which iodin is used. Fortunately, the local effects of ferric chlorid are of less moment but the therapeutist should realize that in applying tasteless or non-irritating preparations, he may be sacrificing the distinctive properties which make, at least in certain cases, the irritating preparations superior to the non-irritating.

FOSSIL MEDICAL WORDS

To the Editor:—Referring to your editorial on "Fossil Medical Words" (The Journal, Feb. 3, 1912, p. 344), I submit some notes I have taken on etymology. "Antimony" means bad for monks. Valentine once gave this mineral to pigs, which throve on it; he gave it to monks, who died from it. "Belladonna" literally means fine lady. "Atropin" is named for one of the three Fates—Atropos, who cuts the thread of life. "Cadaver" is from the Latin *caro data vermibus*, flesh given to the worms. "Catheter," from the Greek, means a thing sent down. "Cinchona" is named for the wife of the Count of Chinchon, viceroy of Peru. "Crisis" derives its general meaning from its use in medicine. Hippocrates believed that the humors of the body ebbed and flowed like the tide of the sea. Tidal days were called critical days and the tide itself crisis—

a time when the physician could judge the nature of disease. "Delirium" is from the Latin *de*, "from," and *lira*, "furrow," because the mind departs from its proper course in delirium. "Garble" means to sift out, to cull, to assort. A statute in the reign of James I imposed a penalty for the sale of drugs not garbled. "Imbecile" literally means leaning on a stick. "Jalap" is the name of a town in Mexico. "Morphin" comes from Morpheus, the god of sleep. "Piles" is from *pila*, a ball. A condition is "precarious" when it depends on prayers. ℞ is a symbol of Jupiter, under whose special protection all medicines were placed. The rectum was believed by the old anatomists to be straight—*rectus*. "Syphilis," etymologically from the Greek, means hog-loving. Testicle is from *testis*, a "witness" of manhood. R. M. Harbin, Rome, Ga.

Answer.—We are indebted to our correspondent for calling attention to these interesting words. Etymology, however, is far from being an exact science, and several of the derivations offered are not generally accepted. The suggested derivation of "antimony," while probably erroneous, is picturesque and in its way instructive. The word is the modern representative of the late Latin *antimonium*, which in turn is supposed to be derived from a root akin to the Latin *stibium* and the Greek *στίμμι*. "Cadaver," according to the best authorities, is derived from the Latin *cadere*, to fall. The Greek word for a corpse, *πτώμα*, is in the same way derived from the Greek *πίπτω*, I fall. The derivation of "crisis" offered by our correspondent suggests the sea-coast superstition about a connection between death and the ebb of the tide. We are not aware, however, of any evidence connecting this or any similar belief with the word "crisis." The Greek *κρίσις*, defined as a separation, a judgment, event, and derived from the verb, *κρίνω*, I judge, was used commonly to mean a decisive state of things long before Hippocrates adopted it for the decisive point of a fever. The derivation of imbecile from *in* and *bacillus*, a stick, meaning leaning on a stick from weakness, is considered rather improbable. The derivation seems to be doubtful. It is curious that we should have lost the exact etymologic meaning for the word "syphilis," though it was originally derived from the name of a Latin poem by Fracastorius written in 1530 and called after one of the characters in the poem. Whether the derivation is from *symphilus* which means loving or from *syophilus*, which means a lover of hogs, is doubtful. Probably the first derivation is the right one.

TREATMENT OF ENLARGED TUBERCULOUS GLANDS

To the Editor:—Please give me the best method of converting enlarged tuberculous cervical glands into abscesses of watery consistency so that the contents can be removed by an aspirating needle. The patient has been under tuberculin treatment for the past six months and apparently the disease is arrested, yet there are three large glands which have not diminished in size. They are freely movable and easy of approach. The patient refuses operation for cosmetic reasons. Is there any digestant which will bring about the desired result without severe inflammatory reaction or great danger? B. R. D., Jamaica Plain, Mass.

Answer.—The tuberculin treatment is the proper one, but it must be continued for some time. We should judge from the description of your case that the glands could be removed with practically no scar, but whether or not they require removal is for the surgeon to decide. It is not necessary to remove the glands until they break down; but any attempt to force them to break down should be avoided, and, if they are to be removed at all, it should be done before they break down. We know of no digestant that can be used as you suggest.

SOMNOFORM

To the Editor:—Please inform me about Somnoform and its effects when used as an anesthetic in extracting teeth.

Last November, when my wife had some teeth extracted, our dentist spoke very highly of this preparation as without bad effects. It left her, however, with a very irritable asthmatic respiratory tract and the circulatory system has been upset, causing a congestion in all the organs, with the symptoms which accompany such conditions. It seems as if the pressure brought to bear on the heart during her severe attacks of coughing and difficult breathing caused the heart to dilate, which made the tricuspid insufficient.

She has been in bed the greater part of the time since December 18, when her heart seemed to give way under the strain. She is able to be up and around now, but that is all; on slight exertion she loses her breath. She was a strong, healthy woman of a nervous temperament, somewhat stout but solid. Sugar was found in the urine, which quickly cleared up on diabetic diet and has not returned, though carbohydrates are allowed in moderation. The glycosuria was supposed to be due to the shock. I would like to know if any similar experiences have been reported. B. R.

Answer.—Somnoform is said to be a mixture of ethyl chlorid 60 parts, methyl chlorid 35 parts and ethyl bromid 5 parts. The relative value of ethyl chlorid and methyl chlorid as compared with ether and chloroform is still an open question, as also is the relative safety of administration. In a general way they have been found to stand, both in effect and safety, between nitrous oxid and ether.

W. J. McCardie (*Brit. Med. Jour.*, March 17, 1906, p. 616) cites a number of fatalities from the use of ethyl chlorid and also states that several deaths have occurred from Somnoform. In a former note in this department (The Journal, Nov. 21, 1908, p. 1788) it is stated that eighteen deaths had been reported from ethyl chlorid; but the number of administrations is not accurately known, so that the mortality rate cannot be stated positively. So far as we know, symptoms similar to those given by our correspondent have not previously been noted as resulting from the use of ethyl chlorid, or from the other alleged ingredients of Somnoform.

TECHNIC OF THE ETHER VAPOR ANESTHESIA

To the Editor:—In an article in The Journal, Feb. 17, 1912, p. 465, by Dr. Gwathmey, the ether vapor method of giving an anesthetic is mentioned. Please refer me to information on the apparatus and technic of this method.

G. E. Knappenberger, Macomb, Ill.

Answer.—This method involves the warming of the ether vapor and is described or referred to in the following articles:

Anesthetics, The Journal, Nov. 11, 1911, p. 1617.

Seelig, M.: Fallacy of Warmed Ether Vapor, *Interstate Med. Jour.*, September, 1911; abstr. in The Journal, Sept. 30, 1911, p. 1162.

Pynchon, E.: Apparatus for Ether Anesthesia, The Journal, May 21, 1910, p. 1690.

McRoberts, W. J.: An Advance in Anesthetic Technic, *Northwest. Lancet*, Aug. 15, 1909; abstr. in The Journal, Sept. 18, 1909, p. 970.

Report of the Anesthesia Commission of the American Medical Association, The Journal, Nov. 7, 1908, p. 1572.

Gwathmey, J. T.: Warm Versus Cold Anesthetics, *New York Med. Jour.*, February, 1908; abstr. in The Journal, April 4, 1908, p. 1150.

MYCETOMA OR MADURA FOOT

To the Editor:—I am preparing a report of a case of mycetoma, or Madura foot, occurring in my practice here, and desire to know the frequency of its occurrence in the United States. Any information on this point from yourself or your readers will be appreciated.

Hendery Allison, M.D., Kingsville, Tex.

Answer.—According to Hyde ("Diseases of the Skin") and also to Pusey ("Principles and Practice of Dermatology") only five cases of mycetoma have been reported as originating in the United States.

CRESOLENE

To the Editor:—Please give the composition of Cresolene, made by the Vapo-Cresolene Co., and name a good substitute for it in whooping-cough. B. P. C.

Answer.—Cresolene or Vapo-Cresolene is, according to an examination made in the Association's chemical laboratory (The Journal, April 4, 1908, p. 1135), "essentially cresol and corresponds in every respect to cresol, U. S. P." Purchase the cresol official in the Pharmacopeia.

The Public Service

Medical Department, U. S. Army

Changes during the week ended March 9, 1912.

Sherwood, Charles E., acting dental surgeon, February 26, left presidio of Monterey, Cal., en route to presidio of San Francisco for temporary duty.

Watkins, Victor E., M.R.C., February 27, reports at date with 22d Infantry, camp at Fort Bliss, Tex. Left Fort Sam Houston same date.

Wolven, F. H., dental surgeon, February 27, ordered to Fort Stevens, Ore., for temporary duty.

By par. 7, S. O. 52, March 2, 1912, War Department, the following named officers of the Medical Corps will report in person on Monday, April 15, 1912, to Lieut. Col. James D. Glennan, Medical Corps, president of the examining board, Letterman General Hospital, presidio of San Francisco, appinted in par. 24, Special Orders No. 25, Jan. 30, 1912, War Department, for examination to determine their fitness for promotion. On the completion of his examination each officer will return to his proper station or to the place of receipt by him of this order: First Lieuts. Arnold D. Tuttle, Clarence A. Treuholtz, George H. McLellan, Alexander D. Parce, Robert W. Kerr, Lee R. Dunbar, Rozier C. Bayly.

By par. 4, Special Orders No. 52, March 2, 1912, War Department, the following named officers of the Medical Corps will report in person on Monday, April 15, 1912, to Col. Henry P. Birmingham, Medical Corps, president of the examining board, Army Medical Museum Building, Washington, D. C., appointed in paragraph 13, Special Orders No. 243, Oct. 19, 1909, War Department, for examination to determine their fitness for promotion. On the completion of his examination each officer will return to his proper station or to the place of receipt by him of this order: First Lieuts. Frederick S. Wright, Daniel W. Harmon, Eben C. Hill, James A. Wilson, Armin Mueller, William S. Shields, Addison D. Davis, William H. Smith, Clarence E. Fronk, William R. Dear.

Truby, Albert E., major, March 4, designated as attending surgeon, headquarters eastern division, Governor's Island, N. Y.

Duncan, William A., captain, March 2, ordered to proceed to Fort Oglethorpe, Ga., for the purpose of installing in the hospital at that post a new type of x-ray machine.

Mills, R. W., lieut., March 4, ordered to Walter Reed General Hospital, Takoma Park, D. C., for observation and treatment.

Feely, James F., acting dental surgeon, March 4, reports for temporary duty at Fort Dupont, Del.

Hart, William L., captain, February 27, reports with 3d Field Art. Camp at Fort Bliss, Tex.

Mason, George L., dental surgeon, March 2, reports for temporary duty at Fort Riley, Kan.

Phelan, James M., and Boyer, Perry L., captains, March 6, ordered to proceed to Washington, D. C., for examination for promotion, May 1.

Rich, Edwin W., captain, March 6, ordered to proceed to Letterman General Hospital, San Francisco, for examination for promotion, May 1, 1912.

Dear, William R., lieut., March 6, orders directing him to proceed to Fort Robinson, Neb., revoked, and instead to proceed to Fort Slocum, N. Y., for duty.

Medical Corps, U. S. Navy

Changes for the week ended March 9, 1912.

Baker, M. W., surgeon, from the *Independence* to the *Denver*.

Angeny, G. L., surgeon, from the *Lancaster* to the *Indiana*.

Brown, E. W., P. A. surgeon, commissioned passed assistant surgeon from Nov. 29, 1910.

Davis, R. G., asst. surgeon, ordered to the naval hospital, Las Animas, Colo.

Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Seventh Month—Fourth Weekly Meeting

Abortion

Definitions: Abortion, miscarriage, premature labor, threatened, inevitable, partial, complete, missed, provoked, therapeutic, criminal.

Causes: 1. Spontaneous, unintentional abortion: (a) From stimulation of uterine contractions; drugs, massage, electricity, douches, infectious diseases, syphilis, endometritis, decidual diseases, uterine displacements and distention. (b) from separation of egg; traumatisms, falls, strains, etc. (c) Death of fetus; obstruction of circulation in cord, disturbed placental function, placental detachments or infarcts, syphilis, acute infection of placenta. (d) Disease of fetus; development, acute or chronic (syphilis) infections.

II. Provoked abortion. Therapeutic or criminal. Oxytocic drugs, massage, electricity, vaginal and intra-uterine injections, sounds and tents, rupture of membranes, curettage.

Symptoms: Pain, hemorrhage.

Dangers: Infection. Hemorrhage.

Treatment: 1. Threatened (a) no infection, (b) with infection. 2. Inevitable (a) no infection, (b) with infection.

Extra-Uterine Pregnancy

Definitions: Extra-uterine; tubal, interstitial, isthmial, ampullar; ovarian, abdominal (secondary), cornual.[1]

Symptoms: Before rupture: General: history of pelvic inflammation, sterility, general symptoms of pregnancy. Special: amenorrhea, metrorrhagia, polyuria, colicky menstrual pains, enlarged uterus, soft cervix, patulous os. At time of rupture: Intraperitoneal: pain, collapse, pulse and temperature, respiration, sweats, nausea and vomiting, syncope, hyperesthesia of abdomen, muscular rigidity. Extraperitoneal: Same as intraperitoneal but modified. Displaced uterus, uterine hemorrhage, circumscribed tumor.

Treatment: Before rupture, after rupture.

Monthly Meeting

Early Diagnosis of Pregnancy.
The Examination of the Urine During Pregnancy.
Treatment of Abortion.

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[1] Webster: Am. Jour. of Obstetrics, July, 1904.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arizona: Phoenix, April 1-2. Sec., Dr. Ancil Martin.

California: San Francisco, April 2. Sec., Dr. Charles L. Tisdale, 929 Butler Building.

Colorado: State Capitol, Denver, April 2. Sec., Dr. David A. Strickler, 612 Empire Building.

Idaho: Boise, April 2-3. Sec., Dr. O. J. Allen, Bellevue.

Illinois: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

Minnesota: State University, Minneapolis, April 2. Sec., Dr. W. S. Fullerton, 248 Lowry Building, St. Paul.

Montana: The Capitol, Helena, April 3. Sec., Dr. W. C. Riddell.

New Mexico: Santa Fé, April 8-9. Sec., Dr. J. A. Massie.

Oklahoma: Oklahoma City, April 9-11. Sec., Dr. John W. Duke, Guthrie.

Rhode Island: Room 315, State House, Providence, April 4-5. Sec., Dr. Gardner T. Swarts, State House.

Utah: County Building, Salt Lake City, April 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.

West Virginia: Parkersburg, W. Va., April 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

Colorado July and October Reports

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written and oral examinations held at Denver, July 5, and October 3, 1911. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75.

At the examination held July 5, the total number of candidates examined was 19, all of whom passed. Twenty-seven candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Colorado	(1911)	75.2, 78, 79.8, 80.4, 82.1, 82.7, 83, 84.2, 85, 85.4, 85.5, 86, 86.2, 88.1.
Chicago College of Medicine and Surgery	(1910)	79.4
Denver and Gross College of Medicine	(1910)	82.3
St. Louis University	(1910)	78.2
Kansas City Hahnemann Medical College	(1910)	75.5
Medico-Chirurgical College of Philadelphia	(1911)	87.4

REGISTERED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	State Licenses
Georgetown University	(1894)	Illinois
Central Coll. of P. and S., Indianapolis	(1889)	Indiana
Northwestern University Medical School	(1910)	Illinois
College of Physicians and Surgeons, Chicago	(1894)	Iowa
Rush Medical College	(1893) (1897) (1904)	Nebraska; Iowa; Illinois.
State University of Iowa	(1909)	Iowa
University of Kansas	(1907)	Kansas
University of Louisville	(1893) (1910)	Kentucky; Wyoming
Tulane University of Louisiana	(1905) (1909)	Texas; Mississippi
Harvard Medical School	(1895)	Mass.
University of Minnesota, College of Med. and Surg.,	(1897) (1902)	Minnesota; Iowa.
Ensworth Medical College	(1906)	Missouri
Beaumont Hospital Medical College, St. Louis	(1897)	Illinois
Marion-Sims College of Medicine, St. Louis	(1897)	Illinois
Columbia University, Coll. of P. and S.	(1901)	Missouri
Washington University, St. Louis	(1909)	Missouri
Barnes Medical College	(1903)	Illinois
Toledo Medical College	(1907)	Ohio
Pulte Medical College	(1894)	Ohio
Jefferson Medical College	(1905) (1909)	Vermont; W. Virginia
Woman's Medical College of Pennsylvania	(1909	New Jersey

At the examination held October 3, the total number of candidates examined was 9, of whom 7 passed, including 2 osteopaths, and 2 failed. Twenty-eight candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Colorado	(1911)	81.9, 83
Northwestern University Medical School	(1911)	90.8
Kansas City Hahnemann Medical College	(1911)	77.1
Tennessee Medical College	(1908)	75.4

FAILED

College	Year Grad.	Per Cent.
Denver Homeopathic College	(1908)	74.4
Bennett Medical College	(1909)	64.8

REGISTERED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	State Licenses
Medical College of Alabama	(1892)	Alabama
University of Colorado	(1905)	New Mexico
George Washington University	(1888)	Dist. Colum.
College of Physicians and Surgeons, Chicago	(1904)	Illinois
Hahnemann Med. College and Hospital, Chicago	(1903)	Illinois
Northwestern University Medical School	(1910)	Illinois
Medical College of Indiana	(1881)	Illinois

Medical College of Evansville	(1882)	Illinois
Keokuk Med. Coll., Coll. of P. and S.	(1907)	Iowa
Louisville Medical College	(1881)	Kansas
Kansas Medical College	(1907)	Kansas
Baltimore University	(1894)	New York
Harvard Medical School	(1905)	Mass.
Barnes Medical College	(1901)	Illinois
University Medical College, Kansas City	(1905)	Kansas
St. Louis College of Physicians and Surgeons	(1902)	Illinois
Missouri Medical College (1874)	(1894)	Missouri
Omaha Medical College	(1898)	Nebraska
New York University Medical College	(1898)	New York
University and Bellevue Hosp. Med. Coll	(1910)	New York
Long Island College Hospital	(1909)	New York
Medical College of Ohio	(1885)	Missouri
Ohio-Miami Medical College	(1911)	Ohio
University of Pennsylvania	(1906)	Penna.
Western Pennsylvania Medical College	(1903)	Penna.
Southwestern Univ. Med. Coll., Dallas	(1908)	Texas
University of Virginia	(1904)	Alabama

Virginia December Report

Dr. R. S. Martin, secretary of the Medical Examining Board of Virginia, reports the written examination held at Lynchburg, Dec. 19-22, 1911. The number of sections examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 58, of whom 25 passed and 33 failed, including one osteopath. Seven candidates were licensed through reciprocity. The following colleges were represented:

College PASSED	Year Grad.	Per Cent.
University of Alabama	(1900)	*
Howard University, Washington, D. C.. (1909) 75;	(1911)	78
Johns Hopkins Medical School	(1908)	85
Woman's Medical College of Baltimore	(1903)	*
Maryland Medical College	(1911)	77
University of Michigan, Dept. of Med. and Surg.	(1898)	*
Leonard Medical School	(1911)	76
Columbia University College of Phys. and Surg.	(1908)	*
Woman's Medical College of Pennsylvania	(1909)	86
Jefferson Medical College	(1911)	85
Knoxville Medical College	(1904)	*
Tennessee Medical College	(1908)	*
Medical College of Virginia (1910) 75, 80; (1911) 75, 75, 78.		
University College of Medicine, Richmond	(1911, 2)	*
University of Virginia (1901) 84; (1908) 79;	(1910)	81
McGill University, Quebec (1899)*	(1911)	88
FAILED		
Howard University, Washington, D. C.. (1911) 72;	(—†)	74
University of Louisville	(1911)	64, 67
Kentucky University	(1893)	* ‡
Baltimore Medical College	(1900)	*
Maryland Medical College (1909) 63, 67, 73;	(1910)	52, 72
College of Physicians and Surgeons, Baltimore	(1891)	*
North Carolina Medical College	(1911)	72
Leonard Medical School (1910) 68; (1911) 40, 62, 63, 63, 72, 73.		
University of Pennsylvania	(1911)	74
Jefferson Medical College	(1895)	*
Tennessee Medical College	(1911)	64
University of the South (1908) 59, 73;	(1909)	66
University of West Tennessee (1910) 60, 60;	(1911)	55
Meharry Medical College	(1911)	71, 73
University College of Medicine, Richmond	(1911)	72

College LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
George Washington University... (1897) (1905)	(1907)	Dist. Colum.
Medical College of Georgia	(1892)	N. Carolina
University of Michigan, Dept. of Med. and Surg.	(1898)	Dist. Colum.
Jefferson Medical College	(1904)	N. Carolina
University of Virginia	(1904)	N. Carolina

* Took oral examination.

† A letter from college says this candidate will graduate in 1912.

‡ Official information received does not indicate graduation.

Arizona January Report

Dr. Ancil Martin, secretary of the Arizona Board of Medical Examiners, reports the written examination held at Phoenix, January 2-3, 1912. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 10, of whom 5 passed and 5 failed. The following colleges were represented:

College PASSED	Year Grad.	Per Cent.
Drake University	(1900)	76.9
Johns Hopkins University	(1907)	85.4
Barnes Medical College	(1900)	93.5
Medico-Chirurgical College of Kansas City	(1903)	80.9
University of North Carolina	(1909)	83.5
FAILED		
Louisville Medical College	(1906)	71.1
University of Minnesota, College of Medicine	(1900)	73.8
Homeopathic Medical College of Missouri	(1908)	74.6
New York University Medical College	(1898)	71.9
Tennessee Medical College	(1907)	66.6

Book Notices

The Bacillus of Long Life. A Manual of the Preparation and Souring of Milk for Dietary Purposes, Together with a Historical Account of the Use of Fermented Milks, from the Earliest Times to the Present Day, and Their Wonderful Effect in the Prolonging of Human Existence. By Loudon M. Douglas, F.R.S.E. Cloth. Price, $1.50. Pp. 160, with 62 illustrations. New York: G. P. Putnam's Sons, 1911.

"The Bacillus of Long Life" is certainly a pretentious and attractive title for a book. Its basis is, of course, the dream of Metchnikoff, that the persistent consumption of sour or fermented milk destroys poison-producing bacteria in the intestinal tract of man and replaces them by long-life-bringing bacteria. Unfortunately, the investigations which are supposed to bear out this theory are not above criticism, although the author takes the stand that they are indisputable. After considering the results of these investigations, coupled with statements from Metchnikoff's book "The Prolongation of Life," the author thinks it but a short step to conclude that the *Bacillus bulgaricus* may claim to be the bacillus of long life.

There are several interesting and meritorious chapters in the book. The accounts and historical data of fermented milks used by different races are of considerable value. Following these, the chemistry of milk is popularly discussed. It is a pity, however, that the author has permitted untrue statements to creep in; for instance, the interpretation of lactometer readings are obsolete and an erroneous statement is made with reference to colored milk, which in nearly all cases is caused by microorganisms rather than by food material.

The bacteriology of milk is taken up next at some length. Names of lactic acid bacteria and facts are hopelessly confused and misstatements are not lacking. The name *Streptococcus lacticus* is credited to Grotenfelt instead of to Kruse, and *Bacillus lactis acidi* in one place is grouped with *B. bulgaricus*. This is a serious mistake. The statement that *Streptococcus lacticus* and *B. lactis acidi*—which, by the way, are identical—are incapable of growth at blood temperature is contrary to all experience.

If statements on scientific subjects are to be embodied in a popular book they ought to bear scientific scrutiny, otherwise they will mislead the reading public. The apparatus described for the preparation of sour milk is simple and efficient. The last chapter (on soured milk in health and disease) discusses the physiologic action of sour milk from an optimistic point of view rather than from experience and fact. The book will undoubtedly gain considerable popularity, but from a scientific point of view is of little value.

Delayed and Complicated Labor. By Robert Jardine, M.D. (Edin.), M.R.C.S. (Eng.), Professor of Midwifery in St. Mungo's College, Glasgow. Cloth. Price, $3. Pp. 351, with 107 illustrations. New York: William Wood & Co., 1912.

The present volume represents the author's personal experience and much of the matter has already appeared in a larger work on clinical obstetrics. The subject is clearly presented and the material well arranged. The subject of eclampsia receives a considerable amount of attention. Four of the twenty-three chapters are devoted to obstetric operations. The descriptions and directions are clear and explicit. The book is well illustrated, three colored plates showing the condition of the kidney and liver in eclampsia. The book, while intended for students, will also be useful to practitioners who wish a handy guide in difficult cases.

Leitfaden der Elektrodiagnostik und Elektrotherapie. Von Dr. Toby Cohn, Nervenarzt in Berlin. Paper. Price, 6.60 marks. Pp. 212, with 71 illustrations. Berlin: S. Karger, 1912. Edition 4.

Among the many excellent features of this small volume one is to be especially commended, namely, the insertion of colored plates, on which the muscles are in black and the motor-points and nerves are in red. This arrangement enables the average practitioner to find the motor-points for diagnosis readily. Although the present edition has been brought up to date, the general arrangement is the same as in former editions, and the changes are not radical.

TREATMENT OF NEURASTHENIA BY TEACHING OF BRAIN CONTROL. By Dr. Roger Vittoz. Translated by H. B. Brooke. Cloth. Price, 85 cents or 3 shillings 6 pence net. Pp. 117. New York: Longmans, Green & Co., 1911.

This is a book for laymen, purporting to give advice in the self-treatment of neurasthenia. Incidentally the author relates his own theories and achievements. Among other things he asserts his ability to count the brain-beats and to judge of the character of the nervous system by the mere placing of his hand on the patient's forehead. The putting forth of these wild theories and boastful assertions does not seem without a purpose. We learn that the author of this booklet owns and operates a sanatorium in Europe which is patronized by the wealthy idle. The intelligent layman, who has in our own country run the gauntlet of the various faith-cults, will hardly fall into this new trap.

Medicolegal

"Irresistible Impulse" Doctrine at Its Worst—Test of Responsibility for Crime

(State vs. Hassing (Ore.), 118 Pac. R. 195)

The Supreme Court of Oregon, in affirming a conviction of wife murder, holds that certain requested instructions were properly refused, as presenting the "irresistible impulse" doctrine at its very worst. They were that before the jury could find the accused guilty they must find from the evidence, and beyond a reasonable doubt, that he had sufficient mental capacity to distinguish between right and wrong as applied to the act he was about to commit, if he did commit it, and sufficient capacity to be conscious that the act was wrong, and at the same time sufficient will power and self-control to restrain himself from the commission of such act. That, in order to convict a person of a crime he must have a memory and intelligence enough to know that the act he is about to commit is wrong, to remember and understand and to know, if he commits the act, he will be subject to punishment, and reason and will sufficient to enable him to compare and choose between the supposed advantage and gratification so obtained by the criminal act, and the immunity from punishment which he will secure by refraining from it, and, having so contemplated the act, the will and controlling power to restrain himself from committing it.

The court further says of these requested instructions that they entirely ignored the difference between an impulse to kill, arising from mental disease or from "sudden and sufficient provocation," and one which springs from anger, or a wicked and furious desire for revenge. Whatever may be the rule in other jurisdictions, the test of insanity in Oregon is the capacity to distinguish between right and wrong. The statute provides that "a morbid propensity to commit prohibited acts, existing in the mind of a person who is not shown to have been incapable of knowing the wrongfulness of such acts, forms no defense to a prosecution therefor." The intent of this statute is to establish a conclusive presumption that a person having sufficient mentality to know that an act is wrongful and unlawful is capable of governing his conduct by that knowledge, and of resisting any impulse to violate the law.

Briefly, the evidence disclosed that the defendant, for some time before the killing, had beaten and abused his wife, and, in one instance, driven her from home; that he had been arrested for threatening to kill her, and on his promise to leave her alone had been allowed his liberty; that, on her refusal to again live with him, he waited at a dark corner, and, after she had fallen in an attempt to escape from him, shot her to death, and afterwards expressed satisfaction at the deed. The selection of the place, the instrument, and the time to consummate the act showed deliberation and premeditation, and a knowledge of its wrongfulness. Independent of the statute, the weight of authority is against the doctrine that a defense of an irresistible impulse to kill can be upheld in any case in which there exists sufficient mentality to know the wrongfulness and unlawfulness of the act

The power to discriminate between right and wrong, as a test of criminal responsibility, has been adopted by a large majority of the courts of the United States, including Oregon. On the other hand, a few courts have admitted with some reservation the theory that an uncontrollable impulse, superinduced by mental disease, even though accompanied by capacity to distinguish between right and wrong, is a defense to crime. Dr. Maudsley, an eloquent champion of this theory, remarks: "There is a destiny made for a man by his ancestors, and no one can elude, were he able to attempt it, the tyranny of his organization." It is submitted that these writers, and the judges who have adopted their opinions, have dealt with man's moral responsibility as between his Creator and himself, rather than his legal responsibility as a member of organized society. It ought to be plain that if every case tried should involve an investigation of the defendant's ancestry and environment, with a view to determine to what extent these influenced the free and untrammeled action of his will, and how far, in view of these, he was morally responsible for his acts, the investigation would be interminable. While one of the incidental objects of the law is to reform offenders, where they are reformable, its principal object is to protect society, and the only practicable working theory on which it can proceed is to assume that every man who knows right from wrong can observe the right and avoid the wrong.

Counsel for the defendant adverted to the sad consequences and injustice of executing a man in the defendant's mental condition, but the jury found that he knew right from wrong, and understood the nature and quality of the act, and this court must assume, in the absence of error by the trial court, that they found correctly. The duty of condemning any human being to suffer the extreme penalty of the law is one which every court approaches with regret. But if the prayer of his innocent and helpless wife was not sufficient to prevent the defendant from sending a bullet through her brain, as she lay fallen and defenseless before him, no mere considerations of sympathy or pity ought to induce the ministers of justice to bend the law to spare him.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
Amer. Assn. of Pathologists and Bacteriologists, Philadelphia, Apr. 5-6.
American Urological Association, New York City, April 2-4.
Arizona Medical Association, Bisbee, April 7.
California State Medical Society, Del Monte, April 16-18.
Georgia Medical Association, Augusta, April 17-19.
Louisiana State Medical Society, New Orleans, April 23-25.
Mississippi State Medical Association, Jackson, April 9-11.
Missouri Valley Medical Society, Colfax Springs, Ia., Mar. 21-22.
New York State Medical Society, Albany, April 16-18.
South Carolina Medical Association, Columbia, April 16-18.
Tennessee State Medical Association, Chattanooga, April 9-11.

THE AMERICAN MEDICAL ASSOCIATION'S CONFERENCES ON MEDICAL EDUCATION, MEDICAL LEGISLATION AND PUBLIC HEALTH

Held in Chicago, Feb. 26-27, 1912

(Continued from page 727)

Medical Education in the South

DISCUSSION ON THE PAPER OF PRESIDENT CRAIGHEAD

PRESIDENT S. E. MEZES, University of Texas, Austin: Medical education in the South is not very different from medical education the United States over. I do not believe that there are as many thoroughly bad medical colleges in the South in proportion to the population and I will admit also, that there are not as many thoroughly good medical colleges as there are in the other sections of the country. We have fewer problems there than you of the North and East have. A comparatively small number of colleges should be put out of business. Some of them have gone; more will go out. We have been helped in getting rid of these colleges by Dr. Flexner's report, by the activities of this conference, and by the growing efficiency of the state boards of medical examiners. In Texas the situation is improving with considerable and very commendable rapidity. I believe we are going to have before many years two strong medical colleges there. We have one medical school—the University of Texas—which is in Class A. We have another which is approaching that and which doubtless will reach that standard. Just how soon rests with this body. There is no reason why, so far as the South is concerned, this conference should not use all its influence toward a standard of one year of college education as a preliminary to medical education, and that can be wisely done now.

President Edmund James, University of Illinois, Springfield: During a recent trip to Berlin, Germany, I found there were in that city more frauds of all kinds engaged in the work of curing people than even in the great city of Chicago. That is pretty strong. I read the newspapers there with great interest and saw advertisements of all kinds of methods of cures. I asked one or two physicians how it was that, in a country with such high medical standards as Germany had and with such rigid medical examinations, it was possible to have such an immense number of fraudulent enterprises in the field of curative practice, and my attention was called to a fact which I was not fully aware of before, namely, that the practice of medicine in Germany is an open profession if one chooses to take life in his hands. In Illinois a man cannot practice medicine and prescribe drugs without having passed a state board examination and receiving a license from the state for that purpose. In Germany, I was told, that is not required. If any one is willing to take the risk on himself of prescribing drugs for some one else in trying to cure him, he may do so, provided in doing that he does not kill. If he kills the patient for whom he prescribes, he will be sent to the penitentiary in case it can be proved that he actually did kill. The licensed physician, who has taken a doctor's degree that has the university stamp on it may kill without any danger of prosecution. (Laughter.) But the man who has not a license takes his life in his own hands when he undertakes to treat people.

Dr. Richard H. Whitehead, University of Virginia, Charlottesville: I doubt if there is a single southern state which is able unassisted to build, equip, organize, and maintain a modern medical school which will meet adequately the exigencies or demands of our modern ideals. The presidents of our best universities are natural leaders in education, and after they have seen what modern medicine can do and what service can be rendered to the public I am sure they will not be disobedient to the duty of raising the standard of medical education. We are justified in a certain amount of optimism about the future, and I would say to you, "Don't worry about the South."

The Conjoint Board of England

Mr. F. G. Hallett, London, England, read a paper on the organization and methods of the board, of which he is secretary. The article appears in full in the department of Original Articles in this issue. The discussion on Mr. Hallett's paper was in part as follows:

Dr. George H. Matson, Secretary of the Ohio Board, Columbus: That a system of conducting these practical tests may be carried out by state boards in a small way I think there can be no doubt, even with the small fees which we now exact. I do not mean to say that we can carry out this practical examination as Mr. Hallett has detailed it to us, but we can certainly carry out a practical examination which will lead the medical student to better thinking and will lead the medical colleges to do better work. What is the purpose of these practical examinations? We all agree in the answer primarily that they are conducted for the purpose of preventing from practicing those who are unqualified and those who have insufficient medical knowledge. Second, we have these examinations in order to compel the medical colleges to do decent work. The medical boards, as was stated in the address of Dr. Bevan this morning, have been and are to-day the leading factors in pointing the way to higher standards. Methods of written examinations have become largely obsolete, and the time is opportune for us in a meagre way to adopt practical tests. These practical tests will determine the qualification of the applicant. They will determine the quality of the skill; they will protect the sick public from the incompetent practitioner. In eight of the states in this country, since 1908, practical examinations in a small way have been undertaken. Six other states have expressed the intention of conducting practical tests within the near future.

An ideal examination, one conducted with the funds that are placed at the disposal of the average medical board in this country, would in my opinion be somewhat as follows: a written discussion of the assigned topics in practice and therapeutics; a practical examination of minor surgery both on the cadaver and on the living subject; laboratory examinations in histology, pathology, bacteriology, and chemistry; clinical tests in diagnosis. To conduct such an examination we need members of medical boards appointed or elected for their special fitness in giving examinations, and funds should be made available for the employment of competent assistants. There is no trouble at all in getting patients for these examinations; I care not from what part of the country the examiners may come, the importance of securing patients for these examinations cannot be emphasized too much. There is not a poorhouse in this country where patients may not be had for a very small fee to appear for such a test, and there is not a state where examinations can be held that patients cannot be secured from hospitals for examination in either of these subjects, and for a very small fee.

Dr. Walter P. Bowers, Member of the Massachusetts State Board of Health: In Massachusetts we hold five examinations a year, namely, in March, May, July, September and November, each examination covering a period of three days, and each examination requiring answers to seven important subjects. Early in our history we became convinced that the ordinary written papers at examinations were an inadequate test of the qualifications of the applicant, and we have tried to adopt the method of practical examinations as early as possible. We were limited in our operations by certain things, and among them we had very few facilities for conducting practical examinations. Later we were offered the facilities of the medical schools of Boston. We have taken advantage of these schools, so that now we are giving one full day to practical examinations out of three days. The written examinations are held on the first and second day, and a part of these written examinations is restricted to subjects which may be properly answered in writing and the practical application of certain questions reserved until the third day, and on that day the examination covers a period of from 9 o'clock in the morning until late in the afternoon. The subjects taken up at that practical examination are embraced in clinical medicine and diagnosis; obstetrics by using the manikin and fetus; surgery on the cadaver, the use and application of splints, and the tying of ligatures, etc., together with a complete practical examination in anatomy.

Dr. James W. Holland, Philadelphia: The first thing for us to do is in some way to get such a change in our civil service regulations that an officer can be appointed with special aptitude and with a certain tenure of office, one which will enable him to devote all his energies, all his thought to the work in hand. I do not suppose there is any one here who would dispute for a moment that the best examiner, other things being equal, is an experienced teacher. The experienced teacher is also an experienced examiner, but it is either expressed or understood in every state in the Union that the examiner shall not be a teacher. In our state it is either understood or stated in the law. We have a new law, so I am not certain on that point, but it would raise a storm around the head of a governor who would dare to appoint on the board of examiners a teacher in a medical school. The consequence is that, unless our examiners be made up of men who are reliable, as they should be, we fall short of perfection. They cannot have had the experience that medical teachers have had.

With reference to securing patients, we cannot always obtain the consent of the physician or the surgeon of the hospital to take his patients away from him to another place and have them examined and have his diagnoses commented on by other persons. So here we have another difficulty to contend with. It is only in a large city where many hospitals are situated that physicians and surgeons of great expertness can bring their patients of all sorts for examination purposes.

Dr. F. F. Wesbrook, Minneapolis: This method which has been worked out by Mr. Hallett is very admirable, and while it looks out of reach for us at the present time, it is no more out of reach than the betterment of our medical colleges was five or ten years ago. We are already engaged in the betterment of our teaching mechanism, and in spite of the tremendous initial handicaps, this has been very considerably benefited, so that four of the best medical schools in the United States need not make any apology in view of the situation when we compare them with other medical colleges of the world. But I believe that having taken such pains, as the best institutions have done, to prepare students for the practice of medicine, we ought by some means or other take great pains in determining whether a student is really fit to practice medicine or not. As to practical examinations, the board in our state can get patients from the county hospital or from the dispensary. There is no trouble in getting them. The difficulties I have heard mentioned in this country are not insuperable. The only thing is to go at the matter rightly. The first thing is to get money, and this must come from the students or candidates, or from the state in the form of an appropriation.

Dr. John A. Witherspoon, Nashville, Tenn.: I agree with Dr. Wesbrook, that we will reach some day the standard of practical examinations as carried out in England. We owe a debt of gratitude to Mr. Hallett for the very fine address he has given us and for the practical enforcement of what seems to be a practical examination to which this country not only aspires but I trust will soon reach.

Mr. F. G. Hallett: We did not develop this system of examination in five years or in ten years, and I do not suppose you will reach our standard in this country in a very short time, but that you can reach it, if you want to do so, I have not the slightest doubt whatever, and probably you will evolve a much better examination than we have done. A point of great importance will be the education of public opinion so as to get the state boards in sympathy with medical education.

CONFERENCE ON MEDICAL LEGISLATION AND PUBLIC HEALTH

The Conference on Medical Legislation and Public Health was held at the Congress Hotel, February 27, with Dr. Henry B. Favill, Chicago, in the chair. After introductory remarks by the chairman regarding the scope and work of the conference, the secretary, Dr. Frederick R. Green, presented his report.

Report of Secretary

The Council on Health and Public Instruction, at its annual meeting in October, adopted a program of activity for the coming year, embracing four fundamental lines of work which it was felt could be developed and made the foundation of the work of the future. These were: 1. The further development and extension of the press bureau. 2. The organization of a speakers' bureau for the purpose of supplying speakers for public meetings on health topics to be held under the auspices of county or state medical societies, women's clubs, local public health leagues, teachers' institutes, farmers' institutes, normal schools, college, university and high school faculties, etc. 3. The compilation and publication of a hand-book for speakers containing the essential facts and figures for a successful public health propaganda. 4. The formulation of a platform setting forth the principles of the Association and what it stands for in public health matters.

Probably the most important feature of the council program is the drafting of a platform setting forth the plans and purposes of the Association, and especially its relation to the public. In the sixty years of the existence of the Association this has never been done. A clear and official statement will be of the greatest value before the public. This matter has been under careful consideration for several months past, and it is hoped to present a definite report at the Atlantic City session.

Resolutions Offered

The chairman then appointed the Committee on Resolutions, consisting of the following members: Drs. B. M. Caples, Waukesha, Wis.; E. J. McKnight, Hartford, Conn.; J. F. Percy, Galesburg, Ill.; S. J. Crumbine, Topeka, Kan.; Colonel M. W. Ireland, U. S. A.; E. S. Kelley, New Orleans, and the Secretary, *ex officio*.

Dr. Antonio H. Moline-de-St.-Remy, Porto Rico, offered a resolution calling for a model bill for state examining boards.

Dr. William C. Woodward, Washington, D. C., moved as an amendment that the trustees of the American Medical Association be requested to make such appropriation as may be necessary. The resolution and amendment were referred to the Committee on Resolutions.

Dr. J. N. McCormack, Bowling Green, Ky., offered the following resolution, which was unanimously adopted:

> *Resolved*, That the Council and Board of Trustees and other activities of the Association be urged now to make such provision as may be necessary to further the work of national legislation at Washington and carry out the resolutions adopted at the Los Angeles session of the American Medical Association; and that provision be made for the necessary traveling expenses and other expenses of persons who may be selected to aid in furthering this work.

Dr. William C. Woodward moved that the Council be requested to prepare a model bill for the prevention of ophthalmia neonatorum. Referred to the Committee on Resolutions.

Dr. E. J. Goodwin, St. Louis, moved that the conference appoint a committee to bring up to date vaccination and small-pox statistics. Referred to the Committee on Resolutions.

Dr. B. R. McClellan, Xenia, O., offered a resolution calling for a Committee on Vital Statistics Legislation. It was referred to the Committee on Resolutions.

Present Status of Vital Statistics in the United States

Dr. Cressy L. Wilbur, Washington, D. C.: The chief need for work at the present time in the North is in the states of Illinois and Iowa. In the South active work is being done for registration. Texas and Louisiana are doing good work. Missouri, Kentucky, Virginia and North Carolina are doing excellent work along the line of registration, and we believe the time is not far distant when we will have complete registration of vital statistics in all states.

The Essentials of State Legislation on Foods and Drugs

Mr. E. F. Ladd, State Commissioner of Foods and Drugs, Fargo, N. D.: Some of the things which I would consider as essentials in food and drug laws may be enumerated and discussed under various heads, as follows: 1. The law should exclude all harmful and deleterious ingredients. It should enumerate in the body of the statute itself those products which should be excluded, as far as known, when the law is enacted, and provide for the further exclusion of injurious products of like character. In such an act I would exclude boric acid, salicylic acid, benzoic acid, sulphurous acid, hydrofluoric acid, and all salts and antiseptic compounds derived therefrom, formaldehyd, fluo-borates, fluo-silicates, or other fluorin compounds, dulcin, glucin, saccharin, caffein, betanaphthol, hydronaphthol, abrastol, asperol, cocain, oxids of nitrogen, compounds of copper or alum, nitrous acid or nitrites, pyroligneous acid, or other added ingredients deleterious to health.

2. Let the statute exclude all deceptive coloring of whatever character, including coal-tar dyes, the use of which is for purposes of deception, enabling the manufacturer to utilize material unfit for human consumption.

3. Let there be truthful labeling; let every label tell the truth and nothing but the truth. If there is a man who wants cocoanut and olive stones ground up for his pepper, let him

have it, but let the label clearly and truthfully state that such is its composition.

4. All false claims and advertising matter should be regarded as an essential part of the description and should be amenable to the law. Any false statements or claims either with regard to the composition, properties or uses of the products should be prohibited either in the act providing for food laws, or in those providing for drugs, patent medicines, or proprietary products.

5. Every article should be so labeled as to show the true net weight, measure or numerical count, whether a food, beverage, drug or medicine. Reasonable variations should be permitted and tolerances therefore provided.

6. The food law should not exclude from use any wholesome article of food, so long as it be sold under a truthful label.

7. No preparation should be permitted to be put on the market which contains cocain or derivatives of this product or wood alcohol, which products are intended to be used either internally or externally. The use of cocain should be restricted as much as possible.

8. The presence of all habit-forming or deleterious ingredients should be distinctly shown on the label and the amount thereof per ounce, or dose, or tablet, as the case may be.

9. Provisions should be made in the act itself so that the commissioner or executive officers who have the enforcement of the law to look after, shall be completely removed from political influences. How can we expect that the law shall be enforced strictly by a commissioner who has been appointed because of his political influence and where the commissionership is used as a political football to further the interests of some aspirant to a higher position.

10. I would have all state food laws in harmony with the national law, as far as the same can be harmonized without lowering the efficiency and effective working of the state law.

One of the greatest evils of our day, in my judgment, is the number and kind of "patent medicines" found on the market. Many of these are without any real medicinal value whatever, and others so labeled as to be dangerous, or so falsely labeled as to make them frauds, pure and simple, the false claims made for them overshadowing any virtue which they may possess.

What is Railway Sanitation and How Can It Be Obtained?

Dr. Arthur M. Hume, Owosso, Mich.: Sanitation is defined as "the devising and applying of measures for preserving and promoting public health"; therefore, practical sanitation is not the exploiting of untried theories and opinions, but the adaptation of methods of proven value. Sanitary science has been created only through the life-time work of scores of men especially skilled along these lines. Legislators who have given no special thought to this subject cannot draft proper sanitary laws. In the absence of a national health department, sanitary laws should emanate from state boards of health, they being the highest legally constituted health authorities.

The greatest problems of railway sanitation are those arising from the transportation of passengers. In railway cars there should be pure air, of proper temperature, pure water to drink, pure food to eat, clean beds in which to sleep, and a proper disposition of excreta. To provide these requires all the executive ability of the operating management, the skill of the car builder, and the science of the sanitarian combined.

Railway companies are willing to comply with every reasonable sanitary law, but their efforts should be directed by a competent sanitarian, trained in railway work. A good railway sanitarian is one who knows what is required, and who has practical methods and means for obtaining it. There should be a uniformity of regulations in railway sanitation, especially as to construction and equipment of passenger cars, in order that once properly equipped and thus maintained, they may comply with the laws of all states in which they are operated. By conference and united action between public health officials, railway managers and sanitarians generally, a perfect working system of railway sanitation can be obtained.

DISCUSSION

Dr. T. R. Crowder, Superintendent of Sanitation, Pullman Car Company, Chicago: I would define railway sanitation as that department of public health which deals with and combats the dangers to life and health brought about by the existence of the railway and by its operation. Primarily, it concerns the safety of the traveler and of the railway personnel. The safety of the traveler depends largely on the health, the vigor and fitness of those charged with operation. It is conceivable, furthermore, that the operation of the railway may affect in no small degree the health of the people living in communities through which it passes. Infectious diseases must constitute the great central thought about which all our sanitary reasoning must be grouped. Dr. Hume has suggested those factors of the railway property which should be considered chiefly in their relation to infectious diseases, namely, railway sufficiency, railway care, and the railway right of way. I would add another consideration which is in my opinion of paramount importance, and that is the effect that the railway may have on the spread of epidemics by reason of the fact that it transports people and animals and freight through widely dispersed territories. The railway may be largely responsible for the rapid spread of such epidemics as we have had in past years, of influenza, for instance. The danger of infection of the passenger from the railway may rest on three facts: 1. The transmission may be brought about from person to person, and this is undoubtedly by far the most important means of transmission. 2. It may be brought about by the use of inadequate car facilities for comfort and convenience. 3. It may be brought about by the infected car, in which disease is transmitted from occupants at one time to future occupants of the car. We are coming more and more to believe in recent years that by far the greater part of the transmissible infectious diseases are transmitted directly from person to person, and that fomites play a minor part in this. We are coming to realize that people and not things are the agents of transmission as well as the sources of infection. We can control in great measure the spread of infectious diseases by excluding infected persons from amongst the travelers.

Dr. Samuel J. Crumbine, Topeka, Kan.: In railway sanitation it is a question of dealing with the people who travel as well as with the railroad companies in providing proper service and proper methods of cleanliness. I do not think it is up to state and local boards of health to determine who are sick and who shall not be permitted to travel. It would be impossible for local or state boards of health to do that. There should be certain rules for cleansing and disinfection of cars which would meet the situation in the best possible way. The matter of track pollution has been greatly exaggerated.

Dr. William A. Evans, Chicago: Dr. Crowder has called attention to the fact that persons rather than things are largely responsible for the spread of disease. This is unquestionably correct. His suggestion that in that way we can account for the epidemics that spread rapidly is a good one, since nothing travels over so much space as passengers, except air, and I think it has been demonstrated that air is not potent in conveying bacteria long distances. He has suggested that infected passengers can be carried by trains, and this applied to infected animals, and he could have added infected insects. Typhoid flies and mosquitoes infected with malaria and yellow fever are carried some distances from the points at which they originally gained access to the cars.

Dr. W. L. Estes, South Bethlehem, Pa.: There is one point which, without serious economic difficulty, railroads might attain to, and which would greatly conserve the public health, and which I tried to bring out ten years ago. After discussing the utility of the hospital cars, with regard to first aid, I suggested that hospital cars might solve the chief difficulty in regard to the transmission of diseases in transit. I tried to show not only from an economic standpoint, but from a practical point of view, that it was possible for each trunk line to maintain half a dozen hospital cars, according to the extent of the line, which would serve the purpose only to carry known cases of infection. In order to obtain data in regard to these cases, it would be necessary to have the statement of the family physician and the cooperation of health boards, and the plan must be national in its scope. If such an arrangement could be made with the railroads, it would be practicable in an economic way, and if sanitarians would insist on it, it would solve to a great extent the danger from many cases which railroads are obliged to transport and which we see, under our present laws, no possible way to avoid unless by some such arrangement as this.

Dr. H. B. Hemenway, Evanston, Ill.: With reference to track pollution, Major Ross in his book on "Prevention of Malaria" shows that the problem of controlling malaria has been reduced to a mathematical question. He shows the proportion of infected persons to the general population, a line of thought that most physicians have ignored. I think it can easily be demonstrated that the possibility of infection from the track or from the pollution of water-supplies is reduced to an infinitesimally small degree, so that it is something that might be ignored absolutely. The only practical way that the possibility of typhoid infection along the tracks can be carried to the people would be through the presence of the house-fly as a carrier of the germ from the track to the house. It has been my experience in inspecting tracks not to have found the house-fly on the excreta along the tracks. The flies that are found there are not house flies. They are not flies that carry infection to the food.

Dr. Dixon, Michigan: In my connection with the Michigan Board of Health I have found the railroad managers agreeable people. In every instance, when I have had occasion to refer the general manager of a railroad system to certain conditions which somebody had reported, the matter received prompt attention, and every specific case has been taken care of and remedied. What we need in Michigan is a sane law, and then, on the part of the railroad management, a supervisor of sanitation with whom we can deal directly.

Dr. J. N. McCormack: The Pullman Car Company has made and is making ample provision to do its part in connection with the public health problem. I have been much interested in the method of ventilation which Dr. Crowder has proposed. I believe it is in the right direction. He thinks it is all we need. I hope he is right, but sometimes, after sleeping in a Pullman car, I have had a doubt, and like the man from Missouri, I want to be shown. However, Dr. Crowder is doing a great work and he is entitled to the commendation of the people of this country. It is pioneer work and done in a scientific spirit and with the intention of getting results that will benefit mankind.

Dr. M. P. Ravenel, Madison, Wis.: In regard to Pullman car sanitation, I have seen men on Pullman cars spit in the dental lavatory, and then the next person, before using it, would take a face towel and wipe it out. Within three months I saw a man using the drinking glass or tumbler and wash his tooth brush in the tumbler. If that man were a typhoid carrier, a pneumonia carrier, or a carrier of tubercle bacilli, there is direct contact from man to man.

Dr. J. W. Cobb, U. S. P. H. and M.-H. S.: We must find out accurately if it is possible to infect a person in these cars, and yet, considering all the work that Dr. Kinyoun did with reference to car sanitation, he only found in a few instances tubercle bacilli in the air of the car. At present ways and means are being discussed in our bureau as to the best plan of making an intensive study of this question.

Dr. James A. Denny, Chicago: The only solution of this question must necessarily come from a universal practice adopted by the government, or by the health boards operated by the government. The laws, for instance, of Wisconsin, Illinois and Missouri on this subject are absolutely contradictory. The railroad is a common carrier, and as such, it must carry people who want to ride. If a railroad as a common carrier refuses to carry a person who is sick, that road becomes liable for damages.

Dr. H. B. Hemenway, Evanston, Ill., offered the following, which carried:

Resolved, That it be the sense of this conference that the Council appoint a committee on railway sanitation.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Journal of Medical Research, Boston

February, XXV, No. 3, pp. 409-514

1 *Metabolism of Hypophysectomized Dog. F. G. Benedict and J. Homans, Boston.
2 *Relative Local Influence of Coexisting Tuberculous Inflammation and Cancer in Lung. H. Oertel, New York.

1. **Metabolism of Hypophysectomized Dog.**—The general effects of hypophysectomy are summarized by the authors as follows: On the body weight: a tendency to retard the normal growth of the animal. Gain in weight is principally due to the deposition of fat. On body temperature: a tendency to slightly lowered body temperature, which may result ultimately in a disturbance of the heat regulation sufficiently profound to produce a very marked drop in body temperature immediately prior to death. On pulse: a marked fall in pulse-rate occurring a few days after operation and remaining at essentially the same level throughout the life of the animal. On respiration: a fall in the respiration-rate approximately parallel and similar to that of the pulse-rate. On total metabolism; a marked fall after operation of the total metabolism as measured by the carbon dioxid production. The fall in carbon dioxid production per kilogram of body weight per hour is still more noticeable owing to the deposition of inert body fat. On development and general appearance: the growth of young animals is checked and their infantile characteristics are preserved. The sexual activity, if not already developed, never develops. If nearly or quite established, it is profoundly affected. The tendency to the deposition of an excessive amount of body fat is sometimes accompanied by thickening of the skin and falling of the hair analogous to changes noticed after thyroidectomy. The change in appearance of older animals surviving a nearly complete removal of the hypophysis is hardly noticeable.

2. **Tuberculous Inflammation and Cancer.**—Oertel states that neither tuberculosis nor cancer seem to possess specific antagonistic qualities, but that the results of such combinations depend on the conditions of individual cases. Thus it appears probable that an actively malignant, rapidly growing cancer may overcome the resistance imposed on it by an approaching or even freshly implanted tuberculosis inflammation. On the other hand, an actively progressing, virulent tuberculous infection may overgrow an approaching or superadded cancer, particularly if the cancer, like the one observed by Oertel (scirrhus) or by Clement (cylindrical cell carcinoma), is not of the irregular cellular, rapidly proliferating type. Finally, both lesions may coexist and intergrow without any marked influence on one another; they may be equally balanced in power or grow in symbiosis, unless by caseation the tuberculous infection removes the necessary conditions for any growth.

In the light of present knowledge it is not possible to determine whether specific factors enter into this relation; one would have to consider in this connection on the one hand the virulence of tubercle bacilli and toxins with associated productive or exudative inflammations, on the other hand phagocytic or other properties of the cancer cells. The tuberculous inflammation does not differ in its effects from that of other inflammations on cancer. Any inflammation may either overgrow the tumor and thereby tend to check cancerous infiltration, or it may become invaded by cancer or frequently coexist in "symbiosis" or unknown relation.

Any inflammation may even by the production of necrosis impede the cancer progress. Undoubtedly similar reasons for the various outcomes of these combinations prevail in simple or specific inflammations. They may explain therapeutic effect and defect of such means of treatment in malignant tumors. Oertel considers that these variable factors may be of considerable importance in the development and progress of cancerous disease which originates on the basis of inflammatory processes. For this reason, he says, the local relation of inflammatory processes and malignant growths deserves renewed observation and consideration along the lines which have been outlined above.

Journal of Arkansas Medical Society, Little Rock

January, VIII, No. 8, pp. 217-240

3 *Rheumatism and Infection of Joints. M. G. Thompson, Hot Springs.
4 Cerebral Concussion. J. B. Wharton, El Dorado.
5 Extra-Uterine Pregnancy. J. A. Foltz, Fort Smith.

3. Abstracted in The Journal, July 8, 1911, p. 157.

Virginia Medical Semi-Monthly, Richmond

February 23, XVI, No. 22, pp. 549-572

6 Necessity for Milk and Meat Inspection. L. A. Klein, Philadelphia.
7 Basilar Headaches and Neurasthenia of Ocular Origin Not Usually Recognized. O. Wilkinson, Washington, D. C.
8 Why Do We Get Our Cancer Cases Late? E. B. Claybrook, Cumberland, Md.
9 Random Therapeutic Notes on Iodin and Iodids. J. A. Burnett, Marble City, Okla.

Yale Medical Journal, New Haven, Conn.

January, XVIII, No. 5, pp. 205-248

10 Gall-Bladder Infection. C. H. Brown, Waterbury, Conn.
11 *Transfusion for Typhoid Hemorrhage. L. S. Booth, New Haven, Conn.
12 *Present Status of Transfusion of Blood. W. E. Hartshorn, New Haven, Conn.

11. **Transfusion for Typhoid Hemorrhage.**—Booth's patient had a typical and serious attack of typhoid, resulting in two severe hemorrhages on the twenty-fourth day of the disease. The reaction of the patient to the acute hemorrhage was perfectly typical, with a subnormal temperature, a scarcely palpable pulse of high rate, cold, clammy sweats and intense thirst. The use of ordinary therapeutic measures such as hypodermoclysis, injections of rabbit and human serum, and the administration of calcium lactate were without any marked effect on the progress of the case, although just how much benefit the patient derived from them, of course, cannot be definitely determined. But with the patient *in extremis* direct transfusion was done with a related blood and a really remarkable effect on the vital signs of the patient resulted. The temperature rose to normal, the pulse improved in quality, and dropped to the approximate level established before the hemorrhages occurred. The transfusion had no effect on the course of the typhoid, as is shown by the recurrence of the temperature three days after the transfusion, and a continuation of the lysis which was already inaugurated before the hemorrhages occurred. What the transfusion did was to restore the ground lost by the patient from the acute depletion of the cardio-vascular system. The donor had never had typhoid, and the results in this case suggest to Booth the interesting speculation of the possible good to be obtained from the use of a donor who had previously been immunized to the disease.

12. **Transfusion of Blood.**—In Hartshorn's opinion the Elsberg cannula represents to the average surgeon the method of transfusion best adapted to his needs. Transfusion by means of vein-to-vein anastomosis presents far less difficulty than that of vein to artery and accomplishes equally good results. Hemorrhage represents the one satisfactory application for the transfusion of blood. A thorough laboratory experience is essential in order to secure a competent technic.

American Journal of Urology, New York

February, VIII, No. 2, pp. 59-114

13 Prostatectomy and Its Indications in Prostatic Hypertrophy. T. Rovsing, Copenhagen.
14 Ureteral Catheterization as Therapeutic Measure. H. Lilienthal, New York.
15 Two Cases of Pneumoscrotum Following Nephrotomy. E. L. Keyes, New York.
16 Echinococcus Cyst of Kidney. W. E. Leighton and B. Lewis, St. Louis.
17 Nephrectomy in Bilateral Pyelonephritis; Recovery. M. Krotoszyner, San Francisco.
18 Vesical Calculus with Multiple Recurrences. A. Hyman, New York.

New York State Journal of Medicine, New York

February, XII, No. 2, pp. 55-104

19 Science and Art of Surgery as Applied in Treatment of Fracture of Neck of Femur. R. Whitman, New York.
20 Indispensableness of Animal Experimentation and Immorality and Cruelty of Antivivisection. W. J. Robinson, New York.
21 Health Officer and Laboratory in Relation to Public Sanitation. C. Stover, Amsterdam, N. Y.
22 Relations of Health Officer to Medical Profession and to Public. F. Overton, Patchogue, N. Y.
23 Cesarean Operation. J. W. Poucher, Poughkeespie.
24 Lactic Cultures; Some Clinical Observations. E. I. Harrington, Yonkers.
25 Value of Urinary Examination in Infants. F. Van Bogert, Schenectady.
26 Importance of Early Operation in Acute Mastoiditis. L. A. McClelland, Brooklyn.
27 Some Facts Concerning Faucial Tonsils and Their Complete Removal. J. F. McCaw, Watertown.
28 *Pelvic Surgery in Relation to Periodic Headaches and Neuralgia. H. P. Groesbeck, Schenectady.
29 *Precaution to Be Taken in Making Benzidin Test for Occult Blood in Test-Meal. S. Florsheim, New York.
30 Typhoid State. W. N. MacArtney, Fort Covington.
31 Huntington's Chorea. L. C. Lewis, Belmont.

28. **Periodic Headaches.**—Groesbeck believes that removal of both ovaries in case of menstrual headache should be done as a last resort after all other attempts at cure have failed and in cases in which cessation of menstruation is preferable to the terrible monthly suffering of neuralgia or hemicrania.

29. **Precaution in Benzidin Test for Occult Blood in Test Meal.**—Over 150 tests were made in Floersheim's laboratory with different collections of prunes taken either from patients' stomachs or from the cupboard. In every instance a positive test for blood was obtained in the benzidin solution. Likewise every test proved negative to aloin and guaiac. Immediately on floating the ethereal extract of the prunes (prepared exactly as from a test meal) on the ozonized benzidin solution, a cloudy field having a distinct greenish tinge was produced. The reaction in many of the tests would become marked within ten minutes; in other cases the distinct dark green reaction was obtained as early as half a minute, while in still other experiments the reaction was delayed upward of four hours. The different specimens of prunes gave quite different time reactions, but in every case and laboratory experiment a positive blood test was obtained. Floersheim suggests that it would seem that the prune contains a substance which reacts to benzidin; hence the precaution that should be taken.

Journal of Tennessee State Medical Association, Nashville

February, IV, No. 10, pp. 391-430

32 Cesarean Section for Puerperal Eclampsia; Report of Three Successful Cases with Three Living Children. W. D. Haggard, Nashville.
33 Pellagra; Report of Case. K. S. Howlett, Franklin.
34 Chronic Pelvic Inflammation. H. M. Tigert, Nashville.
35 Calcium Sulphid. M. A. Blanton, Baileyton.
36 Dystocia. S. S. Duggan, Eagleville.
37 Modern Tonsil Surgery. W. Dotson, Gallatin.
38 Present Status of Roentgen-Ray in General Diagnosis and Treatment. H. Padgett, Nashville.
39 Pneumothorax. J. Clifton, Hickory Valley.
40 Relationship of Food to Disease. E. A. Timmons, Columbia.

Ophthalmic Record, Chicago

February, XXI, No. 2, pp. 57-111

41 Small Round-Cell Myosarcoma of Orbit with Extension Into Eyeball. W. C. Posey, Philadelphia.
42 *Unusual Case of Steel Injury. F. Allport, Chicago.
43 Keratoconus; Report of Case. C. W. Le Fever, Philadelphia.
44 Variation in Axis of Astigmatism in Distant and Near Vision. F. C. Todd, Minneapolis.

42. **Steel Injury of Eye.**—Two years ago a boy, aged 17, was hit in the right eye by a piece of steel which perforated the cornea and lens, but did not remain in the eye. A cataract was produced which gradually absorbed, leaving him with a vision of 20/720 with correction. Nov. 27, 1911, while striking two hammers together he was again struck, this time in the left eye, by a piece of flying steel, which perforated the upper eyelid, cornea, iris and lens. Allport approached the giant magnet to the eye but obtained no response. He then opened the sclera, between the external and inferior recti muscles and used the magnet freely, but with no result. The conjunctiva was sutured. There was no reaction, but desiring to keep him quiet for a few days, a Roentgen-ray picture was not taken until December 3. It showed the steel was located almost exactly in the center of the field and between 24 mm. and 25 mm. from the surface of the cornea. A normal eye being about 24½ mm. long it was hard to know whether the steel was in the sclera or back of it. It seemed as if the steel was in the socket. About this time the eye, which had

previously looked remarkably well, began to show unmistakable evidences of trouble. The tension rapidly diminished, pain on pressure developed and the ciliary injection became more and more marked. December 11, Allport determined to search the socket for the steel, and therefore freely incised the conjunctiva over the external rectus, and after passing a suture through it (in order to be able to re-attach it to the eyeball if found desirable), cut it off and thoroughly explored the socket with the magnet and carefully and effectively inserted between the conjunctiva, capsule, etc., and the sclera of the eyeball. No reaction was obtained, but the eyeball was found to be much softer than had been supposed.

Allport then determined to make a last search for the steel in the eyeball and therefore opened the sclera in its extreme posterior portion, and used the magnet in the opening, with no result. He sutured the opening to prevent collapse of the eyeball during enucleation, and then removed the eyeball. The steel had passed completely through the eyeball and was found in a small mass of exudate which was attached to the eyeball. The eyeball was opened and a beginning purulent ophthalmitis was found at the ciliary region. A red exudate mass was found at about the macula, where the steel had perforated the posterior portion of the eyeball. The case is interesting as showing the strange fatality of a steel injury in both eyes. It is also interesting as showing the difficulty of locating steel, even by skilful radiographs, accurate measurements and "moving" pictures. It also demonstrates how little damage may be expected from a perfectly executed scleral opening.

Medical Record, New York

February 24, LXXXI, No. 8, pp. 351-400

45 Heart in Syphilis. H. Brooks, New York.
46 Quantitative Estimation of Trypsin and Amylase in Feces and in Duodenal Contents. G. A. Friedmau, New York.
47 Colon Bacillus Infection of Urinary Tract. R. M. Rawis, New York.
48 Epithelia Found in Urine, and Their Differentiation, as Aid to Correct Diagnosis. A. T. Gaillard, Philadelphia.
49 Use of Definite Temperature in Treating Disease and Destruction of Gonococci. J. A. Fulton, Astoria, Ore.
50 Bacterin Treatment in Pulmonary Tuberculosis. G. Sanders, New York.
51 Small, Quickly Made Sterilizer. D. H. Stewart, New York.

March 2, LXXXI, No. 2156, pp. 401-450

52 Failure of Colon to Rotate. C. H. Mayo, Rochester, Minn.
53 New York Quarantine. T. M. Prudden, New York.
54 *Case of Fulminating General Paralysis. A. S. Leverty, New York.
56 Overcrowding and Defective Housing in Country Districts. H. B. Bashmore, West Fairview, Pa.
57 Perforation of Cecum by Enterolith; Fracture Dislocation of Cuboid. F. R. McCreery, New York.
58 Orchitis with Unusual Features. L. B. Bangs, New York.

54. **Fulminating General Paralysis.**—The case which Leverty reports presents three interesting features: First, the extragenital seat of the initial lesion. Second, the rapid and furious course of the disease. Third, the report of the findings of the autopsy as the disease was in a relatively early stage. Male, age 45, finger infected in 1900, syphilitic monoplegia in 1909, cured. First symptoms of paresis January, 1911; death from paresis three months later. Autopsy, characteristic findings of paresis. The patient was in good health up to the time of his infection in March, 1900, eleven years ago. The chancre appeared on the index finger of the right hand and was the result of a libidinous manipulation of the genitals of an infected woman.

At first he thought it was a "runaround" and treated it with bread poultices and did not consult a physician until secondary symptoms appeared. He was treated for eighteen months, after which time he discontinued treatment. Contrary to the advice of his physician he married one year after his infection. His first child died of meningitis at less than a year. The patient was of a nervous temperament. His habits had been industrious and at times he had worked very hard, but used no alcohol or tobacco in excess.

In 1906 he complained of being nervous and irritable, of pains in his head, and of inability to apply himself to his work. This condition lasted for a month, when he apparently got well. Three years later, in 1909, he was suddenly attacked with weakness and paralysis of the right arm. With strenuous antiluetic treatment he regained the use of his arm in five weeks. He remained well and attended to his business until the latter part of January, 1911, when he began to express an exaggerated sense of well being.

The somatic symptoms were Argyll-Robertson pupils, tremors of the face, tongue and hands, changes in the deep reflexes, defects of speech and of handwriting. Ten days later he became incoherent, maniacal, and furious and was sent to a sanatorium (February, 1911). The delirious mania continued until his death in April, 1911, less than four months after the onset.

Kentucky Medical Journal, Bowling Green

February 15, X, No. 4, pp. 149-182

59 Treatment of Fractures of Long Bones. G. P. Grigsby, Louisville.
60 Use and Abuse of Strychnin. W. E. Reynolds, Hopkinsville.
61 Cretinism; Report of Case. G. C. Rankin, Walton.
62 Pneumonia. J. P. Wells, Meek.
63 Sepsis and Antisepsis. J. F. Daugherty, Demossville.
64 Needs for Our Kentucky Asylums for Insane. R. W. Wood, Lexington.
65 Pain and Its Significance. A. M. Hayden, Evansville, Ind.

Boston Medical and Surgical Journal

February 22, CLXVI, No. 8, pp. 275-314

66 *End Results of Surgery in Neurasthenics and on Neurasthenia. E. Reynolds, Boston.
67 *Class Method in Home Treatment of Tuberculosis and What It Has Accomplished. J. H. Pratt, Boston.
68 Primary Tumors of Spleen. G. McConnell, Philadelphia.
69 Urinary Infection. B. Tenny and H. M. Chase, Boston.

February 29, CLXVI, No. 9, pp. 153-358

70 Clinician, Hospital and Medical School. D. L. Edsall, St. Louis.
71 Conclusive Tendencies During and After Encephalitis in Children. W. P. Lucas and E. E. Southard, Boston.
72 Self-Retaining Air-Tight Face-Piece for Nitrous Oxid-Oxygen Anesthesia. W. M. Boothby, Boston.
73 Case of Thrombosis of Left Posterior Inferior Cerebellar Artery. J. W. Courtney, Boston.

66. **Surgery in Neurasthenics and Neurasthenia.**—Reynolds maintains that if after cross-examination of the patient and the family practitioner it becomes evident that the nervous breakdown has preceded the development of the local symptomatology, it may generally be concluded with certainty that that symptomatology is merely a neurasthenic exaggeration of an unimportant difficulty, and in such cases even the existence of a perceptible, but not lethal lesion is rarely an indication for operation. When, on the other hand, the local suffering has appeared first and the progress of the neurasthenia has followed the increasing development of the localized symptomatology, the burden of proof is on him who asserts that the fatigue neurosis is of merely general origin.

Again, the persistence of a symptom unchanged throughout a series of years, and more especially throughout the time which precedes and attends the development of a neurasthenia, is in neurasthenics of much more importance than the degree of complaint that it excites. Evanescent and varying symptoms of great intensity are the characteristics of neurasthenia, but steady reiteration year by year of one unvarying discomfort is indicative of a real lesion, and should this lesion be of such a nature as is capable of producing chronic fatigue or auto-intoxication, it may sometimes be of far more importance towards the production of a neurasthenia than would be judged by the amount of pain or discomfort which it excites. The importance which should be attributed to a chronic auto-intoxication especially is one of the points which has until recently been underestimated.

In determining for or against an operation the patient's vital condition and past history should be estimated as a whole, of which the local condition is only one part. It is only on this basis that a wise decision can be expected. In gynecological work on neurasthenics Reynolds says it is an undoubted general principle that prolonged minor treatment is to be avoided. Even in those instances in which it is locally successful, it is almost certain to be generally deleterious. The removal of lesions by radical extirpation of the organs in which they are situated carries with it a degree of incidental nervous shock and after-consequences which renders them inadmissible in the treatment of neurasthenia, with one exception. When the victim of a neurasthenia of presumably pelvic origin is already past or near the menopause, and when the irritating lesion is one which interferes with the physio logic regression of the organs the radical operations are sometimes justified, since in these cases they are aiding and not opposing the natural tendencies. Even in these cases, however, the conservative operations are to be preferred, whenever they are surgically correct and feasible. For youthful neurasthenics the radical operations should be ruled out of contemplation.

The gynecologist must not forget that neurasthenia is frequently due to lesions situated in other portions of the body. When, for instance, the neurasthenia is attended by a constitutional condition which suggests auto-intoxication, the gynecologist should not attempt to relieve it by operations directed to the relief of merely mechanical conditions in the pelvis, even though they may be provoking symptomatology. In such cases no operation should be undertaken until careful physical examination of the woman as a whole, if necessary with the aid of other specialists, has shown that there is no focus of auto-intoxication in the more distant organs (the ear, the tonsils or the digestive system). When a careful study of the history has convinced the gynecologist that a given attack of neurasthenia is the result of an overload due to localized suffering; when his physical examination has revealed a lesion capable of producing that symptomatology, and which is susceptible of prompt, complete and permanent cure by a conservative operation, he is warranted in believing that the performance of that operation will result in a lessening of the overload, will, in short, be followed by an improvement in general health that will restore the neurasthenic to that degree of health which she is fundamentally capable of.

67. **Home Treatment of Tuberculosis.**—Consumptives living at home, but kept at rest out of doors, Pratt says will recover in the majority of instances if the disease is not hopelessly advanced when the treatment is begun. A tuberculosis class with its members well fed following the rest treatment and provided with facilities for leading the out-of-door life in comfort will obtain results equal to those of the sanatoriums. The class method has been tried in cold climates and in warm, in favorable climates and unfavorable ones, in congested sections of large cities and in country districts. Under these varying conditions success has been achieved where the patients have been kept at rest, where the supervision has been adequate and where strict obedience has been enforced.

Journal of Kansas Medical Society, Kansas City

February, XII, No. 2, pp. 41-80

74 Physiologic Chemistry of Psychic Emotions. J. M. Winegar, Hamilton.
75 Cancer; Lack of Early Diagnosis and Disasters Caused by Improper Treatment. R. M. Bennett, Mound Valley.
76 Perineum, Function, Impairment of Function Due to Laceration-Repair. H. H. Heylmun, Hutchinson.
77 Symptoms and Frequency of Chronic Appendicitis and Gall-Bladder Disease, Diagnosed Stomach Trouble. J. R. Newman, Fort Scott.
78 Cholera Infantum. M. J. Tanquary, Independence.
79 The Poor School for the Poor Boy; Is It Necessary? F. A. Carmichael, Goodland.

Surgery, Gynecology and Obstetrics, Chicago

February, XIV, No. 2, pp. 115-214

80 *Cancer of Stomach; Its Surgical Cure. W. J. Mayo, Rochester, Minn.
81 Study of Effect of Constriction by Momburg's Tube on Blood-Pressure, Pulse-Rate, Respiration and Temperature. F. L. Adair, Minneapolis.
82 *Conservation of Sound Ovaries and Tubes in Hysterectomies Near Menopause, Except in Malignant Disease. R. L. Dickinson, Brooklyn.
83 Early Diagnosis of Intermittent Hydronephrosis. O. S. Fowler, Denver.
84 Elasticity of Cranium. A. McLean, Detroit.
85 Diagnostic Value of Shadowgraph Catheter. L. E. Schmidt and H. L. Kretschmer, Chicago.
86 *Carbuncle of Upper Lip. W. O. Bullock, Lexington, Ky.
87 Lane Operation for Chronic Constipation. G. T. Vaughan, Washington, D. C.
88 Atrophic Arthritis. A. R. Shands, Washington, D. C.
89 Pubiotomy in Face Presentation. A. H. Morse, Baltimore.
90 Subphrenic Abscess Complicating Appendicitis. J. Douglas, New York.
91 Prevention and Treatment of Ventral Hernia. E. S. Judd, Rochester, Minn.
92 *Method of Dealing with Sac in Large Inguinal Hernias. H. Fischer, New York.
93 Excision of Whole Shaft of Tibia; Replaced by Transplanting Fibula. G. Torrance, Birmingham, Ala.
94 Non-Descent of Testis and Its Rational Replacement. R. H. Fowler, Brooklyn.
95 *New Method of Circumcision. E. G. Edwards, La Junta, Colo.
96 Modified McBurney Incision. R. H. Fowler, Brooklyn.
97 *Improved Method of Fixation of Colon. F. G. Connell, Oshkosh, Wis.
98 New Axis Traction Handle. J. W. Farrior, Philadelphia.
99 Nitrous Oxid and Oxygen Anesthesia and New Apparatus. F. J. Cotton and W. M. Boothby, Boston.
100 Phlebectasis. G. S. Foster, Manchester, N. H.
101 *Trifles in Surgery Concerning Method in Skin Suture. W. Bartlett, St. Louis.

80. **Cancer of Stomach.**—In the 863 operations for gastric cancer the Mayos were able to do the radical operation in 307, the remainder being gastrojejunostomies or gastrostomies, for palliation, or explorations. The explorations did no good; occasionally they were harmful. Of the 303 explorations, in which hopeless disease was found, six patients died in the hospital. These deaths were not usually immediate, but the patients, lingering along a few weeks, were never able to return home.

82. Abstracted in The Journal, July 1, 1911, p. 160.

86. **Carbuncle of Upper Lip.**—Believing that, in many instances, sinus thrombosis and its sequelæ can be avoided, Bullock undertook to ascertain from a collection of recent cases the actual mortality and the proportion of fatal cases due to sinus thrombosis. Six out of twenty-six cases terminated fatally. While operating on a patient ligation and division of the facial veins was carried out by Bullock as a preventive measure against this complication. Conditions were ripe for the occurrence of cavernous sinus thrombosis; the facial veins were ligated and divided and thrombosis did not occur; and further, although the lip condition required a second incision, an orbital infection improved rapidly and without interruption. In three of the six fatal cases mentioned, there were symptoms of sinus thrombosis, accounting for a mortality of 11 per cent., nor does this include one patient, dying from cerebral abscess, nor one case in which the cause of death was not stated. The figures given, Bullock believes, are sufficient justification of any attempt to improve their results, and his paper was written to advocate the ligation and division or excision of the facial veins in all cases of carbuncle of the upper lip which do not at once clear up after the usual surgical treatment has been instituted, and in all neglected cases in which the orbital tissues show signs of infection. In some far advanced cases it may even be advisable to ligate the superior ophthalmic vein.

92. **Dealing With Sac in Large Inguinal Hernias.**—In the ordinary operation for hernia the sac is separated from the cord by blunt dissection, working at the outside of the sac with or without opening it. In large and old hernias with thickened and tightly adherent sac Fischer proceeds as follows: After cutting through the skin and having isolated the cord and the sac, the latter is primarily widely opened up to the inner ring. Its edges are secured by artery forceps. The contents of the sac are dealt with according to conditions found and then returned into the abdomen. Now an incision is made at the inner aspect of the sac close to the internal ring, transversely to its long axis, care being taken to cut only through the inner peritoneal covering. One can easily avoid the vessels and vas deferens which lie immediately below it, because they can be seen shining through this thin membrane. The peritoneal flap thus dissected off is secured with forceps and bluntly pushed off its underlying structures towards the abdominal cavity, which is very easily done, as the inflammatory changes in the sac here are the least. Now the opening at the neck of the sac is carefully sutured, taking care to go well beyond the internal ring. In order to do this it is necessary to retract the conjoined tendon well upward. After closing the opening the rest of the sac is peeled off from the cord, always working from within. After having removed the sac the anatomic relations of the cord are hardly disturbed. The space left after removal of the sac is obliterated by the approximation of the structures of the cord, which fall together by themselves; a special suture is not necessary.

95. **New Method of Circumcision.**—The operation devised by Edwards is done as follows: With two catch forceps grasp the foreskin anteriorly and posteriorly, drawing it well down. At this point, with the tissues on the stretch, pull down the skin still further with the forceps, being careful to grasp only the skin. Place the straight phimosis clamp at a slight angle

on the foreskin, having decided beforehand the amount necessary to be removed in order to expose the glans to the posterior third. The tissue to be removed is skin only. When the clamp is removed and the skin retracted there will be a circle of skin taken from the posterior third of the penis. Draw the edges of the cut surfaces together; stitch with subcutaneous or interrupted sutures; cut frenum if necessary. The result: The skin at this point, if squarely cut, and intimately approximated, will heal with but a faint line showing; this will be well back on the posterior portion of the penis and the foreskin will have all the smoothness of nature. The hemorrhage amounts to a few drops only. No anesthetic is required other than a few drops of cocain injected ahead of the clamp. Danger of infection is practically nil. The incision made at this point will not cause swelling of the tissues and it is much easier to keep dressings applied.

97. **Improved Method of Fixation of Colon.**—The method of separating the Jackson's membrane, and its formation into a cord that is attached to the colon or cecum is the same as previously described by Connell; but instead of its inclusion in the abdominal incision, he now passes it from a point within and behind, in the line of the dorsal insertion of the mesocolon, or the blending of the parietal and visceral peritoneum in an upward and forward direction between the muscle and fascia, in an extra peritoneal course, in a way similar to the intramural shortening of the round ligaments. In order to secure this result, curved forceps are inserted between the fascia and the muscle on the right side of the abdominal wound, and are passed laterally and dorsally in the abdominal wall, and made to present within the abdominal cavity by puncture of the parietal peritoneum at a point above and behind the origin of the artificial ligament from the bowel. The jaw of the forcep is opened and the free end of the ligament grasped and pulled through the abdominal wall, as the forcep is withdrawn; the end is then attached to the fascia. This procedure has been repeatedly carried out clinically and found practicable.

101. **Mattress Skin Suture.**—A continuous mattress skin suture has been devised by Bartlett. The needle is introduced a little to one side at the very end of the wound; is brought under the skin to a point directly opposite, and the proper tension maintained to permit an easy falling together of the raw edges. After the needle has gone through both lips of the wound, it is then reversed and carried back in the opposite direction, through both lips. This procedure is then repeated as often as necessary.

Lancet Clinic, Cincinnati

February 17, CVII, No. 7, pp. 177-202

102 Cases Illustrating Some of More Acute Forms of Mental Pathology Resulting from Alcoholism. C. G. Wholey, Pittsburgh.
103 Obstacles Which Tuberculosis Nurses Meet in Their Work. M. L. Empire, Cincinnati.

February 24, CVII, No. 8, pp. 203-228

104 Calculous Anuria. D. Loree, Ann Arbor, Mich.
105 *Relation of Renal Activity to Surgical Operations. E. O. Smith, Cincinnati.
106 Rational Treatment of Syphilis. E. D. Holland, Hot Springs, Ark.

105. Abstracted in The Journal, Nov. 4, 1911, p. 1557.

New York Medical Journal

February 24, XCV, No. 8, pp. 365-416

107 Relation of Intestinal Toxemia to Chronic Arthritis; Treatment. C. C. Suiter, Rochester, N. Y.
108 *Creative Surgery. R. Bellamy, New York.
109 Sarcoma of Inferior Maxilla; Report of Case. J. D. Whitall, Philadelphia.
110 Extradural Hemorrhage; Recovery After Trephining. B. T. Tilton, New York.
111 Vaccines in Tuberculosis. W. H. Watters, Boston.
112 Fibrous Tuberculosis of Peritoneum, Involving Omentum, Intestines and Uterus. C. L. Hall, Kansas City, Mo.
113 Anesthesia in Tonsil Enucleation. C. Garthwaite-Fisher, Flushing, N. Y.
114 Office Anesthesia for Small Surgery, Nitrous Oxid and Air, Self Administered. A. E. Guedel, Indianapolis.
115 Remarkable Resistance to Combined Ascaris and Hookworm Infestation. E. Echeverria, Limon, Costa Rica.

108. **Creative Surgery.**—Some days prior to the hatching of the chick, and certainly at that time, if one examines the membrane, a number of well-developed blood-vessels virtually forming a plexus can be observed in the inner or cell-bearing surface, while the outer side is glistening and apparently undisturbed with naturally its patency remaining, which allows a free interchange of gases. These cells Bellamy uses in his work. The wounded, destroyed, or partially destroyed portion being as nearly aseptic as possible, hemorrhage being controlled or infinitesimal hemorrhage being allowed, each piece of work of creative surgery being a law unto itself, the cells of the inner cellular substance covering the albumen of the egg are either detached, using a sterile spoon and specially designed forceps, or the strips of fresh cellular media are cut away and brought to, or near, the soil from which the new structures are to be produced before the cells are sown. The residue or partially evaporated saline water, procured from the ocean, is brought in contact with the place from whence the new growth is to spring. Sterile dressings and splints or gauze cushions, depending on the portion of the economy under consideration, are resorted to as required.

As the cells were preserved in salt water for a period of several days while carrying out some of the research, Bellamy says it is logical to believe that this might be done so that the cells might be used at all seasons.

In all cases, from time to time, new cells were introduced to facilitate the growth of structures or to hasten the growth of granulating surfaces; the growth of the different structures seemed to be in perfect harmony. The nerves were pronouncedly well developed, sensory motor as well as tactile corpuscles, as well as responsive to heat and cold. A number of clinical cases are cited to show the feasibility of this procedure.

Journal of Indiana State Medical Association, Fort Wayne

February, V, No. 2, pp. 59-110

116 Salvarsan in Sixty Cases. B. Erdman, Indianapolis.
117 Hyperthyroidism. T. M. Jones, Anderson.
118 *Infantile Paralysis, or Acute Anterior Poliomyelitis. W. D. Hoskins, Indianapolis.

118. Abstracted in The Journal, Oct. 21, 1911, p. 1391.

Delaware State Medical Journal, Wilmington

February, III, No. 3, pp. 1-28

119 Gastric and Duodenal Ulcers. E. S. Dwight, Smyrna.
120 Treatment of Ununited Fractures and of Delayed Union in Fractures by Injection of Blood. W. W. Babcock, Philadelphia.

Archives of Diagnosis, New York

January, V, No. 1, pp. 1-108

121 Acute and Chronic Pancreatitis. J. B. Deaver, Philadelphia.
122 *Bimanual Palpatory Percussion, Apparently a New Method in Physical Examination. H. Sewall, Denver.
123 *Significance of Lagging of Chest Wall as Sign of Intrathoracic Disease. F. M. Pottenger, Monrovia, Cal.
124 Non-Malignant Tumors of Colon. A. C. Wiener, Chicago.
125 Differential Diagnosis of Congenital Syphilis and Tuberculosis of Bones and Joints. C. G. Cumston, Boston.
126 Diverticulum of Esophagus with Development of Secondary Carcinoma in Sac; Report of Two Cases. H. Fischer, New York.
127 Gastrogenic Diarrhea. C. D. Aaron, Detroit.
128 Diagnosis of Thoracic Gland Tuberculosis During Childhood. L. C. Ager, Brooklyn.
129 Widal, Diazo and Russo Reactions—An Interdependence. B. G. R. Williams, Paris, Ill.
130 Case of Secondary Carcinoma of Lung. D. M. Hoyt, Philadelphia.
131 Diagnostic Value of Blood Cultures in Relation to Diseases of Ear. H. Hays, New York.
132 Two Cases of Perplexing Diagnosis. H. J. Boldt, New York.

122. **Bimanual Palpatory Percussion.**—The purport of this method is to differentiate the viscera by outlining their borders where they are more or less contiguous to the external surface of the body. The method has exactly the same scope and depends on the same physical laws as does that of the familiar auscultatory or stethoscopic percussion, but its convenience of application is said to be incomparably greater. When the trunk of the body is tapped with the finger, whatever organ lies beneath is set in vibration by the impact. This vibration radiates with a definite intensity throughout the homogeneous viscus, but is suddenly checked at the borders of the organ and is transmitted, if at all, greatly enfeebled to adjoining structures. For example, applying this principle in outlining a definite organ, as the heart. Having discovered by ordinary percussion the location of the abso-

lute heart dulness, the finger ends of the left hand, palm down, are gently laid on the middle of the area and, using the pulp of the middle finger of the right hand as a plessor, the chest wall is gently tapped along radii centering in the area covered by the fingers of the left hand. The percussion is begun well beyond the borders of the heart and gradually approaches the center. Just as soon as the percussing finger crosses the border of the lung which lies on the heart a sudden increase of vibration is felt in the palpating fingers of the left hand and one can mark the exact limit of absolute cardiac dulness on the radius which has been percussed. The complete outline of dulness is secured by similar percussions carried out along radii in all directions. The method is said to be especially useful in distinguishing two contiguous organs which give the same note to ordinary percussion as, for example, the left lobe of an enlarged liver and the spleen. The method is said to be of real assistance in the frequent contingencies under which ordinary percussion fails to resolve the physical problem. Thus, by it there is no difficulty in outlining the borders of an empyema when surrounded by a solid lung. No other method, on the whole, proves so satisfactory in confirming the percussion outline of the right border of the heart. The method in no way purports, as does ordinary percussion, to distinguish the physical consistency of the organ under examination. Collections of gas, fluids and solids are indistinguishable as such; only their outlines are determinable.

123. **Lagging of Chest Wall.**—After observing many cases of pulmonary involvement (especially tuberculosis), Pottenger has found that lagging is not confined to the apex of the lung, as has been so strongly emphasized, but that it shows itself over the entire side of the chest. The factor which suggests itself as being the most important is diminished motion of the diaphragm. Pottenger has observed this sign carefully in making several hundred chest examinations. Lagging, not only of the apex but of the entire side, is present as a sign of slight as well as extensive involvement of pulmonary tissue. It is present in early active tuberculosis of the apex where only a slight amount of tissue is involved. Lagging is present in many cases of chronic pulmonary inflammations where the active inflammation has subsided. In other cases of this kind, however, the respiratory motion seems to be fully regained. If there is a widespread chronic or quiescent pulmonary involvement in one lung and a slight active lesion in the other, very often the lagging will be greater on the side of the fresher lesion, even though the lesion be only a fraction of the other in extent. In some cases of this type, however, the disturbances in the diaphragm on the two sides seem to balance each other, making it practically impossible to determine whether or not the respiratory excursion is normal or decreased. Inflammations of the pleura, especially those of an acute nature, and particularly if situated at the base of the lung, produce the same general phenomenon of lagging as do intrapulmonary lesions.

Pennsylvania Medical Journal, Athens

February, XV, No. 5, pp. 339-422

133 *Treatment of Cardiac Arhythmia. G. W. Norris, Philadelphia.
134 Mycotic Aneurysm of Aortic Arch, with Presentation of Specimen. G. E. Holtzapple, York.
135 Pernicious Anemia. S. J. Repplier, Philadelphia.
136 *Case of Massive Pericardial Effusion. T. W. Kay, Scranton.
137 *Relation of Streptococci to Scarlet Fever with Active Immunization by Means of Streptococcic Bacterins. J. A. Kolmer, Philadelphia.
138 Preventable Blindness. W. W. Blair, Pittsburgh.
139 Blackboard Evil, Remedy; Copy-Book Evil, Remedy. J. N. Rhoads, Philadelphia.
140 Recognition and Treatment of Tumors of Pituitary Region. L. Litchfield, Pittsburgh.
141 Scarlet Red in Treatment of Wounds. J. Leedom, Philadelphia.

133, 136 and 137. Abstracted in THE JOURNAL, Oct. 21, 1911, pp. 1480 and 1481.

Vermont Medical Monthly, Burlington

February, XVIII, No. 2, pp. 27-52

142 Anterior Poliomyelitis. M. B. Hodskins, Palmer, Mass.
143 Injuries of Abdomen. E. J. Melville, St. Albans.
144 Deafness: Its Cause and Newest Treatment. H. E. Cook, New York.

Journal of Medical Association of Georgia, Augusta

February, I, No. 7, pp. 241-275

145 Treatment of Digestive Disturbances by Surgeon. R. P. Glenn, Columbus.
146 Cases Treated with Tuberculin. J. O. Baker, Savannah.
147 Rationale of All Treatment Applied to Pulmonary Tuberculosis. J. M. Anderson, Pinedale.
148 Some Diagnostic Points in Pellagra. G. M. Niles, Atlanta.
149 Potpourri. E. C. Cartledge, Atlanta.
150 Gas Gangrene. C. W. Roberts, Douglas.
151 Preventable Deafness. W. C. Lyle, Augusta.
152 Abscess of Liver. J. G. Tuten, Jesup.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 17, I, No. 2668, pp. 345-408

1 Correlation of Symptoms and Signs in Some Abdominal Diseases. B. G. A. Moynihan.
2 Compressed Air Illness and Experimental Research. L. E. Hill.
3 Artificial Respiration with Oxygen. L. Brunton.
4 Intrinsic Cancer of Larynx: Operation by Laryngo-Fissure: Lasting Cure in Eighty Per Cent. of Cases. S. Thomson.
5 *Peculiar Case of Esophageal Dilatation. P. S. Hichens.
6 Case of Angioma of Oropharynx. W. Sanderson.
7 *Early Excision of Boils. J. Cropper.
8 Value of Vital Blood Staining in Study of So-Called "Infective Granule." A. Balfour.

5. **Esophageal Dilatation.**—The diagnosis in Hichen's case seemed to be stricture of the esophagus at the cardiac orifice with subsequent dilatation. At the post-mortem examination the esophagus was found to the right of the spine, greatly dilated and obscurely sacculated in its whole length. The muscular walls were greatly thickened and also the mucous membrane, which, however, was quite smooth and not congested. The walls of the esophagus were considerably thicker than the walls of the stomach. To gain the stomach the esophagus crossed the spine at a right angle. The mucous membrane of the esophagus showed no sign of ulceration, new growth, or any stricture. The cardiac opening of the stomach admitted the middle finger of the hand. There was much débris of food in the esophagus, very little in the stomach. Fluid poured into the esophagus seemed to pass with difficulty into the stomach. The origin of this condition is doubtful.

7. **Early Excision of Boils.**—An ethyl chlorid spray, a sharp cataract (Graefe's) knife, and a pair of dissecting forceps are all that Cropper requires. The skin over and around the boil is well frozen. This renders it firm and easily cut, which is a great point. With the cataract knife held perpendicularly to the skin surface, a circular disk of the whole skin of the size of a wheat seed or small pea is removed by sawing movements. Where there is much inflammation the diameter of the piece removed may by one-fourth inch, but it need never be larger if tackled early. The pain caused by this procedure is said to be trifling, even when carried out on the tender inner part of the leg, and the bleeding is insignificant, and should be encouraged by warm bathing. The subsequent treatment by any form of antiseptic dressing seems to be of quite minor importance. It can be fixed by strapping. There is usually a little suppuration, but, from the moment of the operation, the throbbing and intense soreness are at an end. The resulting scar, which is minute, is far less than the unsightly lumps so often left after ordinary treatment by poulticing, etc. Moreover, the danger of a secondary infection by the pus is reduced to a minimum. Where this method has been carried out properly complete success has resulted.

Lancet, London

February 17, I, No. 4616, pp. 413-482

9 Experimental Poliomyelitis. F. E. Batten.
10 *Some Forms of Hemorrhage which Are Difficult of Explanation. W. H. White.
11 *Malignant Disease of Testicle and Treatment of It by Radical Operation. H. M. Davies.
12 Partial Thyroidectomy Under Local Anesthesia, with Special Reference to Exophthalmic Goiter. T. P. Dunhill.
13 Tuberculous Disease of Bones and Joints: Present Position of Treatment in London. R. C. Elmslie.
14 *Tuberculosis of Mesenteric Glands in Children: Its Nature and Treatment. E. M. Corner.

15 Enterectomy Under Spinal Anesthesia for Acute Intestinal Obstruction in Infant Twenty-Four Hours Old; Survival for One Month. G. E. Waugh.
16 Case of Severe Vertigo: Destruction of Labyrinth; Cure. M. Yearsley.
17 *Removable Bladder Sutures. C. Clarke.
18 Examination of Medical Provisions of National Insurance Act. W. A. Brend.

10. **Forms of Hemorrhage Difficult of Explanation.**—It is suggested by White that pathologic hemorrhages might be produced in a similar way that the menstrual flow is provoked (by a hormone secreted by the ovary) and he thinks it possible that they may be caused by endothelial toxins which act on the walls of the vessels from which the bleeding comes.

11. **Malignant Disease of Testicle.**—Davies holds that all tumors of the testicle must be regarded as malignant. The history of previous venereal disease, the association of the swelling of the testicle with an injury, the length of the history dating perhaps from childhood, must not be allowed to outweigh clinical evidence. He would always suspect a tumor of the testicle when there is an oval swelling which is not translucent and comparatively painless. When the tumor is in addition soft or elastic, and the surface shows slight lobulations, he regards his suspicions as confirmed. Increased pulsation of the cord is in favor of tumor, but is not pathognomonic. A solid tumor may be so elastic as to give the feel of a fluid swelling. The aberrant clinical manifestations of a testicular neoplasm must constantly be borne in mind. If the diagnosis is uncertain and the possibility of growth is entertained the tumor must be explored. Should the tumor be syphilitic, no harm will have been done; if tuberculous or a hematoma, operation is the correct treatment. When the diagnosis of tumor is confirmed the complete radical operation, consisting of removal of testicle, cord, lymphatics and surrounding fascia, and of the lymph-nodes in the region of the aorta and vena cava, must be done, unless the lumbar nodes are extensively involved, or there are evidences of metastases elsewhere.

14. **Tuberculosis of Mesenteric Glands in Children.**—The physical change in the bowel contents from fluid to solid (accomplished largely by the absorption of water and the deposition of mucus) is accomplished while the products of digestion pause and wait at the cecum. Besides food, a varied host of microorgamsms is ingested which will flourish and multiply during the pause in the cecum. Hence, Corner says, they are at their maximum infectivity or septicity in the ileocecal region. To protect the body against this menace a large amount of lymphoid tissue has been formed in the ileocecal region. Hence the function of the appendix. There must be a continuous "ileocecal" strife between organisms and the lymphoid tissue. And so long as the lymphoid tissue prevails the host is in good health. If the microorganisms get the best of the ileocecal strife the host is in bad health, and may suffer from appendicitis, colitis, or infected glands in the mesentery. From this reasoning, Corner believes there can be no mistake in assuming that the great entrance of tuberculosis from the intestine to the body is by the lymphatics of the ileocecal region, and that, therefore, tuberculosis of the mesenteric glands originates from there. The children suffer from ill-health and abdominal pains referred to the umbilical region. These pains come on at night and sometimes after food. The loss of appetite, anorexia, is often accompanied by some disturbance of the action of the bowels, more often inactivity and constipation than looseness.

From a very considerable experience of such cases Corner says that tuberculous mesenteric glands and a somewhat dilated appendix containing fecal material, but otherwise not obviously diseasesd, are always found. The appendix is removed, whereby a great danger is obviated and a great source of discomfort from contractions on the fecal matter (appendicular colic), is avoided. A fortnight or three weeks after operation the patient is sent away to a country home. In nine cases out of ten the improvement is rapid and great. Shortly after the operation the appetite returns, and the patient eats and digests with enjoyment articles of diet which had been interdicted before. Hence there is no doubt, in Corner's mind, that the appendix is the great (and removable) source of danger and discomfort in these cases, and that no convalescent treatment should be undertaken until that is done.

17. **Removable Bladder Sutures.**—The tube sutures used by Clarke consist of the following parts: (1) Strands of ordinary strong silkworm gut; (2) short pieces of glass-tubing, 2 inches long and ¼ inch in diameter; and (3) small brass or steel rings, ½ to 1 inch across. The sutures of silkworm gut are passed with a curved needle through the muscular coat of the bladder on both sides of the opening. Each suture is inserted not less than ¼ inch from the edge of the incision and emerges on the cut surface, just short of the mucous membrane of the bladder. The two free ends of the suture are threaded through a glass tube and drawn tight; they are then secured in this position by being firmly tied over the rim of one of the metal rings. The loop of silkworm gut which projects from the end of the tube and passes through the bladder wall acts like the loop of a wire polypus snare and holds the two sides of the bladder incision firmly in contact with each other. The other end of the silkworm-gut suture, knotted over the edge of a ring, is on a level with the surface of the abdomen and is easily accessible for the removal of the suture. To remove a suture the silkworm gut is divided close to the knot, and the knotted end is then pulled on until the suture is withdrawn. One hand at the same time holds the glass tube steady in the wound. The silkworm gut remains quite taut after ligature in the tubes, and does not adhere to the bladder wall on removal.

Dublin Journal of Medical Science

February, III, No. 482, pp. 81-160

19 Case of Splenomegaly. W. A. Winter.
20 Case of Traumatic Pancreatic Pseudo-Cyst. T. G. Moorhead.
21 Pyorrhea Alveolaris. V. G. Best.
22 Epidemic Cerebrospinal Meningitis. H. S. Millar.

Medical Press and Circular, London

February 7, XCIII, No. 3796, pp. 129-156

23 Complications of Middle-Ear Suppuration. U. Pritchard.
24 *Proposed Sterilization of Mentally Unfit. M. J. Nolan.
25 *Some Hitherto Unrecognized Causes of Spinal Curvature. E. F. Cyriax.
26 Observations on Altmann's Granules in Cells of Normal and of Malignant Tissues. H. Cunningham.

February 14, XCIII, No. 3797, pp. 157-182

27 Ocular Palsies. J. Taylor.
28 Methods of Operating on Varicose Veins. A. Fullerton.
29 Supravaginal Hysterectomy Performed in Place of Induction of Abortion and Subsequent Sterilization for Repeated Melancholia Following Labors. W. S. A. Griffith.
30 Specimen of Rachitic Pelvis in which First Sacral Vertebra on Its Left Side Has Characters of a Lumbar Vertebra, Known as "Assimilation Pelvis." W. S. A. Griffith.
31 Treatment of Puerperal Septicemia by Bacterial Vaccines. G. T. Western.
32 Non-Surgical Treatment of Acute and Chronic Typhlitis. Moosbrugger.

24. **Proposed Sterilization of Mentally Unfit.**—Pointing out that the "baton sinister" of mental defect is to be found on the escutcheon of every family of known descent, Nolan submits that the proposal to sterilize the mentally unfit is unjustified by the past history of mankind, and by our imperfect knowledge of artificial methods in heredity; that it is a crude and rash proposition to deal with, a matter of extreme delicacy and importance and one which requires the most mature experience.

25. **Causes of Spinal Curvature.**—In Cyriax's opinion, diseases of the abdominal organs and of the heart can bring about spinal curvatures, especially of the scoliotic nature, in one of two ways: (1) Through localized contraction of muscles from reflex nerve irritation. (2) Through the assumption of vicious attitudes on the part of the patient in order to relieve symptoms. These two causes often coexist. The attempt to cure such cases by means of spinal corrective exercises alone is obviously unsatisfactory, and at the best only palliative, inasmuch as the real cause is left untouched.

Glasgow Medical Journal

February, LXXVII, No. 2, pp. 81-159

33 *Treatment of Carcinoma of Rectum and Pelvic Colon. W. E. Miles.
34 Skull of Dr. Pritchard. G. H. Edington.
35 Some Modes of Cardiac Failure. J. M. Cowan.
36 Treatment of Ringworm of Scalp. J. R. Riddell.

33. **Carcinoma of Rectum and Pelvic Colon.**—Miles has performed the radical abdomino-perineal operation forty-two times, in twenty-two men and in twenty women. Of these forty-two patients, seventeen died from the operation, giving an operation mortality of 40 per cent. Of the twenty-two men, eight died, mortality, 36 per cent.; of the twenty women, nine died, 45 per cent. The causes of death after the operation have been as follows: Peritonitis, five; hypostatic congestion of lungs, two; intestinal obstruction, one; gangrene of proximal end of colon, one; shock, three; cardiac failure, four; surgical kidney, one. The peritonitis was due to bacillus coli infection at the time when the bowel is divided. The five patients who died from this cause succumbed on the fifth day, and in all of them there was evidence of free gas in the abdominal cavity which produced a kind of surgical emphysema of the tissues in the vicinity of the colostomy opening. Among the twenty-five patients who have survived the operation, four have suffered from recurrence. One died three years and six months afterwards of general peritoneal carcinomatosis. Another suffered from recurrence in the prostate gland and the left corpus cavernosum penis, which manifested itself nine months after the operation. Another died of recurrence in the liver six months after the operation, and one became affected by a recurrent growth in the margin of the colostomy opening seventeen months after the operation. Of the remaining twenty-one patients, one, a female, died of pneumonia a year after the operation without manifesting any signs of recurrence, and a male committed suicide three years after the operation, though there was no evidence of recurrence at the time.

As to the present condition of those who have survived the operation and are alive at the present time: Of these there are nineteen, of whom ten are males and nine are females. The length of time ten of them have survived the operation without manifesting any signs of recurrence is as follows: Over four years, three; over three years, three; over two and one-half years, two; over two years, two. From his observations Miles deems it safe to draw the following conclusions: 1. Cancer of the rectum spreads both intramurally and extramurally. 2. The extramural spread takes place in three distinct zones. 3. A cancer situated in the lower part of the rectum may give rise to early metastases in the pelvic mesocolon and pelvic peritoneum. 4. A growth in the upper part of the rectum or in the terminal portion of the pelvic colon may give rise to spread situated in the peri-anal skin and in the ischiorectal fat. 5. That the tissues of the three zones of spread are vulnerable to spread wherever the primary growth may be situated in the rectum. 6. That although perineal operations can eradicate the tissues comprising the zones of lateral and downward spread, they are quite inadequate for reaching the tissues of the zone of upward spread. 7. That the only operative procedure which completely eradicates the tissues forming the three zones of spread is the radical abdomino-perineal.

Archives des Maladies de l'App. Digestif, Paris

January, VI, No. 1, pp. 1-60

37 *Delay in Elimination of Water in Urine as Sign of Liver Disease. (L'opsiurie dans les maladies du foie.) A. Gilbert and P. Lereboullet.
38 Agar as Vehicle for Drugs to Act on the Intestines. (L'agar-agar comme véhicule en thérapeutique intestinale.) M. Einhorn (New York).
39 *Simple and Rapid Dosage of Amylase in the Stools. (Dosage de l'amylase fécale.) Goiffon and R. Tallarico.
40 Peptic Ulcer in Jejunum Opening into Colon. (Cas de fistule jéjuno-colique par ulcération peptique du jéjunum consécutive à une gastroentérostomie.) Urrutia.

37. **Opsiuria as Sign of Liver Disease.**—Gilbert and Lereboullet apply this term to a delay, an inversion in the normal rhythm of elimination of water, the water being eliminated more copiously the longer the interval after the meal. In health a pint of water ingested is generally passed within six hours, if the individual urinates every hour, and by far the larger amount is voided in the urine in the second or third hour. With liver disease, the water is eliminated much slower and later, and in some cases only one-tenth as much when the individual is up and about as when he is reclining. They have been studying this opsiuria, as they call it, for ten years in all forms of liver disease. It may accompany normal diuresis or the total urine voided may be above or below normal, usually the latter in case of portal hypertension. The opsiuria may be the first sign to call attention to the liver disease. As the portal congestion is more marked in the erect than in the recumbent posture, they insist on their patients reclining when taking the test and also when taking courses of mineral waters in general. Others have come to realize the advantages of this morning reclining at spas to get the greatest benefit from the waters.

39. **Test for Starch Digestion in the Stools.**—Goiffon and Tallarico write from Mathieu's laboratory to extol the advantages of their modification of Robert and Strassburger's method of testing for amylase by the length of the interval before a solution of starch mixed with a solution of feces loses the power to stain blue under addition of iodin. The 1 per cent. solution of starch is mixed with an equal part of a 10 per cent. solution of stool, neutralized and filtered. The mixture is kept at a constant temperature of 38 C. and at regular intervals a drop of the mixture is brought in contact with a drop of iodin solution. When it ceases to stain blue the digestion of the starch has been complete. The stool should not be too fresh nor kept on ice, and there should not be the slightest admixture of urine. It is often enough merely to mix the stool and starch solutions in a test tube, heat in hot water and apply the iodin test. If there is abundant amylase present, the starch will be digested in five minutes.

When great precision is desired, it is better to use a 5 per cent. solution of the feces and dilute further with an acid solution made with 10 parts normal solution of hydrochloric acid; 5 parts sodium chlorid, and water 1,000 parts. About 5 c.c. of stool are ground in a mortar with 50 c.c. of water. The mixture is poured into a test-tube and all above the 50 c.c. mark represents the volume of feces. Water is then added at the rate of 20 c.c. for each c.c. of feces. In another test-tube are placed 2 c.c. of the 1 per cent. starch solution, 5 c.c. of the above acid solution, and the whole is heated in water toward 40 C. Then, noting the time, 2 c.c. of the solution of feces is added and at regular intervals a drop is dropped on a drop of the official compound solution of iodin until all bluish or reddish discoloration ceases. For extreme precision, the index of the findings can be the time required for digestion of the starch, divided by the dry weight per hundred of the stools. The findings of the test throw light on pancreas functioning and on conditions in the large intestine.

Archives Mensuelles d'Obstétrique et de Gynécologie, Paris

January, I, No. 1, pp. 1-96

41 *Fibromas and Myomas of the Fallopian Tubes. (Etude sur les tumeurs fibreuses et myomateuses de la trompe utérine.) M. Auvray.
42 *Pubiotomy. (Sur l'hébostéotomie.) T. H. van de Velde.
43 *Treatment of Acute Puerperal Peritonitis. (Sur le traitement des péritonites aigues au cours de la puerpéralité.) A. Boquel.
44 Mortality of the Prematurely Born in Relation to the Causes of the Premature Delivery. (La mortalité des prématurés dans ses relations avec les causes de la prématurité.) Planchu.

41. **Tubal Fibromas and Myomas.**—Auvray reports a case in which the oviduct was deformed and a large fibroma had developed on the end of the abnormal tube. He summarizes the details of the cases of tubal fibromyoma on record and ten cases of adenomyoma of the Fallopian tube. Only three or four cases in the list are from American literature. There was no recurrence in any instance of the tumor after salpingectomy with or without hysterectomy.

42. **Pubiotomy.**—Van de Velde emphasizes the importance of study of the pregnant woman in all cases, calling the specialist in consultation when there is suspicion of contracted pelvis. The specialist should utilize every means to render conditions as favorable as possible for delivery, taking advantage of every particle of the natural forces but with close supervision, not permitting the prolonged expectant management of the case to result in a "too late." When the true conjugate measures less than 7.5 or 7.8 cm. and the fetal head is of the normal size, cesarean section is the only operation indicated, he says, notwithstanding its drawbacks. But between these cases and those in which the disproportion between the skull and the passage is not very great and the presentation is normal, and the uterine contractions adequate under or without drugs, there are transitional cases in which pubiotomy is a valuable resource. A history of previous difficult deliv

eries may aid in determining the contracted pelvis; with a primipara the fact that the head is not engaged three or four weeks before term is suspicious. Once suspicion is aroused, the obstetric surgical specialist should be consulted and watch kept for kidney trouble or suppuration which might entail complications to operative delivery. He advises the woman's going to the hospital three or four weeks before term, if an operation is deemed necessary, or, if not certain of this, the woman should reside where she can be easily moved to the clinic if need arises.

43. **Acute Peritonitis in the Puerperium.**—Boquel restricts his intervention to simple laparotomy and drainage, through the abdominal wound and the pouch of Douglas, with the patients partly sitting up. The signs of diffuse peritonitis are often vague, but the general aspect, the condition of the tongue, voice and skin, are useful minor signs—in case of doubt, he says, incise and drain. The characteristic disproportion between the pulse and temperature was marked in only a few of his cases, and vomiting did not occur in all. The abdominal pain was not distinguishable from that with ordinary localized peritonitis, and the abdominal walls were soft in several of the women. Even a tardy operation proved successful beyond hope in some cases, while in the already doomed the operation did not seem to aggravate the condition. Nine of the fourteen patients on whom he operated recovered, while only five recovered of the thirteen given expectant treatment.

Bulletin de l'Académie de Médecine, Paris

February 6, LXXVI, No. 6, pp. 113-124

45 *Fatalities Under Salvarsan. (Les morts par le 606. Suite.) E. Gaucher.
46 Toxicity of Derivatives of Morphin. (Chloréthylmorphine et isopropylmorphine. Toxicité des dérivés de la morphine.) A. Mayor.

45. See Paris Letter in The Journal, March 2, p. 645.

Lyon Médical, Lyons

February 4, CXVIII, No. 5, pp. 217-280

47 *Tuberculous Skin Diseases. (La tuberculose inflammatoire de la peau.) A. Poncet and R. Leriche.

47. **Inflammatory Tuberculosis of the Skin.**—Poncet and Leriche emphasize that the skin affections for which tuberculosis is responsible are legion, and they cite a number of instructive cases to sustain this view. An inflammation for which tuberculosis is responsible is the key to a large number of pathologic cutaneous manifestations whose true nature hitherto has been a mystery, but they present evidence to show that they can all be traced to toxi-infection from the tubercle bacilli. Nodose erythema, for instance, is an affection that may be set up by various microbes, including the tubercle bacilli. Psoriasis, eczema, keloid, elephantiasis nostras, etc., can all be traced at times to tuberculous infection and affections of the appendages of the skin. He says that a history of some old tuberculous affection is generally traceable in every case of ingrowing nail; the trouble is usually that the soft parts encroach on the nail rather than that the nail grows in too deep.

Presse Médicale, Paris

February 7, XX, No. 11, pp. 113-120

48 Action on Bile Production of Injection of Hemoglobin. (Recherches sur la biligénie.) A. Gilbert, E. Chabrol and H. Bénard.
49 *Dangers of Menthol. (Dangers et méfaits du menthol.) R. Leroux.
50 *Symptom of Duodenal Ulcer. (Un symptome clinique de l'ulcère duodéno-pylorique.) L. Meunier.

49. **Dangers of Menthol.**—Leroux does not hesitate to accuse menthol of being always treacherous, frequently dangerous and sometimes fatal in its effects. He gives the details of the cases cited by Lublinski (mentioned in Abstract 64 below), adding to the list several unpublished cases, including the alarming reflex suffocation presented by his own infant after instillation of one drop of 1 per cent. mentholated oil for acute coryza. Besides the serious reflex accidents liable in young infants from its use, coming on with the suddenness and danger of a chloroform accident, he reports a number of other disturbances that have followed its use in the nose, acute or chronic conjunctivitis, reflex earache, tinnitus—chronic local changes from the continued use of menthol.

50. **Symptom of Duodenal Ulcer.**—Meunier states that with an ulcer in the duodenum near the pylorus if the patient drinks a pint of milk during the attack of pain the pain keeps up in the same intensity for five, ten or fifteen minutes; then suddenly the patient belches some gas and in a minute the pain is over. This occurs regularly each time when the ulcer is at this point. When the ulceration is in the stomach itself, the patient feels relief of the pain after a few swallows of milk and gradually all pain subsides. But with duodenal ulcer, roentgenoscopy shows that the pain ceases as the milk passes into the duodenum; the contraction of the stomach opening the pylorus and permitting the escape of the stomach content is also the signal for the escape of gases upward. The belching is thus a sign that the stomach content is being expelled, and the pain from the duodenal ulcer ceases as the stomach content reaches it.

Revue de Gynécologie, Paris

January, XVIII, No. 1, pp. 1-128

51 *Hypernephromas in the Broad Ligament and Ovary. (Les hypernéphromes génitaux de la femme.) H. Alamartine and G. Maurizot.
52 *Volvulus of the Stomach. (Le volvulus de l'estomac.) T. Tuffier and Jeanne.

51. **Genital Hypernephromas in Women.**—At present these tumors do not have much practical importance, the authors say, but as adrenal functioning becomes better understood, these tumors may be diagnosed from the special disturbances they induce. They describe a case in detail, the patient, a woman of 56, succumbing after removal of a large tumor in the broad ligament, developing from aberrant adrenal cells, involving adjacent organs and entailing cachexia like a cancer. They summarize ten similar cases from the literature and review numerous cases on record of accessory adrenals in the genital and other abdominal organs of both sexes. The peculiar malignancy of hypernephromas is another argument in favor of prompt excision of any tumor in the broad ligament or ovary which may possibly be of this nature.

52. **Volvulus of the Stomach.**—Tuffier and Jeanne encountered a typical case of volvulus of the stomach and looked up the literature on the subject which they here review, with thirty-one illustrations. They discuss the mechanism and location of the torsion, emphasizing that the situation of the vessels and not the aspect of the twisted stomach should be the guide to estimate the degree of torsion. As the stomach dilates, this has a tendency to correct the torsion, until the dilatation becomes so extreme that the stomach is incarcerated. Only one case in a child is on record. Under prompt operative treatment, 60 per cent. of the patients recovered; untreated, total volvulus is speedily fatal. This was determined, in addition, by experimental volvulus induced in dogs, although the dogs bore without harm a partial volvulus. In operating, the stomach should be anchored so that it will not twist again later.

Revue de Médecine, Paris

January, XXXII, No. 1, pp. 1-80

53 *Variable Clinical Course of Myelitis. (Sur les évolutions cliniques diverses des myélites toxi-infectieuses.) S. Bernheim.
54 Hemorrhagic Encephalitis in Patches. (Cas d'hemorrhagie cérébrale bilatérale récente de la corticalité.) C. Roubier and L. Nové-Josserand.
55 *Abdominal Pain Without Anatomic Lesions. (Les algies abdominales.) J. Cecikas.
56 Intracranial Simple Cyst. (Une variété rare de kyste intracranien.) Bouchut and Bouget.

53. **Myelitis.**—Bernheim refers to the myelitis occurring during or following infectious disease, industrial poisoning, etc. His experience has shown that a toxi-infectious myelitis may run an absolutely latent course, and be merely a necropsy surprise. In other cases, the only sign may be exaggeration of the foot and knee tendon reflexes. He found this manifest in sixty of a hundred typhoid patients, and he cites a few examples in detail, as also in cases of pneumonia, miliary tuberculosis and neurasthenia. In four cases of the latter after influenza this was the only spinal symptom. In four

other cases reported in detail, the symptoms of the myelitis were more pronounced, formication, numbness and darting pains accompanying the exaggerated reflexes, tenesmus and impotence in the arms. In six other cases reported, the gait was affected after typhoid fever, besides the exaggeration of the reflexes. In all the above cases the myelitis soon subsided without leaving a trace, but in six others it lasted for months up to two years, but then subsided. The infection had been influenza in most of these cases; in two the myelitis was of the type of amyotrophic lateral sclerosis or sclerosis in patches; such recovery is unusual. Besides these secondary myelites, he reports the details of two primary cases in which permanent disability was entailed; the brain symptoms subsided but spastic paraplegia was left. In three similar cases the primary myelitis recurred two or three times after intervals of months or years, finally resulting in typical sclerosis in patches. The myelitis progressing rapidly to a fatal termination is better known, perhaps, than the classes of cases to which he calls attention. Only in nine of the total thirty-four case-histories given were the patients children, between 8 and 16, and these were among the milder cases with complete recuperation.

55. **Abdominal Algias.**—Cecikas remarks that chronic constipation was invariably present in all his cases of abdominal algias, but that purgatives are contra-indicated in all forms of abdominal angina. Hot oil enemas at night must be the main reliance. In some cases of tabetic abdominal crises, the pains did not return after a systematic course of this kind for several weeks. The diet should aim to combat constipation and relieve the special organ suffering most, with measures to relieve abnormal conditions in regard to nutrition, circulation and innervation when there is no concrete anatomic lesion. Hydrotherapy is a valuable aid, as is also possibly the high frequency current. He was much impressed with the benefit from opotherapy in two cases; it seems to supply the lacking hormone of the organ at fault, which is unable to attract to itself the other hormones needed to keep it functioning normally. He used the corresponding organ from freshly slaughtered sheep, chopped, triturated with sand, mixed with four times its weight of Ringer's solution, and kept on ice. About 5 c.c. was taken at meals, in soup or wine.

Semaine Médicale, Paris

February 14, XXXII, No. 7, pp. 73-84

57 Hysterectomy in Treatment of Uterine Myoma. (Hystérectomie totale ou subtotale dans le traitement des myomes utérins.) R. de Bovis.

Berliner klinische Wochenschrift

February 5, XLIX, No. 6, pp. 241-288

58 Present Status of Surgery of the Lungs. (Der gegenwärtige Stand der Lungenchirurgie.) A. Fraenkel and W. Körte. Concluded in No. 8.
59 Methyl-Alcohol Poisoning. (Ueber Methylschnaps-Vergiftung.) J. Hirschberg.
60 Anaphylatoxin and Bacterial Toxins. (Ueber Anaphylatoxin und Bakteriengift.) H. Aronson. Commenced in No. 5.
61 First Reported Case of Rat-Bite Fever in Europe. (Sokodu—Rattenbisskrankheit.) C. Frugoni.
62 Spasmodic Constriction of the Pylorus. (Zur Lehre von Pylorospasmus.) P. Manasse.
63 The Eosinophils of the Intestinal Mucus. (Ueber Eosinophilie des Darmschleims.) H. J. Wiener (New York).
64 *Menthol in Rhinology and Its Danger for Young Children. (Die lokale Mentholanwendung in der Nase und ihre Gefahr im frühen Kindesalter.) W. Lublinski.
65 Diagnosis and Treatment of Postpartum Hemorrhage. (Nachgeburtsblutungen.) E. Runge.

64. **Dangers of Local Application of Menthol in Infants.**—To relieve acute coryza, Lublinski put a small (*linsengrosse*) amount of 2 per cent. coryfin vaselin (coryfin is a preparation of menthol) in the nose of an otherwise healthy baby nearly a year old, and rubbed it around lightly with his finger. The child was seized at once with spasm of the glottis, cyanosis, its eyes rolled up, and the pulse became imperceptible. Under artificial respiration and wrapping the throat in hot sponges, the child was relieved but was still unable to breathe freely on account of the excessive secretion in the nasopharynx. After wiping this out with the finger, respiration became regular once more by the end of fifteen minutes after the first symptoms. Koch reported in 1910 a similar experience, after wiping out the nose of a three-weeks' infant with a tampon dipped in coryfin. Killian has reported similar symptoms in an infant after instillation of one drop of menthol oil (*Mentholöl*). A similar case has been reported recently by Delille, by Maliban and two by Mayet, and Leroux reported last year a number, including one terminating fatally. The age of the infants ranged from 1 to 15 months, and in three cases they were in physicians' families. In Gomez' case an otherwise healthy month-old infant died within ten minutes after a little 2 per cent. mentholized vaselin had been introduced into its nose to relieve coryza. The trouble is evidently a reflex process from irritation of the nasal branch of the trifacial nerve; on account of the existing inflammation in the nose this nerve is exceptionally sensitive. Besides the measures Lublinski applied in his case, others report benefit from traction of the tongue, swinging by the feet, hot baths, mustard baths or frictions. Ten years ago in Paris there was a symposium on the danger of spasm of the glottis from local application of menthol preparations in the nose, but the warning emphasized then seems to have been forgotten. (See abstract 49 above.)

Deutsche medizinische Wochenschrift, Berlin

February 8, XXXVIII, No. 6, pp. 249-296

66 *Diagnosis and Treatment of Cirrhosis of the Liver. (Leberzirrhose.) C. Bäumler. Commenced in No. 5.
67 *Operations to Relieve Pressure on the Brain. (Indikationen und Erfolge der operativen Behandlung des Gehirndrucks.) G. Anton. (Ueber druckentlastende Eingriffe bei Hirndruck.) E. Payr.
68 Operative Treatment of Injuries of the Lungs and Pleura. (Operative Behandlung der Pleura-Lungenverletzungen und Druckdifferenzverfahren.) E. D. Schumacher.
69 *Relations Between Trauma and Inflammation and Tumors. (Die Beziehungen von chronischer Entzündung, Narbe, Trauma und den Fortpflanzungsvorgängen zu der Entstehung von Tumoren.) A. Theilhaber.
70 Influence of Treatment on the Wassermann Reaction in Late Stages of Syphilis. (Einfluss der Therapie auf die Wassermannsche Reaktion bei Spätsyphilis.) J. Müller.
71 Influence of Soda on the Wassermann Reaction. H. Mayer.
72 Alcohol Injections in Trifacial Neuralgia. (Ueber die Behandlung von Neuralgien des 2. und 3. Trigeminusastes mit Alkoholinjektionen.) W. Alexander.
73 *Parasitism and Diseases. (Parasitismus und Krankheit.) Theobald Smith (Boston).

66. **Cirrhosis of the Liver.**—Bäumler concludes this postgraduate lecture by emphasizing the importance of prophylaxis of cirrhosis of the liver. He is confident that much more might be accomplished in this line. The cirrhosis is the terminal stage of long intoxication, especially from alcohol, but also possibly from lead, or other industrial poisoning. It may likewise be induced by chronic stasis of bile, by acute and chronic infectious diseases or by chronic congestion of cardiac origin—any of these injurious influences is liable to damage the liver cells, and the task of the physician in warding off or correcting such damage is an important and manifold one. The special feature of the syndrome induced is the disturbance from stasis and back-pressure of the blood in the portal vein. These same phenomena are liable to be induced secondarily by other affections involving sympathetically the liver or the trunk of the portal vein, such as peritonitis, especially tuberculous peritonitis, which, by the way, he says, is peculiarly liable to become superposed on existing cirrhosis of the liver. Careful differentiation is of paramount importance for treatment. In all stages dietetic treatment and regulation of the bowels are the principal thing. Milk should be the main feature of the diet, sweet, sour or buttermilk, watching over the urine, especially over the excretion of urobilin. Saline laxatives for a time may be needed, a warm solution of Carlsbad salts in the morning or cascara at night. In the early stages it is often an easy matter to restore conditions to normal in this way, especially when the trouble is due to abuse of alcohol. Organs are able to recuperate amazingly, and particularly the liver, if it is not being constantly subjected to new injury. If the liver is enlarged and hard, with more or less tendency to jaundice, the spleen somewhat enlarged and the abdomen distended, the wearing of an abdominal band may be useful to keep the over-heavy organs from sagging or being pushed about, thus interfering still further with the portal circulation. The binder should not be allowed to interfere with the movements of the diaphragm. With ascites, he warns not to wait too long before tapping; release of the fluid restores better conditions for the circulation.

Drugs which act on a weakened but still sound heart or on the kidneys or render the blood more fluid may sometimes cure the tendency to ascites with cirrhosis of the liver. Even salt, which aggravates dropsy with kidney or heart disease, may draw the water out of the tissues and expel it through the kidneys. He cites Savy's case to illustrate this: A man of 51 with atrophic cirrhosis of the liver had required tapping six times in two months, each time over twelve liters of fluid being withdrawn. He was kept on a milk and salt-free diet, but wearying of this he cast aside all restrictions and ate at will, using salt lavishly, up to 25 or 30 gm. a day. By the end of a few weeks the ascites had disappeared, and has not returned. Bäumler advocates omentopexy for suitable cases, not waiting too long; operations to divert the bile and remedy conditions with severe cirrhosis should be considered as needed.

67. **Puncture of the Corpus Callosum and Other Decompressive Measures.**—Anton discusses the affections and the anatomic disproportions which indicate regulation of the intracranial pressure, and describes the technic for puncture of the corpus callosum, which, he declares, by its ease, simplicity and harmlessness has amply justified its right to survive. (The technic was described in The Journal, Oct. 30, 1909, p. 1520.) The operation can be done under local anesthesia. By putting an end to the symptoms of general pressure it throws the focal symptoms more into prominence, and thus permits localization of curable lesions. None of the fifty patients treated by puncture of the corpus callosum has died, and in twelve of the seventeen cases of hydrocephalus the motor disturbances, paresis or spasms were favorably influenced. In nineteen cases stasis optic neuritis was benefited; in thirty-one cases the intense headache was cured; in twenty-seven cases vertigo and vomiting, and in twenty-six cases of a brain tumor the stupor or coma was relieved for a long time.

Payr gives a general oversight of decompressive operations, classifying the various palliative measures under five heads, and describing his experiences to date with his method of diverting the fluid from the ventricle into the blood stream. He has tried a number of technics and has operated in this way in twenty-two cases—in eighteen cases for hydrocephalus; seven of the patients have died; in four cases the results were most gratifying and permanent; in two others there has been recurrence, and the operation is of too recent date in the other cases to judge of the final outcome. In four cases the drainage was into the longitudinal sinus, in six into a vein in the neck. He uses a small artery from the calf for the drain, as described in The Journal, Oct. 14, 1911, p. 1327.

69. **Trauma and Irritation in Origin of Cancer.**—Theilhaber is convinced that atrophy of the tissues precedes the development of cancer. This local atrophy may be the result of old scars, chronic inflammation or destruction of soft tissues from trauma, as in childbirth, or senile atrophy of mesodermal tissue. The uterus and mammæ of women who have never borne children are less developed and hence less amply supplied with blood vessels, and consequently they display greater tendency to develop malignant disease. He queries whether the vast scars left by the modern excision of cancers do not enhance the tendency to recurrence. This idea is sustained by the frequent good results of the partial operations of thirty years ago. His experience has been that the younger the woman the lower in the uterus the cancer is located, which corresponds to what we know of the local circulation. In 347 cases of uterine cancer in his service, 27.5 per cent. of the women were nulliparæ, as also in 75 per cent. of his tubal cancer cases. He found that well-to-do women and Jewesses seemed more inclined to cancer of the breast and uterine myoma, the poor to cancer of the cervix or stomach.

73. **Parasitism and Disease.**—This address by the "exchange professor" emphasizes the importance of comparative pathology in the study of disease. Smith urges the necessity for perfecting the methods of animal experimentation so that they will resemble more closely than at present the conditions in the clinic. He also urges closer study of the natural parasitic affections in animals. The spontaneous diseases of even the guinea-pig, he remarks, have by no means been exhaustively studied although it has acquired almost a dozen infectious diseases within a short period. Study of this biologic problem will throw light on many others. If these natural epizootics are allowed to run their course, in time either the parasite or the host or both will die out or adjust themselves each to the other. He also urges research on the diseases of primitive peoples, whose mode of life resembles more that of our domestic animals.

Deutsche Zeitschrift für Chirurgie, Leipsic

January, CXIII, Nos. 3-4, pp 197-426

74 *Operative Injury of Thoracic Duct. (Die operativ entstandenen Verletzungen des Ductus thoracicus. Ihre Bedeutung. Ihre Behandlung.) D. G. Zesas.
75 *Treatment of Subphrenic Abscesses. A. Wakar.
76 *Tuberculin in Treatment of Surgical Tuberculosis. (Ueber Versuche mit Tuberkulin in der Behandlung der chirurgischen Tuberkulose.) J. Bungart.
77 *Bilateral High Shoulder. (Ueber angeborenen Hochstand der Schulterblätter. Ein neuer Fall von doppelseitigem Hochstand.) K. Hayashi and M. Matsuoka.
78 *Primary Acute Circumscribed Colitis. E. Haim.
79 Inflammation of the Diverticulum of Meckel. (Beitrag zur Kenntnis der Entzündung des Meckelschen Divertikels.) A. Meyer.
80 *Subscapular and Retroperitoneal Kidney Hemorrhage. (Ueber das sogen. perirenale Hämatom und andere spontane retroperitoneale Massenblutungen.) A. Läwen.
81 *Abnormally Low Ribs. (Ueber den Rippentiefstand.) G. Ledderhose.
82 Histologic Research on Free Fascia Grafts. (Zur freien Fascientransplantation.) B. Valentin.
83 *Plastic Operations on the Dura. (Zur Duraplastik.) A. Brüning.

74. **Operative Injury of Thoracic Duct.**—Zesas has compiled fifty-eight cases from the literature and reports a case from his own experience, summarizing forty-nine case-histories. The operation had been done for tuberculous lymph-nodes in the neck in eighteen cases, for cancerous in thirteen; in nine cases for removal of a tumor in the neck and once for an aneurysm. The operative injury can be treated by tamponing, by ligation or clamping, by suture or by implantation of the injured duct in a vein. Of the twenty-one patients treated by tamponing, three died and in fourteen others there was a persisting fistula. Only in four cases was the effect good and permanent. When the injured duct was closed with a clamp or ligated, the effect was good in nine of the thirteen cases in which this was done. In the other cases there was oozing of lymph, but this gradually subsided, and no harm was apparent from the procedure in any instance. Zesas states that the wound should be sutured as the routine procedure, and ligation should be applied only when it is impossible to suture. No injury from the suture has been observed to date; thrombosis does not have the same importance in this duct as in a blood vessel. Schopf has proposed to implant the duct in a vein and Deanesly has done this with success in one case. Only when it is absolutely impossible to suture or ligate should any reliance be placed on tamponing alone.

75. **Subphrenic Abscess.**—Wakar presents evidence to show that the transpleural technic is not dangerous in itself, and compares his results with those in the literature, reviewing the experience of other Russian surgeons in this line. One of Waker's twelve patients with subphrenic abscess recovered spontaneously and five of the others after an operation through the diaphragm; all of the seven treated by a lumbar incision recovered. His experience confirms the comparative harmlessness of an operative pneumothorax. It is extremely important to place the patient so that the fluid contents of a gaseous abscess can be most readily reached with the puncture needle. In every case of a gaseous abscess the sheets of the pleura were adherent while this was never observed with the abscesses without gas. All his patients with gaseous abscess succumbed, with one exception, although the operation was a technical success, while all the patients with a nongaseous abscess recovered except one. The affection was of about two months' standing in most of the patients. In the lumbar operation cases there had been preceding paranephritis in four; violent physical effort with furunculosis in two; in one each trauma and a bowel trouble, and in the three others typhoid spondylitis, periproctitis or furunculosis.

76. **Tuberculin in Surgical Tuberculosis.**—Bungart reports extensive experience with tuberculin in treatment of various

surgical tuberculous affections after removing dead tissue as conservatively as possible. One eighteen months' infant with severe bone and joint tuberculosis was completely cured in about nine months under increasing doses of tuberculin, injected into the back, from 0.0001 gm. to 0.3 gm., with local operative measures for the various foci. This and seventeen other cases summarized sustain his assertion that tuberculin treatment may be regarded as harmless in the hands of a cautious and skilled clinician. The way in which the patients—all children but one—increased in weight was striking, as also the subsidence to normal of the temperature. Tuberculin is especially indicated, he says, as an adjuvant to operative treatment. The course of the case under the tuberculin will soon show whether it is proving of benefit or not. The aim is not to immunize against as large doses as possible, but to maintain as long as possible the reacting capacity of the organism. In other words, the high doses which may be attained in the progress of the course are not the end in themselves but only the means to the end. The favorable effect was evident in some cases under small dosage and no better results were apparent in some cases in which the tuberculin was rapidly pushed to high doses. The mild immunizing dosage according to Sahli's principles seems the best technic. In conclusion he reports a case of extensive destruction from lupus of the entire face in which roentgenotherapy was supplemented by fourteen injections of tuberculin, from 0.0005 to 0.005 gm. in seven months, and the face entirely healed over.

77. **High Shoulder.**—The 125 cases of extreme dislocation of the scapula on record are reviewed and a case of bilateral high shoulder, the sixteenth on record, is reported, and the causes of the conditions are discussed.

78. **Primary Circumscribed Colitis.**—In the case reported by Haim, an abscess was found in the wall of the transverse colon and recovery followed its evacuation. He reviews a number of similar cases from the literature, the syndrome simulating appendicitis, and the origin and course showing that the same process as in appendicitis may develop at any point in the colon.

80. **Perirenal and Retroperitoneal Hematomas.**—Läwen states that all died of the five patients not given operative treatment while six in the ten operative cases recovered. In another case the retroperitoneal hemorrhage was from the psoas muscle in a hemophiliac.

81. **Low Ribs.**—Ledderhose has encountered a number of cases in which the ribs reached to the crest of the ilium or below. This finding generally indicated disease of the spine, and in examining the spine the distance between the eleventh rib and the crest of the ilium should be determined: normally in young people the distance is about four fingerbreadths, but the rib may touch the crest or reach below it inside.

83. **Plastic Operations on the Dura.**—Brüning has slit the dura in four cases and twisted the upper sheet around to cover a defect left after an operation on the skull for an abscess or fracture. The dura plastics was done under local anesthesia. He found it a help in separating the membranes to inject physiologic salt solution to force up the dura. He trephines exclusively now under local anesthesia, running a suture thread around the spot first.

Medizinische Klinik, Berlin

February 11, VIII, No. 6, pp. 219-262

84 *Systemic Gonorrheal Infection. (Die gonorrhoischen Allgemeinerkrankungen.) K. Zieler.
85 Roentgenoscopy of Duodenal Ulcer. (Der radiologische Nachweis des Ulcus duodeni.) M. Haudek. (Commenced in No. 5.
86 *Prognosis of Epilepsy in Children. (Zur Prognose der Epilepsie im Kindesalter.) J. Zappert.
87 Roentgenotherapy in Gynecology. (Der derzeitige Stand der Röntgentherapie in der Gynäkologie.) M. Immelmann.
88 Hemorrhagic Diathesis. (Casuistischer Beitrag zur Frage der hämorrhagischen Diathese.) G. Löffler.
89 Hybrid Grafting. (Ueber Pfropfbastarde.) W. Wangerin.

84. **Systemic Gonorrheal Infection.**—Zieler reviews the various manifestations of systemic dissemination of the gonococcus with and without mixed infection, and warns that anything tending to aggravate an acute gonorrheal catarrh favors irruption of the germs into the blood—trauma, excesses of any kind, menstruation and pregnancy. Treatment of gonorrheal arthritis is mainly local as the salicylates are useless, but fixation of the joint should be done very cautiously as ankylosis is extremely prone to follow gonorrheal rheumatism, and immobilization does not prevent further metastasis. The best treatment, he says, is with the Bier constriction hyperemia. The constriction should not be applied too close to the joint, but it should be kept up for twenty or twenty-two hours a day, until there is distinct puffiness and the pain is entirely relieved as long as the band is worn; if pain recurs, the band is generally too tight. During the intervals, the arm should be raised; a splint should be applied only in case the pain is severe. The acute phase rapidly subsides under this treatment or under superheated air; with it suppuration is exceptional. The great advantage of these measures is that they permit passive movements from the start. Systemic gonorrheal infection is the main field for vaccine treatment with killed gonococci; it acts by stimulating the production of antibodies or other defensive substances; control with the opsonic index is generally superfluous. The chief advantage of vaccine therapy is that it gives us a weapon to attack manifestations of gonococcal infection which have hitherto been beyond our reach. Under the influence of the vaccine there is generally a reaction in the metastatic foci, which has great differential value in some cases. Dieulafoy has reported a case in which vaccine treatment had an unmistakably favorable influence on gonococcal endocarditis. Acute or subacute affections respond better to the vaccine therapy than the chronic, torpid forms. It is extremely important not to neglect local treatment at the same time. In many cases thorough local treatment of some focal complication quenches the source of the infection and cures the systemic disturbances. Picker has recently reported an instructive case of this kind, the patient having dragged along for three years with various manifestations of what was diagnosed as chronic progressive rheumatism or cryptogenic sepsis, rebellious to courses of treatment instituted by different urologists and others. The patient was a man of 32 who had acquired gonorrhea eleven years before, apparently cured by the ordinary two months' course of local treatment. Six years later pain in the right hip joint developed but subsided after two months of treatment for the supposed sciatica or arthritis; two years after this a peri-urethral abscess developed with cystitis and prostatitis and the arthritis returned. After a year in bed and various manifestations of gonococcemia and mixed infection, the patient came into Picker's hands and by digital investigation of the glandular adnexa of the posterior urethra and bacteriologic examination of their contents he was able to trace the source of the whole trouble to these obscure foci and by massage to restore conditions in them to normal and with this to cure the whole trouble. Zieler emphasizes the lesson to be drawn from this "disabled veteran of gonorrhea," and insists further on the importance of warning against anything liable to induce an exacerbation of an acute gonorrheal process.

86. **Prognosis of Epilepsy in Children.**—Zappert gives the case-histories of seven boys who all presented what seemed to be typical epilepsy and yet, after a time, improvement ensued so that a year or two to date has elapsed without further symptoms although previously the seizures had been frequent. Even if the cure is not complete and permanent, yet this intermisson of a year or so is a great gain for the mental development of the child. During the years the children were under observation there was nothing to shake the diagnosis of epilepsy. The patients are now from 9 to 18 years old. In another case a boy of 7 had two typical seizures with foam at the mouth, etc. He was vigorously purged and an ascaris was passed; during the two years since there has been nothing to suggest a tendency to epilepsy. Another boy of 5 has had no seizures for three years to date although before that he had had convulsions several times a day after the age of eighteen months; tetany had been diagnosed in this case. In another case a little girl had numerous attacks of sudden blank staring, dizziness, etc., with pavor nocturnus, suggesting a tendency to epilepsy, but these

tacks gradually grew less frequent and there has been none · the last two years. The child is now 6 and is rather ckward in school but otherwise apparently normal. In ree other cases Zappert found that apparently typical ileptic seizures were the first manifestation of a severe ogressive brain or meningeal disease; later the seizures adually ceased. Zappert thinks that these thirteen personal periences of his justify the conclusion that the prognosis epilepsy in children need not be inevitably unfavorable.

Monatsschrift für Kinderheilkunde, Leipsic

X, No. 10, pp. 499-578

0 Chemical Composition of Human Milk. II. (Die chemische Zusammensetzung der Frauenmilch auf Grund neuer Analysen.) E. Schloss.
1 Visible Gastric Peristalsis in Infants. (Ueber sichtbare Magenperistaltik beim Säugling.) T. Hoffa.
2 *Prognosis of Tuberculosis in Infants. (Prognose der Säuglingstuberkulose.) H. Hahn.
3 Case of Acute Hemorrhagic Nephritis in Girl of 10 After Impetiginous Eczema. R. Halberstadt.
4 Vitiligo and Chorea. K. Mallinckrodt.

92. **Prognosis of Tuberculosis in Infants.**—Hahn has traced e later history of sixty-nine tuberculous infants at the agdeburg hospital. Forty-eight have died, two have been st to sight, but nineteen are in more or less good health w, the ages ranging from 2 to 5 years. He tabulates the tails of the various cases and the present condition. The dings confirm the assumption that the outlook is worse if e infection occurs before the infant is six months old. But e case-histories show that an unexpectedly large proportion children infected in infancy grow up apparently healthy. ne greatest source of danger seems to be superinfection. hen this can be avoided the prognosis is far better.

Münchener medizinische Wochenschrift

February 6, LIX, No. 6, pp. 289-344

5 Strophanthus in Chronic Heart Disease. (Chronische Herzinsuffizienz und intravenöse Strophanthintherapie.) A. Fraenkel.
6 Action of Salvarsan and Arsenophenylglyzin. (Zur Theorie der Wirkung des Salvarsan und Arsenophenylglyzin.) J. Iversen.
7 Distant Thrombosis After Intravenous Injection of Salvarsan. (Fernthrombose nach endovenöser Salvarsaninjektion.) E. Klausner.
8 Pituitary Extract as Oxytocic. (Hypophysenextrakt als Wehenmittel.) F. Jaeger.
9 Treatment of Flat-Foot. (Plattfussbeschwerden und Plattfussbehandlung.) F. Lange.
0 *Technical Aids for Examination of Stools. (Winke zur Untersuchung der Fäzes.) E. C. van Leersum.
1 *Industrial Argyria. (Ueber gewerbliche totale Argyrie.) F. Koelsch.
2 Culture Plate for Typhoid and Colon Bacilli. (Eine neue Platte zur Züchtung von Bakterien der Typhuskoligruppe aus Fäces.) M. Mandelbaum.
3 Destructive Influence on the Skin of Radium Emanation. (Ueber den zerstörenden Einfluss der Radium-Emanation auf die Haut.) G. P. Mesernitzky.
4 Relations Between the Physician, the Pharmacist and the Manufacturing Chemist. (Arzt—Apotheker—Industrie.) M. Winckel.

100. **Examination of the Stools.**—The introduction of the omach tube is liable to cause slight erosions which may duce enough bleeding to give deceptive findings when the ool is examined for blood. This, van Leersum says, is pecially liable to occur with exfoliating gastritis and tarrhal achylia. With the former the mucosa is so fragile at even straining at stool may tear off scraps. When sting the stools for blood the patient should be warned refrain from any movements straining the stomach or domen, and the stomach tube should not be used. It is tter to refrain from eating meat during the period of the sts. Another element liable to mislead is the presence the outside of the stool of menstrual blood or blood from morrhoids. This source of error can be obviated by washing e lumps in a three per cent. solution of hydrogen dioxid. is removes all the blood on the exterior and the guaiac test n then be confidently applied to the stool from the center the lump. For the test for pancreas functioning by estiation of the digestion of the nuclei in the fibers of meat, he ixes the stools with a lot of water and sets aside in a tall ssel. When the heavier particles have settled out, the pernatant fluid is decanted into another vessel. The getable fibers then gradually settle to the bottom and the uid above contains merely the meat fibers and fine detritus. Repeating this sedimentation process, the sediment finally contains most of the meat fibers in the stool, and their amount can be estimated and the nuclei stained and examined to estimate the extent of pancreatic digestion. With healthy digestion there is very little sediment; with poor digestion and with disease of the pancreas, the sediment abounds in undigested meat fibers. He has thus obtained an abundant sediment consisting almost exclusively of meat fibers in cases of diarrhea and in a case of pancreatitis. The yeast cells which induce fermentation are readily recognized in the stools under the microscope, showing up as bluish bodies, refracting light, oval, and grouped in chains or bunches. These cells are a little smaller than the cells of baker's yeast. Stools free from such colonies of yeast cells need not be examined further for fermentation processes.

101. **Total Argyria.**—Koelsch reports two cases of severe industrial total argyria. The patients were women of 27 and 50 who since the age of 13 or 14 had been employed in arranging in booklets sheets of silver leaf, like gold leaf. He knows of no treatment liable to prove effectual; drugs that might dissolve out the silver from the tissues would prove too toxic for the patients. The first indication of the silver line on the gums should be a warning to change to some other occupation.

St. Petersburg. medizinische Zeitschrift

January 14, XXXVII, No. 1, pp. 1-16

105 *Autodigestion of the Esophagus. (Fall von Oesophagomalacia.) W. Kernig.
106 Diagnosis and Treatment of Abdominal Contusions. (Subkutane Bauchverletzungen.) H. v. Haffner.
107 Means for Estimating Functional Capacity of the Heart. (Einige Methoden der funktionellen Herzdiagnostik.) H. Stillmark.

January 28, No. 2, pp. 17-32

108 Pharmacologic Research on Alkaloid of Mescal Buttons. (Zur Wirkung von Anhalonium Lewinii.) A. Waeber.
109 Cancer. (Ueber Krebserkrankungen.) A. Bertels.

105. **Autodigestion of the Esophagus.**—Kernig's patient developed fever the third day after abortion at the third month. Three days later he found the woman moribund, a patch of excoriation on the chin, and the abdomen distended with air. Poisoning with suicidal intent was assumed from the raw spot on the chin and the collapse, as poison suicides are common in the Obuchow hospital, 298 cases having been treated there in 1909 and 355 in 1910, and the excoriation on the chin being a frequent finding. But this patient's mouth and throat were normal and although she presented all the signs of peritonitis the abdomen was not rigid. The necropsy findings demonstrated that the peritonitis, originating in the genital organs, had induced repeated vomiting, and the woman was too weak to expel the vomit some of which stayed in the lower part of the esophagus and under its corrosive action the walls softened and ruptured, permitting the escape of air into the abdomen. The vomit lying on the chin had induced the excoriation.

Therapie der Gegenwart, Berlin

February, LVIII, No. 2, pp. 49-96

110 *Cod Liver Oil. (Beitrag zur Lebertrantherapie.) A. Czerny
111 *Emphysema of the Lungs. (Betrachtungen über das Lungenemphysem.) O. Minkowski. Commenced in No. 1.
112 *Differential Diagnosis and Treatment of Gastric Neuroses. (Zur Differentialdiagnose der Magenneurosen und ihre Beziehungen zur Therapie.) L. Kuttner. Commenced in No. 1.
113 Radio-Active Substances in Treatment of Cancer. (Die Behandlung bösartiger Geschwülste mit radioaktiven Substanzen.) S. Meidner.
114 Vibratory Massage in Asthma. W. Siegel.
115 Strabismus and Its Treatment. (Ueber Schielen und seine Behandlung.) P. Römer. Commenced in No. 1.
116 By-Effects of Salvarsan. (Ueber die Nebenwirkungen der intravenösen Salvarsaninjektion.) Berneaud.

110. **Cod Liver Oil in Therapeutics.**—Czerny ascribes the benefit from cod liver oil to the fact that it supplies fat in an easily digestible and convenient form, while fat is the element of the food lacking most in the diet of the poor and of almost all children. When children already have a sufficiency of fat in the diet it is folly to give cod liver oil, he says, as also to children with the exudative diathesis. The morbid tendencies of the latter are aggravated by fat in the diet; this was instructively shown in an experience at the children's clinic in his charge. He pushed cod liver oil in treating a number

of tuberculous children, giving them as much as they could take without appreciable disturbance. Some thus took up to 80 gm. of cod liver oil a day without apparent harm. The children did not make any special gain in weight on these large amounts of cod liver oil, but one after the other they developed eczema of the face and scalp so that in a few weeks the clinic was a regular hotbed of "scrofula." The cod liver oil was then dropped, and the tendency to eczema gradually subsided and has never been observed since at the clinic as Czerny's dietetic regulations keep the children permanently free from all such manifestations of the exudative diathesis, which is thus kept under control. In tuberculosis, however, he adds, it is important to steer the right course between giving the proper proportion of fat required for the tuberculosis while refraining from giving fat enough to rouse the exudative diathesis to any manifestations. Weigert's experimental research in 1907 confirmed what physicians had long known from experience in regard to fat in the diet, namely, that a large proportion of fat checks the development of tuberculosis while carbohydrates favor it. Czerny regards two tablespoonfuls of cod liver oil a day as about the proper dosage for tuberculous children on a diet otherwise poor in fat.

111. **Treatment of Emphysema.**—Minkowski comments on lack of elasticity in the chest wall as the main factor to be combated in treatment of emphysema. Operative measures aim to restore this lacking elasticity, and he thinks that chondrotomy for this purpose should be done before the condition has entailed atrophy of the muscles of respiration and severe disturbances in the circulation. Potassium iodid, he says, is still as of old the best expectorant for bronchitis with emphysema. Epinephrin has a favorable influence in asthma, probably from the anemia it induces in the mucosa of the finer ramifications of the bronchi, thus reducing the resistance to expiration. The benefit from sweating procedures, electric light baths, is probably from the same mechanism. All measures are rational and useful which aid in strengthening the muscles of respiration and promoting expiration of residual air. Of special importance is the strengthening of the diaphragm. Full deep baths modify the external pressure, and are particularly beneficial in treatment of emphysema, as also means to regulate the heart action. Many cases which used to be called emphysema of the lungs with bronchitis are now classed as insufficiency of the myocardium with stasis catarrh, and treatment based on this better conception of the condition is far more liable to be successful.

112. **Stomach Neuroses.**—With the progress of differential diagnosis, the assumption of a true gastralgia is becoming very rare, Kuttner remarks. Some direct or indirect, near, remote or reflex cause can almost invariably be discovered. Disease in lungs or pleura, heart, liver, kidneys, pancreas, genital organs, hernia or intercostal neuralgia may induce pain in the stomach, simulating a local affection. He cites a number of cases in which vomiting and other gastric symptoms were regarded and treated as a neurosis but were finally traced to a diverticulum in the esophagus or a kinking above the diaphragm, a chronic nephritis, meningitis, brain tumor or tabes. Recent examination of 100 patients with various nervous affections has shown that deviation of complement, lymphocytosis and the globulin reaction in the lumbar puncture fluid, even with no other symptoms on the part of the central nervous system, can be accepted as evidence of the central origin of the so-called periodic vomiting. In two recent cases the periodic vomiting occurred without headache, dizziness, syncope or tendency to apoplexy, and yet the trouble proved to be multiple sclerosis. Periodic vomiting with acetonemia, in children, is probably a manifestation of an inherited diathesis. Hyperchlorhydria may be the only manifestation of chronic appendicitis or gall-stones, and he reports two cases of this kind, the treatment having been directed exclusively to the hyperchlorhydria and the underlying affection having been neglected and allowed to progress to a dangerous point. Anorexia may be the only sign of tuberculosis, or a distaste for meat of gastric cancer, while an exaggerated appetite may be a sign of pregnancy or diabetes, gastric or duodenal ulcer or some serious mental or nervous disease—all of these must be excluded before assuming a true sensory neurosis of the stomach. A test for alimentary glycosuria may help throw light in these cases. The so-called dyspeptic asthma can generally be traced to arteriosclerosis or some other affection of the heart or vessels.

Wiener klinische Wochenschrift, Vienna

February 8, XXV, No. 6, pp. 227-258

117 "Cancers" in the Vegetable Kingdom. (Der "Krebs" der Pflanzen.) L. Hecke.
118 Resistance of Trachoma Virus. (Experimentelle Untersuchungen über die Filtrierbarkeit des Virus der Einschlussblennorrhoe und über die Wilderstandsfähigkeit des Trachomvirus.) A. Botteri.
119 Dubious Sex. (Zur Kenntnis des "fraglichen Geschlechtes"—Homines neutrius generis, Virchow.) L. Arzt.
120 The Scaphoid Scapula. (Einige Bemerkungen über die Scaphoidskapula und ihre Begleiterscheinungen.) W. W. Graves.
121 *Tuberculosis of Buccal Mucosa. (Zur Kasuistik der Mundschleimhauttuberkulose.) F. v. Redwitz.

121. **Tuberculosis of Buccal Mucosa.**—In the case reported a lump was removed from the inside of the right cheek; it proved to be a tuberculous lesion although assumed beforehand to be of a cancerous nature. A recurrence at the same spot was removed a few weeks later. Three and a half years later a similar induration developed in the mucosa of the other cheek, which was also excised, as likewise a recurring lesion at the corner of the mouth. During the year since the patient, a man of 40, has had no further buccal lesions of the kind although there are signs of a bilateral apical process, so that the process in the mouth was probably not primary.

Zeitschrift für Kinderheilkunde, Berlin

III, Nos. 5-6, pp. 391-572. Last indexed February 3, p. 383

122 Volume and Specific Gravity of Living Infants. (Körpervolumen und spezifisches Gewicht von Säuglingen.) O. Kastner. (Körpervolum- und Körperdichtebestimmung am lebenden Säugling.) M. Pfaundler.
123 Hydrocephalus and Syphilis. (Hydrocephalus und Lues.) W. Knöpfelmacher and W. Schwalbe.
124 Action of Salts on Infants' Organism. (Die Wirkung der Salze auf den Säuglingsorganismus auf Grund früherer und neuerlicher Untersuchungen.) E. Schloss.
125 Growth and Osmotic Pressure in Young Dogs. II. (Wachstum und osmotischer Druck bei jungen Hunden.) P. Schulz.
126 Characteristics of Prehistoric Skeletons in Cretins. (Neandertalmerkmale bei Kretinen.) Finkbeiner.
127 Preserved Human Milk for Infant Feeding. (Praktische Erfolge der Ernährung mit konservierter Frauenmilch—Bericht über 100 Fälle.) E. Mayerhofer and E. Pribram.
128 Vasoconstricting Substance in Infants' Blood-Serum. (Ueber gefässverengernder Substanzen in Säuglingsblutserum.) S. Samelson.

Zentralblatt für Chirurgie, Leipsic

February 10, XXXIX, No. 6, pp. 169-208

129 *Doubled Periosteum Flap as Substitute for Joint Ligament. (Bildung eines Gelenkbandes durch freien Periostlappen.) M. Katzenstein.
130 *Prevention of Postoperative Ischemic Paralysis. (Zur Verhütung der Drucklähmungen nach Esmarch'scher Blutleere.) H. Gocht.

129. **Joint Ligament Made from Free Periosteum Flap.**—Katzenstein reports a case in which he remedied severe functional disturbances in the calcaneoscaphoid articulation by supplying a new ligament for the ruptured one. As the new ligament must be one that would grow solidly to the bone, he selected periosteum for the material; to prevent bone growth he folded the strip of periosteum lengthwise, the ossifying surfaces in contact except where a small area was left where the ossifying surface was fitted to a raw surface made for it in the malleolus and scaphoid bone. The part was put in a plaster cast for seven weeks, the foot in the varus position. When the cast was removed conditions were apparently normal. The tibionavicular ligament in this case had been torn by the woman's heel catching in a stair carpeting and holding there as she fell. A chronic, very painful luxation resulted, but all disturbances ceased after the operation two years after the accident. Katzenstein cites other experiences to confirm his view as to the great importance of the joint ligaments for normal functioning of joints. Injury, even merely overstretching, may seriously interfere with function. He used the joint capsule to make a ligament in a previous case, but found that the free periosteum flap has superior advantages. It will be found particularly useful, he thinks, for disturbances resulting from overstretching of the deltoid ligament.

130. **Prevention of Postoperative Ischemic Paresis.**—Gocht plies under the constricting band or belt a little bag con- ning "factis." This is ground rubber, and it is used in the anufacture of truss pads, etc. A bag of it makes a cushion hich spreads the pressure while exerting an elastic, even essure over the region. Under the Esmarch band or the omburg belt it protects against pressure paralysis, etc.

Zentralblatt für Gynäkologie, Leipsic

February 10, XXXVI, No. 6, pp. 161-192

1 *The Electrometrogram. J. Veit.
2 Course of Pregnancy and Delivery with Uterus Bicornis. (Beitrag zum Schwangerschafts- und Geburtsverlauf bei Uterus bicornis unicollis.) R. Klages.
3 *Wire Decapitator. (Der Kezmarszky'sche Dekapitationsecraseur.) B. Nadory.

131. **The Electrometrogram.**—Veit has coined this term to present the application to the contractions of the uterus of e principle of the electrocardiogram. He had intended to e Einthoven's filament galvanometer, thus applying the same hnic as in electrocardiography, but found it impossible to cure this galvanometer. A Bock and Thoma oscillograph s at his disposal, however, and he found that it worked ually well, recording faithfully the electric fluctuations in e uterus accompanying the muscular contractions. The ings are so clear and characteristic that they afford a st interesting and reliable means of studying the action drugs on the uterus. The current must be conducted away the feet instead of the arms, as otherwise the heart action y disturb the record.

133. **Decapitator.**—Nadory cites a number of advantages of e Kezmarszky instrument, a piano wire with a loop in each d, the ends drawn down through a handle carrying a thumb- ew which winds the wire down to make the loop smaller d smaller. The obstetrician's hand is worked into the uterus til the thumb and finger can encircle the neck of the fetus. en one end of the wire is introduced along the thumb until e finger can seize the loop in the end and draw it around e neck and out. The looped ends are then wound down turning the screw in the handle, thus severing the head th ease and precision. The instrument has been in use at dapest since 1882 and has fully established its superiority Nadory shows by seven case-histories. He has improved the original model by having a ring worn on the thumb guide the wire as it is first introduced, as he shows in an istration.

Gazzetta degli Ospedali e delle Cliniche, Milan

December 17, XXXII, No. 151, pp. 1595-1610

4 Official Report on the Plague in Manchuria. (A proposito dell'ultima epidemia di peste polmonare in Manchuria.) G. Galeotti.
5 Tuberculosis of the Intestine. (Ricerche cliniche sulla tubercolosi intestinale.) L. Cecconi.

Policlinico, Rome

January, XIX, Surgical Section No. 1, pp. 1-48

6 *Bone and Joint Grafts. (Di alcune ricerche sperimentali sul trapianto libero osteo-articolare.) R. Dalla Vedova. (Commenced in No. 12, xviii.
7 *Treatment of Ankylosis of the Jaws. (Sul serramento stabile delle mascelle per anchilosi ossea temporo-mascellare.) R. Malatesta.
8 Syphilitic Synovitis. (Di un rarissimo caso di sinovite papillare luetica considerato forma iniziale di lipoma arborescente delle guaine tendinee.) O. Finzi.

136. **Bone and Joint Grafts.**—Dalla Vedova gives thirty- ne radiographs and nine colored pictures of the findings in bits grafted with parts of bones and joints taken from er regions on the same animal. No histologic healing was dent in the cases, but the grafts grew into place and less differentiated elements proliferated. Satisfactory ctional results were obtained in his experimental research he describes in detail.

137. **Ankylosis of the Jaw.**—Malatesta reports the case of nan of 33 who had developed ankylosis of the jaw in child- od in consequence of an abscess in front of the tragus with eomyelitis of the ascending ramus of the jaw. The deformity s corrected by merely sawing the joint and next day inter- sing a silver plate. The teeth had developed very defec- ely but satisfactory conditions were restored by the operation and some dentistry, and the man is now, two years later, free from all disturbances. Orlow found fifty-four cases of bony ankylosis in 104 cases of ankylosis of the jaw on record, and others have been published since, bringing the number to over seventy. In fifteen cases the ankylosis was bilateral. In the case reported the characteristic deviation of the chin toward the sound side was pronounced. In four other cases on record a silver plate was interposed, as in the present case, but there was a persisting fistula in two cases. Malatesta thinks that the delay of a day before introducing the metal plate aided in the successful outcome, as it permitted absolute hemostasis.

Riforma Medica, Naples

January 20, XXVIII, No. 3, pp. 57-84

139 Experimental Research on Reconstruction of the Vaginalis of the Testicle with Flap from the Peritoneum. (La ricostruzione della vaginale del testicolo con lembi di peritoneo.) A. Librola.
140 Changes in the Heart Under Influence of Epinephrin. Experimental Research. (Sulle alterazione del cuore da adrenalina.) P. Pisani.

January 27, No. 4, pp. 85-112

141 Meralgia Traced to Nodose Neuritis. (Caso di meralgia parestetica da neurite nodosa.) L. Preti.
142 Improved Technic for Bassini Operation for Hernia. (Una piccola variazione al metodo Bassini. L'aggiunta di un punto di seta.) U. Grimaldi.

February 3, No. 5, pp. 113-140

143 *Chemical Reaction in Urine, After Administration of Thiocol, as Sign of Liver Disease. (Una nuova reazione chimica nelle urine degli individui che prendono solfo guaiacolato potassico: suo valore nella diagnosi d'insufficienza epatica.) D. de Sandro.
144 Experimental Tuberculosis of Bile Apparatus. (Ricerche sperimentali sulla tubercolosi dei fegato e delle vie biliari.) G. Carere. Commenced in No. 4.

143. **Thiocol Test of Liver Functioning.**—De Sandro states that persons who have been taking potassium guaiacol-sulphonate (thiocol) for several days do not eliminate it in the urine as such or in the form of its separate ingredients, none of which gives the characteristic reactions in the urine, but the urine of such persons turns green on addition of ferric chlorid. If, however, the liver functioning is defective, the urine does not display this color reaction on addition of ferric chlorid. There is not a trace of green in the urine in cases of advanced liver disease. He found the reaction negative in a case of severe malarial anemia with enlarged and hard liver, free from urobilinuria but with indicanuria, the kidneys sound, and he is now investigating the behavior of the stain in kidney disease. In a patient with tuberculous peritonitis the urine reaction was positive after taking thiocol, and the assumption that the liver was sound was confirmed by necropsy. An aqueous solution of the drug turns violet on addition of the ferric chlorid.

Sei-I-Kwai, Tokyo

January, XXXI, No. 1, pp. 800-113

145 The Pathological Anatomy of the Pneumonic Plague in Manchuria. A. Fujinami.

Brazil Medico, Rio de Janeiro

January 15, XXVI, No. 3, pp. 21-30

146 North American Triatomas. (Notas de entomologia medica e descripçao de duas novas especies de triatomas norte-americanos.) A. Neiva.
147 Nephroptosis. A. Vianna.

January 22, No. 4, pp. 31-40

148 *Momburg Belt Constriction in Obstetrics. (A applicaçao do processo de Momburg nas hemorrhagias do delivramento.) S. Kossobudzki.
149 Cancer of the Kidney. (Cancro do rim.) L. Freire.

February 1, No. 5, pp. 41-50

150 Children's Untruths. (Sobre a mentira infantil.) P. Olinto.

148. **Belt Constriction in Obstetrics.**—Kossobudzki expatiates on the simplicity and effectualness of arresting postpartum hemorrhage by the Momburg technic, winding a two-yard piece of rubber tubing around the patient's waist. In a case reported the tube was removed after twenty minutes, the uterus having contracted sufficiently during the meanwhile to arrest the hemorrhage. He cites a number of authorities on the subject, emphasizing in conclusion that severe anemia strictly contra-indicates the measure, as also an aneurysm, arteriosclerosis or any severe cardiovascular affection. The tube should be drawn just tight enough to arrest the pulse

in the femoral arteries, neither more nor less. It should be tightened and removed very slowly and gradually. He makes a point of telling the family beforehand that this measure is necessary but is not entirely free from danger.

Semana Medica, Buenos Aires

January 11, XIX, No. 2, pp. 49-92

151 *Osteoplastic Amputation of the Leg. (Contribucion al estudio de la amputacion osteoplastica de la pierna. Procedimiento del Prof. L. Valle.) A. F. Landivar.

January 18, No. 3, pp. 93-136

152 *Amino-Acids in Urine as Test of Liver Functioning. (Determinacion de los amino-acidos de la orina como medio de exploracion funcional hepatico.) M. R. Castex.

151. **Osteoplastic Amputation of the Leg.**—Landivar gives ten illustrations of the technic and roentgenoscopic findings with Valle's method of amputating the leg at the lower third. The ease and simplicity of the technic commend it while the flap of skin, bone and periosteum left supply a good covering for the stump. The incision is shaped like a U, upside down; the long part left in the center is the flap to be turned back later. The tibia is cut across below the site for the real amputation, and is then sawed lengthwise and then across on the level with the sawed stump of the fibula. This leaves a shallow, square piece of tibia adherent to the periosteum flap. As the flap is turned down over the stump this plate of tibia fits over the cut surface of the tibia, where it is fastened with a few catgut sutures. The ultimate outcome of this technic is said to be exceptionally good. Five cases are reported in detail.

152. **Amino-Acids in the Urine as Index of Liver Functioning.**—Castex applied the various tests according to the phosphotungstic and other technics, and studied the findings in health and in various diseases, following the same lines of research as Frey, Falk and others on the amino-acids in the urine. The findings in forty cases are tabulated for comparison, and in another table the repeated findings in two cases of pneumonia, one showing exceptionally high aminuria, with recovery, while in the fatal case the proportion of amino-acids was abnormally low. A high content was also noted in cases of diffuse liver disease, in febrile tuberculosis and, highest of all, in a case of pseudoleukemia.

Ugeskrift for Læger, Copenhagen

February 8, LXXIV, No. 6, pp. 217-250

153 *Epidemic Poliomyelitis and Its Treatment. (Den Heine-Medin'ske Sygdom og dens Behandling.) H. C. Slomann.

153. **Treatment of Epidemic Poliomyelitis.**—Slomann says that during the acute phase the treatment should be that for acute infections in general, rest, hygiene, etc., with measures for symptoms as they arise. Calomel may prove of aid as in some cases the portal of entry is evidently in the gastro-intestinal tract; hexamethylenamin is still on trial. After the acute stage is past, massage and exercise should be applied to keep the muscles in good condition, and the physician's first task is to determine which muscles require special strengthening. This requires testing the functioning of every group of muscles. The massage should be done briefly, with frequent pauses. Dry warm packs for the extremities, especially at night, will help to regulate the defective circulation in the paralyzed limbs, and warm baths are also useful as the paralyzed muscles contract more easily when the weight of the body and other muscles is eliminated by the support of the water. Slomann does not regard electricity as of much use in poliomyelitis as the faradic current acts only on muscles not giving the reaction of degeneration, while the electric measures are liable to weary and render the child nervous. The physician must be on the watch to detect any tendency to contracture; Slomann has observed incipient contracture of the Achilles tendon nine or ten days after the onset of the disease. Any muscle displaying this tendency must be systematically fully stretched several times a day, and any articulation showing a tendency to deformity must be exercised in all directions and kept in a position of overcorrection, bandaged thus if necessary. He cites Wickman's eight types of poliomyelitis, the spinal, bulbar, cerebral, meningitic, polyneuritis, ataxia, acutely fatal and the abortive forms. He says that the disease in justice should be called the Heine-Medin-Wickman disease, and states that during 1911 Norway had about 800 cases recorded, Sweden 3.000 cases, Germany at least 1,000, and Austria in 1909 had 600.

Upsala Läkareförenings Förhandlingar

XVII, No. 3, pp. 141-270. Last indexed January 20, page 234

154 *Arythmia in Children. (Om arhytmi, särskildt hos barn.) R. Friberger.

155 Occurrence of Fat in the Thymus Parenchyma. (Om förekomsten af fett eller fettliknande substanser i thymusparenkymet.) R. Holström.

156 Physiology of Fixation of the Ocular Image. (Ogats rörelser under fixering.) H. Ohrvall.

157 Influence of Fertilization on Osmotic Pressure in Amphibian Ova. (Befruktiningens inflytande på osmotiska trycket hos ägg från Bufo vulgaris och Triton cristatus.) E. L. Backman.

154. **Arhythmia, Especially in Children.**—Friberger makes an important contribution to this subject by his report of the results of systematic examination of 321 unselected school children between the ages of 5 and 14. He gave each child a question-blank to be filled out with the aid of the parents, stating whether the child had had scarlet fever, diphtheria, acute articular rheumatism, chorea or other serious illness, and whether the child had been inclined to be short of breath after running, more than its mates. The questions in regard to articular rheumatism were particularly minute so as to exclude any other affection causing pains in the limbs which might have been confused with it. The record of each child further included the weight, height, blood-pressure, examination for albumin, heart and lung findings and the results of a jumping exercise for one minute, the pulse being recorded before, immediately after and a minute later. The pulse was palpated and a graphic tracing taken. The respiration rate at the same time was recorded or a graphic tracing taken of the jugular venous pulse. The time-rate of the pulse was recorded at the same time in tenths of a second. The children were given a few pennies for their cooperation and seemed to take an interest in the examinations and be conscientious in filling out the blanks. He thinks that psychic factors may be excluded as the children were not excited or afraid, having observed the examination of other children. Sixty-four of the children were examined anew at a later period and the findings were approximately the same. He does not know of any similar systematic research on old or young, and yet the lack of such records leads to erroneous conclusions from examination of the sick, as conditions which are physiologic at the age of the subject are assumed to be the consequence of the pathologic condition at the time. Thus Friberger's conclusions are totally at variance with Heubner's; the latter drew his conclusions from long series of sick children. Among the 321 school children Friberger found that only 37.4 per cent. had a regular pulse; in 12.2 per cent. there was extreme irregularity, and in 50.4 per cent. moderate arhythmia. Comparing these with the small series of similar findings in healthy adults by Hüsler, Janowski and von der Mühlls, shows that 65 per cent. of the children had differences of 0.2 or 0.3 of a second, and 22 per cent. still greater differences, while in the healthy adults the differences ranged from 0.025 to 0.3 second. The arhythmia in the children was generally what Mackenzie calls "the youthful type of irregularity." Boys and girls seemed to present it about equally, and no special influence could be discovered from the size or muscular development. The irregular pulse occurred with no more frequency among the children who had passed through some acute infectious disease than in the total material. Thirty-eight children presented signs of an unstable nervous system, but only 27 per cent. in this group had arhythmia, while the average for the rest of the children was 39 per cent. Twenty-three of the children had advanced pulmonary tuberculosis, and 42 per cent. in this group had arhythmia.

Books Received

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MEDICAL ASPECTS OF SURGICAL DISEASES, OR PREVENTIVE SURGERY *

JOSEPH COLT BLOODGOOD, M.D.
BALTIMORE

Most surgeons must feel daily that they are called on to employ their art as operating technicians at the wrong and late period of the disease. In this sense much of their work is unnecessary surgery. Earlier recognition of the disease, in some cases followed by appropriate treatment, may make surgical intervention unnecessary; such measures belong to preventive surgery.

Most physicians must regret their relation to the late intervention of surgery. In the literature and in conversation one so often reads and hears that surgery should be the last resort, modified sometimes by the statement: but not a late resort. This expression "a last, but not a late resort," sounds well, and I am quite certain that those who employ it mean well and are just as anxious to have surgery an early intervention, although as a "last resort." I fear, however, that the promulgation of the expression that surgery should be a last resort will unconsciously act to make it a late resort.

In view of the daily painful reminders in my operative work that surgery, indeed, is a late and last resort, and much of it unnecessary in this late period and some of it absolutely preventable, it is natural that I should wish to discuss the surgeon's view of the medical aspects of surgical diseases. In the last few years I have been especially attracted by this phase of the subject and have dwelt on it at considerable length in teaching.

The facts are these: At the present time and ever since modern surgical methods were introduced, surgical technic has been far ahead of either surgical or medical diagnosis. No one can question this. A graduate in medicine can become proficient in surgical technic long before he is in diagnosis. Surgeons, therefore, are prepared, in the majority of cases, to offer this improved technic to patients with surgical lesions in the early stage of the disease as well as in later periods. A statistical study of any surgical clinic will demonstrate that all classes of diseases which ultimately come for treatment by operation come, not in the early stage, but at later periods.

Studies of immediate and late results demonstrate that the operative mortality is greater in the late period, the postoperative complications and period of disability greater than when the operation is performed in the early stage. But the contrast is most striking in the study of the late results. This is especially true for malignant tumors.

In June, 1910, in an address before the State Medical Society of Wisconsin, I took for my subject the Medical and Surgical Aspects of Tumors.[1] For this reason I shall dwell but shortly on this subject and chiefly bring out further evidence which has accumulated since that time.

All surgeons will admit that an operation in the earlier period of the disease (when the patient is suffering not at all, or very little, when there is no pitiful cry for relief) is an unpleasant resort. Toward operative intervention there is still in the minds of the majority a mental attitude of fear.

There is always hope that an operation will not be necessary. Hope, fear, unpleasant resort are factors which act against early surgical intervention. But, there are others—ignorance, of the laity and the profession. In addition, the diagnosis of the surgical disease in the period most favorable for the prevention of an operation, or for the best immediate and permanent results of an early operation, is most difficult.

Again and again the statement has been made: The more difficult the diagnosis, the better the prognosis for surgical intervention, and the reverse.

I am inclined to believe that perhaps the general public, especially the younger generation, is being educated more rapidly than the general profession in regard to modern advanced methods of diagnosis which allow the recognition of surgical diseases in this earlier and more favorable period.

But we cannot hope for any better results after surgical intervention unless the methods of diagnosis already employed by the minority are made familiar to, and made use of by, the entire profession. There is a crying need for diagnosticians.

The public seeks first the advice of the general practitioner. He must be a better diagnostician. He must have available for his use the more modern methods helpful for this diagnosis.

Those fortunate enough to be connected with a large hospital have, within easy access, all of these methods—a trained laboratory man to make the Wassermann test, the Widal reactions, and bacteriologic examinations; trained clinical assistants for the examination of urine, sputa and stomach contents, blood-pressure and kidney function; a roentgenologist to make *x*-ray plates and investigations with the fluoroscope; laboratories equipped to make frozen sections for microscopic examination of doubtful cases; colleagues specializing in different branches who are able and willing to aid one another in the differential diagnosis. In such a hospital there is an expert to make an ophthalmoscopic investigation and to employ with precision such instruments as the laryngoscope, esophagoscope, bronchoscope, cystoscope, catheter, etc.

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* Read before the Lehigh Valley Medical Association, Delaware Water Gap, Pa., July 20, 1911.

[1] Bloodgood, J. C.: Wisconsin Med. Jour., August, 1910, ix, No. 3.

In large cities physicians are able to give their patients the benefit of these methods of diagnosis, but in smaller cities and in the country nothing of this kind is accessible, except for a few places. Some states have established laboratories in connection with the boards of health for making such examinations. In view of the danger of infectious diseases most city governments provide laboratories and experts to make for the general practitioner certain laboratory examinations free of charge, for example, blood-examinations for typhoid and malaria, bacteriologic investigations from cultures and smears from the throat, etc. Now, if the people are willing to pay for this, which is for their benefit, why should they not go further? It is quite impossible for any single practitioner to provide for all of the examinations. It is too expensive either for himself or for his patient.

Now, if we make the statement that surgery should be an earlier intervention and that this can be accomplished only by better methods of diagnosis, we must provide, in some way, for this. It appeals to me that the enlargement of the city health departments to meet such demands and the establishment of laboratories and laboratory experts in districts would meet the need with the least expense to the public.

The fact that surgery is usually the last and a late resort is not by any means always due to the inability of the physician to get these more accurate methods of diagnosis, but to faulty clinical knowledge of ordinary clinical methods.

I wish to emphasize this, because here is an opportunity for a great improvement with, perhaps, the least expense. A better knowledge of the surgical disease can be obtained by reading, and this, combined with a little more careful examination by inspection, by palpation and by taking a more careful clinical history, will allow the physician to reach a pretty accurate conclusion without the aid of the other methods.

But I wish to urge on the practitioner to break away from the older text-book pictures so typical of the various diseases in their late and often hopeless stage, and to attempt, by reading more modern text-books and especially current literature, to get the earlier picture.

Important as these more expert methods of diagnosis are, they are not essential in the large majority of cases to the general practitioner for the recognition of most surgical diseases in their more favorable stage for treatment.

If every individual were required by the state to subject himself or herself to medical examination at certain intervals of time, then we should have to use these laboratory methods which are now employed only by those proficient in their use. The public, however, seeks advice for symptoms, and in the large proportion of cases, if the physician is painstaking and observant, he will be able to come to a pretty fair conclusion from what the patient tells him and from what he can find out himself by simple physical diagnosis. If he cannot come to a conclusion, the methods of diagnosis which he is not prepared to use can be employed in the majority of instances by others for him. The question can be stated in so many ways, but I am very anxious to present it in a light that will be helpful, in a manner that will not create antagonism.

With most surgical lesions the average practitioner has experience with but a few, one or more. So it cannot be expected of him to make the early diagnosis without help. Large surgical clinics collect great numbers of the different surgical diseases so they should be able from their records to present most accurately the medical aspects. In this country, however, the surgeon in the past has written more frequently on technic than on diagnosis.

It is my view that if the surgeon really desires to get his surgical cases at an earlier and more favorable period, he should first study his own records and present this investigation to his medical colleagues. I fear the evidence will show that, while the surgeon has been crying to be allowed to operate earlier, he has not furnished the evidence to support his demand and he has not given to the clinicians the facts which are obtainable only from his surgical records.

I shall, in the further discussion, give examples to illustrate these general remarks which have preceded as an introduction.

We all recognize that surgery should be an earlier resort. The question is how to do it. I shall attempt to answer this question, as far as I am able from evidence which I have personally collected, based on recorded facts which I believe are truthful.

GASTRIC ULCER AND CANCER

It is my opinion that the accumulated experience favors the view, chiefly emphasized by the Mayos in this country, by Moynihan and Robson in England, and Hartmann in France, that gastric ulcer is the precancerous lesion in 75 per cent. or more of all cases of gastric cancer. The more I personally see of gastric cancer and restudy the histories of the older cases, the more am I inclined to this view. Whether this has been proved with scientific accuracy is, in my opinion, immaterial to the question before us. I am confident that experience shows that the only way to give the surgeon an opportunity to operate on a cancer of the stomach at a favorable period is for the medical profession and the public to look on symptoms of gastric ulcer as the first stage of gastric cancer, and these symptoms should lead at once to medical or surgical treatment which heals or removes the ulcer.

I have restudied most carefully, with the aid of the fourth-year medical class, all the cases of gastric cancer on record in the surgical pathologic laboratory of the Johns Hopkins Hospital and University. Most of these cases come from the clinics of Drs. Halsted and Finney, or from my own. Here in Baltimore, our records show that surgeons meet, on exploring the stomach, at least four cases of cancer to one of ulcer. The records of clinics in which the best results have been obtained in resection of the stomach for cancer show an opposite condition of affairs. This is true of the clinic at Rochester, Minn., of Kocher's clinic and some few others.

Up to the present time, among my colleagues in Baltimore, I know of not one case of resection of the stomach for cancer in which the patient has lived three years or more after the operation. During the last two years we have had some favorable cases. I had two in which the chances of a cure seem unusually good.

Kocher found that all his patients cured of cancer of the stomach had freely movable tumors at the pylorus, producing obstruction; all but one were of the type of adenocarcinoma, and none associated with metastasis. Naturally cancer at the pylorus brings the patient earlier for operation, because it produces stenosis.

There is great difference of opinion among both surgeons and physicians as to what shall be considered the minimum of symptoms which justify the exploration of the stomach. Surgery here is truly a last and late resort.

Pyloric stenosis, as a rule, forces surgical intervention. Otherwise there is a long period of pain, various gastric discomforts before the patient comes for surgical treatment. During this time, of course, it is good luck, not good management, which prevents the development of cancer, if it does not take place.

Eighty per cent. of all the cases of cancer of the stomach which I have studied clinically give a history of definite gastric symptoms of over one year, many of from five to twenty years, the large percentage of them of two and three years. In all of these there was ample opportunity for earlier intervention. In every case the maximum symptoms were present.

Perhaps the profession and the public do not realize that gastric cancer is a very common disease and ranks among the most frequent of all cancers.

In my opinion, we do not need the aid of instruments of precision or expert laboratory methods to ascertain the minimum symptoms which justify exploration. The most neglected available examination by the general practitioner is the passage of the stomach-tube and the estimation of the amount and gross characteristics of the stomach contents. This objective finding, with a few weeks' observation, during which the patient is under a restricted diet, is sufficient to justify a consultation at a hospital where all the other examinations can be made.

Indigestion is such a common complaint, it is so often associated with alcohol, tobacco, overeating, lack of exercise, worry, overwork, and many different mental conditions, that the average practitioner thinks of these only, but ulcer and, later, cancer may develop from these etiologic factors. Most of my cases of ulcer in young adult males have been associated with alcohol.

The medical relief should be rapid in these cases, and all these patients should be carefully watched. I am confident, from the experience of three years at the St. Agnes Hospital, where my medical colleagues have given me an opportunity to explore the stomachs when minimum symptoms were present, that it is not so difficult a problem. Now, if the medical section of the great profession will answer our call and help us to decide when to operate, the surgical section will promise to educate itself to know what is best to do when the abdomen is opened.

I make this statement with great care, but it has been my personal observation, confirmed by the reading of the literature, that physicians who specialize in gastro-enterology have learned by their special methods of treatment to make their patients so comfortable that they are very apt, when they get an early cancer in ulcer, to carry it along from the operable period to the inoperable one in comparative comfort. I am certain that less harm will be done by the surgeon who, with good technic, may open the abdomen for exploration a little too frequently than by the physician who, through any means, delays operative intervention in ulcer and cancer.

The surgery of gastric ulcer and cancer, especially ulcer, is by no means settled to-day, but in my opinion the technic is far ahead of the diagnosis. There is but one thing to do for operable gastric cancer—resection. The only question is, how shall the stomach be reanastomosed.

In regard to ulcer of the stomach the opinion that resection should be the operation of choice is growing in strength. If the adhesions are not too extensive, this operation should have no higher mortality, its immediate results are better, and, I am confident, time will show that the permanent results are far more satisfactory, because the ulcer, the precancerous lesion, is excised.

In the last year I have performed pylorectomy with a Kocher anastomosis in many cases, in which previously I would have been content with gastro-enterostomy or a Finney pyloroplasty. But these are surgical questions.

I trust that as surgeons restudy and publish their clinical observations on gastric cancer with the confirming statement of the frequency of a long history suggesting ulcer, and that as surgeons demonstrate by their reported experience that their mortality is low and their immediate and permanent results increasingly better, the laity and the general profession will attempt to reduce the total number of gastric cancer so that more operations will take place at the stage of ulcer, or in an earlier stage of cancer.

The physician, of course, must first feel convinced that the technic of his surgical colleague is sufficiently good to justify his advice of operative intervention.

CANCER OF THE COLON

Dr. Cody, a recent graduate of the Johns Hopkins University, first studied with me in a critical way the entire experience with cancer of the colon at my laboratory. I have restudied the subject again with Dr. Hebb of Baltimore. This has brought out most valuable information from which we can develop the medical aspects or the minimum symptoms which will allow one to explore the abdomen and resect this relatively benign cancer of the colon. These cases, up to the present time, can be divided into two main groups: In one, the larger fortunately, the patient comes to operation because of acute intestinal obstruction, and if the obstruction is relieved in time, the cause is ascertained, and the patient lives for the secondary resection. Although there is a fairly and unnecessarily large percentage of immediate mortality in this group, yet, among the survivors there are almost 80 per cent. of permanent cures. The individual, therefore, with a cancer of the colon is fortunate to get obstruction, because this will result in early operation.

In the second, smaller, group there are no acute symptoms of obstruction. The development of the clinical course varies somewhat, but all the patients suffer from attacks of abdominal pain of a sufficient degree to excite much more interest on part of the physician.

Then there may be intermittent diarrhea or constipation with or without blood or ribbon stools. There may be attacks of belching, nausea, vomiting and distention; indigestion of various degrees. These symptoms go on, the attacks repeat themselves, the patients are usually treated for neurasthenia or mucous colitis. No *x*-ray examinations are made. The proctoscope is neglected. The patients usually come for operation because of the appearance of a palpable tumor, or the greater discomfort and distention of the ascites from peritoneal metastasis. In this group, although there has been but little operative mortality from the exploratory laparotomy—a late and last resort—yet, there have been but few cures — less than 5 per cent. — either because the tumor has become adherent and thus inoperable, or because metastasis has taken place. Most of the patients admitted with acute obstruction give a history of previous symptoms of the same character.

I am confident, from this study, that cancer of the colon can and should be recognized earlier in a larger number of cases without the aid of the accidental acute obstruction. Cancer of the colon is a most favorable type of cancer. Resection of the colon is now a well-established surgical technic with minimum dangers.

If surgeons are given the opportunity to explore the abdomen, because the symptoms suggest cancer of the colon, they must make a very careful *x*-ray study before operation, because recent experience shows that in the early stage there is not much difference in the symptomatology of cancer of the colon in the different situations. Local pain is not often present. The pain is usually general, like colic.

In addition, there are many benign lesions the symptomatology of which is practically identical with the early stage of cancer. These lesions may even produce acute obstruction. So the surgeon must prepare himself to recognize cancer, for which there is but one operation —resection. If this malignant lesion is excluded he must be familiar with the various benign conditions and their operative treatment, because often the more radical resection is not necessary to accomplish a cure. Some of these benign lesions are: ptosis of the colon, which may be of various types; pericolitis with kink formation; mesenteritis; diverticulitis; this latter and volvulus are most frequently situated in the sigmoid colon. Then there are the rare inflammatory tumors which produce indurated masses in the wall of the colon, most frequently observed in the region of the appendix and often secondary to, or associated with, appendicitis.

The surgical problems, then, are enlarged when these patients with colonic lesions seek aid in the earlier and most favorable period.

I trust that during the next few years we shall see great strides in the surgery of the stomach and the colon. We have done so much for gall-stones, for appendicitis, for pelvic lesions, for lesions of the kidney, that we should catch up and bring surgery of the stomach and colon to an equal footing. In doing this we will save, by far, a larger number of patients who are suffering with cancer.

It is my opinion that the more rapid development of surgery of appendicitis, strangulated hernia, gall-stones, and pelvic lesions, is due to the fact that the danger of delay was more obvious, because more immediate, while in lesions of the stomach and colon the dangers are more remote. In addition, surgery of the former is less difficult than the latter.

INTESTINAL OBSTRUCTION

I have recently studied some 285 cases of intestinal obstruction of which I have records in the surgical pathologic laboratory. The medical aspects of this abdominal lesion resemble those of acute appendicitis. As stated before, the dangers of appendicitis are abscess and peritonitis. The sequence of events from the initial symptom is rapid. The patient is either dying of peritonitis or intensely ill with abscess, or on the pleasanter road to recovery at the end of three days. Appendicitis of the acute type is a much more common lesion than intestinal obstruction. My records show about one case of intestinal obstruction to ten of appendicitis. Naturally both the practitioner and the surgeon have had greater opportunity to be educated in the earlier diagnosis. In addition, the operative problem in appendicitis is simpler than in intestinal obstruction.

In the study of these cases of intestinal obstruction I can make out marked improvement in the earlier recognition and, of course, the operative mortality only in one group admitted to the surgical clinic. This group is strangulated external hernia, inguinal, femoral or umbilical. It is also true that the number of cases is less each year. This must mean that patients in greater numbers are subjecting themselves to the radical operation for hernia in the earlier period of the reducible stage. Although the number of cases of strangulation is smaller, however, yet these patients have come to the surgical clinic earlier, and gangrene, peritonitis, and death from auto-intoxication are very rarely observed. But the same is not true of other types of intestinal obstruction.

I then compared the cases of intestinal obstruction admitted to the clinic from the outside with those that arose in the hospital. These cases are chiefly postoperative. The difference in the duration of time from the symptom of onset to the operation was in great contrast as was the operative mortality. The surgeon, therefore, in the hospital wards had been trained to recognize intestinal obstruction in the earlier period in which the operative mortality is least.

The chief acute abdominal lesions which the general practitioner may expect are acute appendicitis, acute pelvic inflammatory lesions, intestinal obstruction of the various types, perforation of gastric and duodenal ulcers, acute pancreatitis, gall-bladder colic and acute cholecystitis, renal colic and acute infection of the kidney. Most of these lesions begin with epigastric or general abdominal pain associated with nausea and vomiting, and most patients give a history of previous constipation and indiscretion in diet. The usual diagnosis is acute indigestion; the usual treatment, catharsis. The maximum symptoms are to-day, as a rule, recognized, but in this period the chances of recovery are extremely slim in many of the lesions. Ochsner, of Chicago, well expressed the proper attitude of the physician toward a cathartic in the presence of acute abdominal symptoms. I have heard him make this statement:

> For those lesions in which a cathartic is indicated its postponement will do no harm, while for those lesions in which it is contra-indicated, the cathartic may be a factor in the fatal result.

Unfortunately an ill human being has been educated to expect and demand immediate relief of symptoms. Patients should be educated to the proper attitude, which is—diagnosis before treatment. They cry for morphin and usually get it; from their cradles they have been educated to the domestic cathartic. The suggestion of washing out the stomach is abhorred. As a rule there is even objection to an enema.

With symptoms such as abdominal pain, vomiting, one should most carefully observe the respiration and with the gentlest palpation examine for muscle spasm. Tenderness and muscle spasm, thoracic respiration, leukocytosis and obliteration of liver dulness are very early symptoms. A very careful inspection and palpation will as a rule make the physician suspicious in the very early stage of an acute abdominal lesion. Such cases should always be examined again in from two to four hours. In this early and perhaps doubtful stage it will be better for the patient to be sent to the hospital, if convenient, for further observation. Delay for surgical consultation at the home, where the surgery which may become necessary cannot be done, is but loss of precious time.

We all know that perforation of gastric, duodenal and intestinal ulcer should be recognized within four hours and operated on within six. Acute hemorrhagic pancreatitis will, I am sure, show the lowest mortality when the peritoneal bloody exudate containing the toxic ferment is removed by laparotomy within twenty-four hours, or sooner, and the pancreas drained. Operations between this time and the third day have an increasing mortality and after the third day operations are usually unnecessary, because the patient is either dead or recovering.

The story of appendicitis need not be repeated. That the probabilities of recovery without operation from acute cholecystitis, with or without gall-stones, is so large has been an influence to postpone operation when the acute symptoms in the right upper quadrant suggest gall-stones. It is quite impossible to differentiate acute hemorrhagic pancreatitis, perforation of gastric and duodenal ulcer, an inflammation of the appendix situated high up on the right side, or an intestinal obstruction in the upper portion of the jejunum, a case of acute cholecystitis with very marked symptoms.

Differential diagnosis cannot here be discussed in detail, but the symptoms of the acute abdominal lesions are there in the early period, if one will only look and feel for them and not mask them with morphin, and it is unnecessary to make them more pronounced by the administration of a cathartic. Abdominal pain which requires repeated doses of morphin usually indicates something more severe than a stone in the gall-bladder or kidney. It has been my experience that the indication for a second dose of morphin should be looked on as a call for operative exploration.

Intermittent abdominal pain of the type of colic without diarrhea is one of the earliest signs of obstruction. In these early hours the physician rarely palpates for von Wahl's loop through rectum or vagina or from above. The indistinct and rapidly passing wave of peristalsis is seen only by the keen eye of the close observer.

Gastric ulcer with its complication — cancer, and benign lesions of the colon with, perhaps, their secondary results — cancer, represents a group of more or less chronic abdominal troubles, the first warnings of which are often overlooked by the patient and perhaps more often treated but not diagnosed by the physician.

The danger of delay in gall-stones is less serious. The mortality of operation for stone in the common duct is about 9 per cent., for stone in the gall-bladder or cystic duct very much less than 1 per cent. So there is no argument which can combat this evidence against early operation on inflammations and stone in the gall-bladder. Gall-stones and cholecystitis, however, give by no means the typical symptom of gall-bladder colic. In my experience there is a large group of cases in which jaundice and gall-bladder colic are absent. These patients suffer from various kinds and degrees of epigastric pain or colic, or different types of indigestion of a lesser degree. In the last year I remember distinctly two patients whom I sent to the hospital to be admitted to the ward. As usual, they were seen and examined by the resident physician in charge before being admitted to the ward. After the history was taken and the examination made, admission was refused, because it was considered that they were out-patients for the medical clinic and not for the surgical wards. Only when they later presented letters which I had written, did they gain admission. In one of these cases the gall-bladder was packed with stones, in the other there was a marked chronic cholecystitis with pericolic adhesions.

It is to be understood that this progress depends on the education of the public; that physicians must be better diagnosticians; that the public must aid the profession by enlarging the functions and numbers of the laboratories of the health departments, so that they may aid in this earlier diagnosis, and—most important of all, perhaps—the surgeon must be prepared to make the diagnosis in this earlier period and perform the operation with a minimum mortality, and the assurance of the highest percentage of permanent results.

GRAVES' DISEASE

I wish to call attention to a lesion about which there is much discussion as to when there should be resort to surgical intervention. There are certain symptoms which are called thyrotoxic, or those of hyperthyroidism, which when fully developed produce a well-known and easily recognizable disease called Graves' or Basedow's disease, exophthalmic goiter, or hyperthyroidism. The evidence of surgical experience shows positively that in the more advanced and late stages the mortality of the operation is higher, the postoperative convalescence and disability longer, the chances of recurrence and secondary operation greater, and the possibility of a permanent cure less. Yet, in this later state surgery at the present time is practically the only treatment which offers the patient any chance.

There is no doubt that patients in the early stages may recover after proper medical treatment. In this stage, however, there should be no mortality from surgical intervention, the postoperative convalescence and disability shorter, the assurance of a permanent result greater. There is but one contra-indication of operation in this early stage—the skin scar.

A surgical operation, in any event, should be but a part of a well-planned medical treatment which has for its object mental and physical rest. Why should not surgery interfere in the least dangerous period, even if it interferes now and then unnecessarily?

904 North Charles Street.

A NEW APPARATUS FOR ADMINISTERING AND WARMING GENERAL ANESTHETICS AND NEW METHODS OF ADMINISTRATION

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I have devised a new apparatus primarily for the administration of nitrous oxid and oxygen, the chief aim being simplicity, utility and portability. I have also perfected two new methods of administration: ether by the closed drop method, and the warm vapor method, whereby the vapor of all anesthetics by all methods is warmed to body temperature at the time it is inhaled. Several other original and practical features will appear in the following description:

APPARATUS

A light stand is provided for holding two cylinders each of nitrous oxid and of oxygen. The supporting standard has slip, instead of threaded, connections with the base and the top bearing the cylinders so as to be quickly assembled and dissembled. Small rubber tubing leads from the top of the stand to an 8-liter gas bag, the neck of which is attached to a metal fitting, which carries a shut-off and air vent operated together, and is attached to one end of the anesthetic chamber. This opening of the chamber is quite large and through it the necessary gauze may be easily and quickly placed within. As the chamber is ample in size it is never packed, but just loosely filled, with coarse gauze. To the top of this chamber is attached the anesthetic cup, which has a needle-point valve controlling the flow of the liquid anesthetic to the chamber containing the gauze. As the anesthetic drops from the cup it can be seen plainly and the amount accurately regulated by the needle-point valve. The liquid anesthetic is added by a mechanical drop method, thus insuring it to be regular and constant, and at the same time the flow is in sight and under complete control of the anesthetist.

The other end of the chamber is attached to the inhaler, which has an expiratory orifice that is open when the exhalations are to escape, and closed when there is rebreathing. The inhaler carries an inner tube in which are two light and delicately constructed valves, so arranged that they are thrown out of action when there is rebreathing, and, when the exhalations are to escape, one valve prevents breathing back into the bag during expiration, and the other prevents any air from being inspired through the expiratory orifice during inspiration, the change from one form to the other being easily and quickly made by simply turning the knob through an angle of 90 degrees. The expiratory orifice always directs the exhalations away from the patient's face and field of operation. Through this orifice, the expiratory valve can be plainly seen, and its movement in the open method always shows whether the patient is actually breathing, while the movements of the bag furnish this valuable information in the closed method.

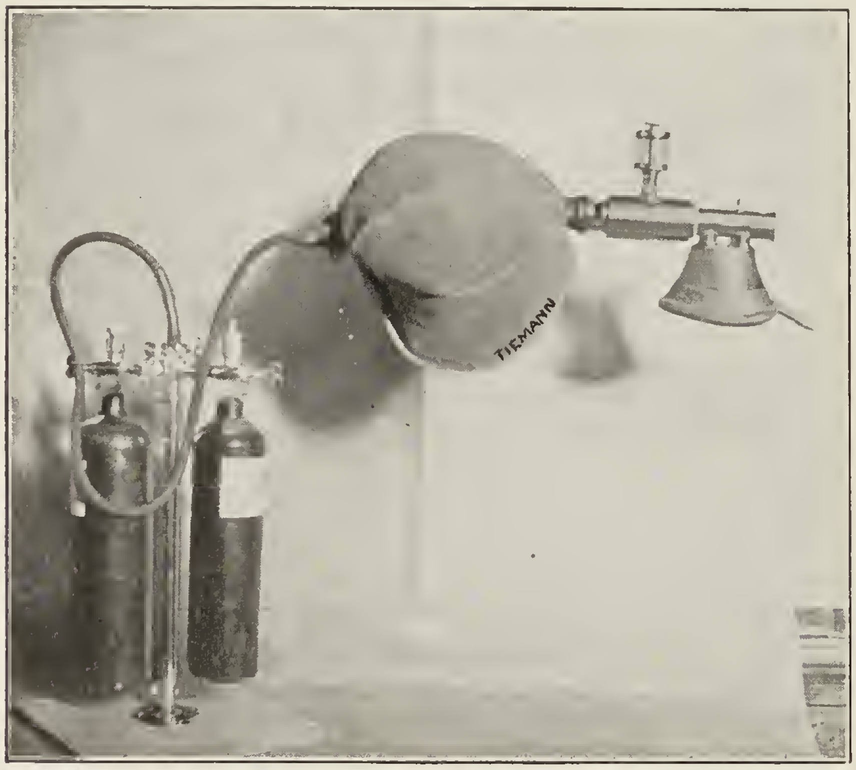

Fig. 1.—Apparatus for administering nitrous oxid-oxygen with ether attachment, one cylinder of each gas in position.

To the other end of the inhaler is attached the face mask, which is made of transparent celluloid or of metal, and of such a shape that when the rubber hood is inflated it fits the face very accurately.

The cup, chamber and bag, when in position, ordinarily extend back over the patient's head, but by reversing the mask on the inhaler, they may be extended over the patient's chest. The cup can always be maintained in an upright position, no matter what may be the position of the patient's face, by turning the chamber on its connection with the inhaler. When the ether attachment is not needed, the cup and chamber may be removed and the bag fitting attached direct to the inhaler.

A small and light electric heater, with a flexible cord which may be connected to any lamp socket (either direct or alternating current), is attached by spring clamps to the chamber, and it thoroughly warms all the anesthetic vapor. This heater can be attached and detached at any time without removing the inhaler from the patient's face or disturbing the anesthetic in any way. There is what might be termed a small rheostat a short distance from the heater for controlling the radiation.

METHODS OF ADMINISTRATION

When ether is administered by the closed drop method the stand and tubing are not used, unless oxygen is administered to prevent anoxemia. Otherwise the air vent is left slightly open, enabling the patient to inhale a small amount of air with each inspiration from the bag, and the amount of rebreathing controlled by the proportion the air vent is opened. Ethyl chlorid is administered by the closed method by spraying this anesthetic into the bag through the air vent, or through the rubber stop-cock (Fig. 2).

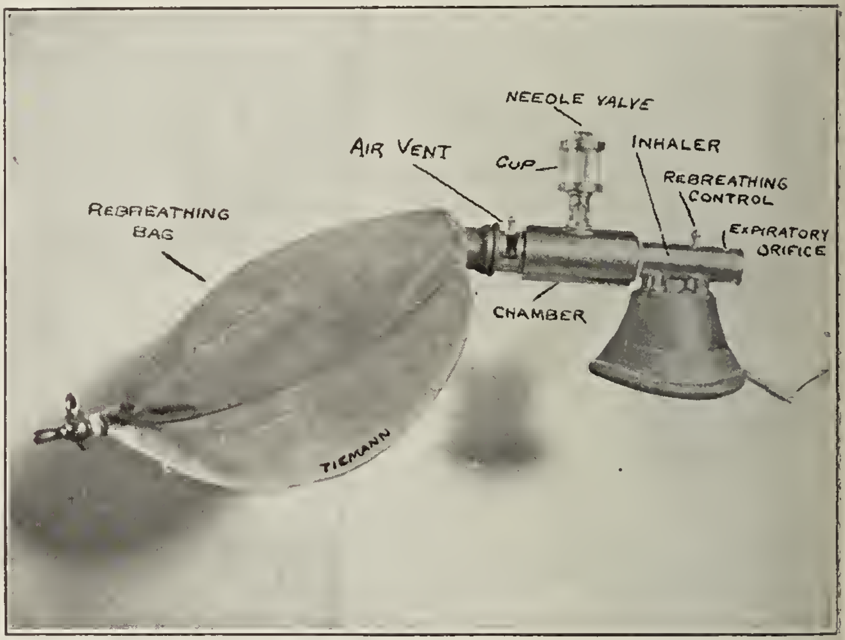

Fig. 2.—Same apparatus as in Figure 1, with stand and tubing disconnected.

When ether, anesthol, ethyl chlorid and chloroform are administered by the open method the bag is disconnected, thus permitting of a free supply of air and no rebreathing. The administration of the anesthetic, excepting ethyl chlorid, is controlled by the needle-point valve. As the exhalations escape at the expiratory orifice, instead of passing over the gauze, much less of the anesthetic is used.

Warm Vapor Method.—For ether by the open method one of the two higher grades of heat is used; and for the other anesthetics and methods one of the two lower grades of heat is sufficient. The hand holding the mask to the patient's face constantly furnishes the information as to the temperature of the chamber. For ether by the open method, it should be kept as hot as the hand can well tolerate it (120-125 F.), and for all other use it should be at about 100 to 105 F., or just merely warm. There is no practical way of holding the mask to the patient's face except by thus placing the hand in intimate relation to the source of heat—a very practical, efficient and constantly acting safeguard.

The Closed or Rebreathing Method.—As the breathing-space of my apparatus is ample throughout, and the bag placed close to the patient's face, it throws no extra work on the respiratory process in rebreathing, as in the case in which the patient breathes back and forth through a long tube. With a patient breathing rapidly (about thirty respirations per minute under nitrous oxid) and expiring 500 c.c. into a mask and a 30-inch tube of 1,000 c.c. capacity, it is certainly evident that none, or but very little, of the expiration reaches the bag before the next inspiration takes place, and that this inspiration consists almost entirely of a mixture of the previous expiration and the contents of the mask and tube. Consequently the patient continually inspires a higher percentage of carbon dioxid and a lesser amount of the anesthetic than would be the case were the bag placed close to the patient's face. In other words, when the bag is close to the face there is a retention of a less amount of carbon dioxid with the same amount of rebreathing, or with the same amount of carbon dioxid retained there is a longer period of rebreathing. Therefore it is a matter of economy as well as a better scientific principle to dispense with the long tube and place the bag close to the patient's face, and an extended clinical experience with both methods clearly establishes this proposition.

Another and decided advantage of having the bag and anesthetic chamber close to the patient's face is that it enables the anesthetist to watch the movements of the bag, the dropping of the anesthetic and the patient's face all at the same time. He can thus concentrate his attention on a small space.

In order to ascertain the temperature of the vapor inhaled when ether is administered by the open drop method, I placed a specially constructed and delicately calibrated thermometer within an inch of the gauze in the herein described inhaler—the approximate distance of the patient's respiratory passages from the gauze of the usual open mask—and, since the expirations did not influence the thermometer, this gave the temperature accurately of the inspired vapor. Sufficient ether for a light anesthesia quickly reduced the temperature to 55 F.; a moderate anesthesia to 45 F.; a deep anesthesia to 35 F., and a profound anesthesia to 32 F., operating-room temperature 75 F.

After determining the temperature of the cold vapor I attached the electric heater to the ether chamber and I found the temperature then to vary from 80 to 88 F. (average 84 F.) in a room temperature of 75 F. In other words, the electric heater raised the temperature of the vapor on an average 42° F. by the thermometer. But in this apparatus, after passing over the thermometer the vapor passes through 3 inches of a metal tube maintained at a temperature of about 110 F., which further elevates the temperature of the vapor several degrees, and, on account of a low specific heat of gases, the vapor was warmed to practically body temperature at the time it was inhaled.

ADVANTAGES

1. The design, construction and operation are reduced to the basic principles of simplicity.

2. Each and every one of the inhalation anesthetics can be administered by all the different methods in common use. It can be easily, quickly and thoroughly sterilized, and above all else it is practical.

3. Being compact in design, light in construction and easily assembled and taken apart, the entire apparatus, together with sufficient nitrous oxid and oxygen for two hours' anesthesia, can be readily carried in an ordinary handbag.

4. The whole apparatus is not expensive; any parts not wanted need not be purchased. As it covers the entire field for general anesthetics by the oral-nasal route, no other equipment is needed except for the highly specialized methods. It saves one-third of the cost of all anesthetics administered by the open method, and reduces to an absolute minimum the cost of the anesthetic by the rebreathing method.

5. For nitrous oxid administration it furnishes a light and compact stand for holding the proper number of cylinders, and places the rubber bag close to the patient's face. The stand is absolutely rigid with slip connections. It affords practical means for administering ether by a new method—the closed drop method, which is the logical and scientific complement of the open drop method. For ethyl chlorid administration by the open method, it insures that the anesthetic will always be completely vaporized and diluted before being inhaled. It thoroughly warms the vapor of ether by the open drop method. It always shows whether the patient is actually breathing—no matter what anesthetic is used or method employed. It warms the vapor of all anesthetics to practically body temperature at the time it is inhaled. It reduces the administration of ether to a scientific basis—any desired rate of administration can be obtained in the open, semi-open or closed methods and maintained with absolute constancy. In the open method it prevents the waste of the anesthetic from vaporization by the expirations. It furnishes a compact, light, convenient, practical and scientific means for administering all the general anesthetics by all the ordinary methods. It affords the utmost possible conservation of the patient's energy.

Bretton Hall, Eighty-Sixth Street and Broadway.

THE USE OF NITROUS OXID AND OXYGEN TO MAINTAIN ANESTHESIA AND POSITIVE PRESSURE FOR THORACIC SURGERY

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Although there are many forms of apparatus for differential pressure, we are still in need of a reliable and simple one that will enable us, in any hospital, to safely open the chest. Most forms of apparatus are either cumbersome and costly or unsatisfactory. The Meltzer and Auer method is the one in greatest favor at present and again proves the rule that in surgery, as in other lines, the guide to success is simplicity and efficiency.

In the method to be described, the differential-pressure apparatus is the size of a jack-knife and there is no more difficulty in applying it than in giving the ordinary gas and oxygen anesthesia.

Nitrous oxid with oxygen has the following advantages over ether as an anesthetic for thoracic work:

1. It is the only general anesthetic which will allow the continuous application of a mask to the face throughout the operation. Ether causes the collection of mucus in the throat, coughing, vomiting and such

relaxation that the tongue falls back into the pharynx. These emergencies, which are practically not encountered when nitrous oxid and oxygen are used, make the face-mask impracticable with ether and necessitate either a catheterization of the trachea or the enclosing of head or body of patient in a cabinet.

2. No pump of any kind is needed.

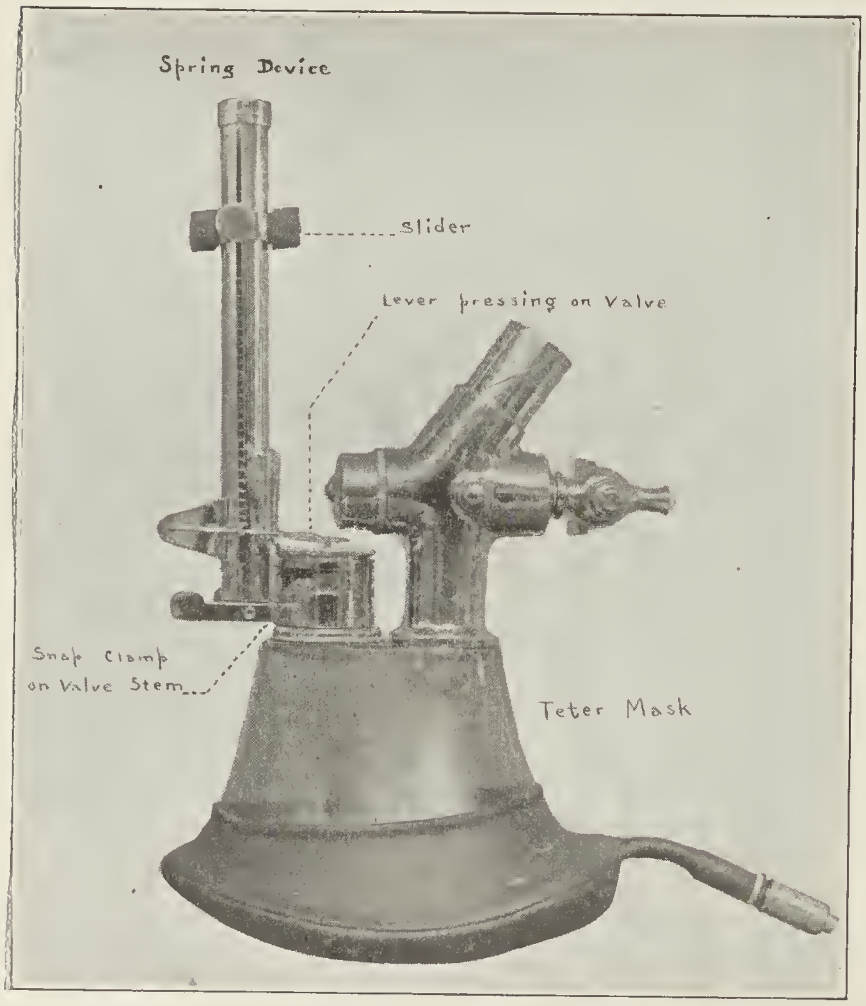
3. Nitrous oxid and oxygen is the safest anesthetic; compared with ether, there is little or no shock from gas, and shock and lowering of resistance are important factors in causing death following operations within the chest.

4. Nitrous oxid does not irritate the lungs as does ether.

5. Actual cautery may be used on ends of bronchial tubes as nitrous oxid is not inflammable.

The disadvantages of nitrous oxid and oxygen are as follows:

1. They are expensive (about $6 an hour, or $3 an hour with nitrous oxid generator in the building).



An attachment to the ordinary Teter mask for administering gases which raises the pressure so as to prevent collapse of the lung in operations on the thorax. The spring device is shown snapped in place on the valve stem of the Teter mask. It is the only special apparatus needed for positive pressure.

2. There is often a faint cyanotic tinge with this anesthetic when not sufficient oxygen is given; for instance, in some alcoholic patients who need a relatively greater amount of nitrous oxid than oxygen to keep them anesthetized. It has occurred, though very rarely, that patients with weak myocardium have died under this anesthetic, so theoretically it might happen that this extra work of the heart to compensate for the cyanosis in a patient of lessened lung capacity may lead to dilatation.

PRINCIPLE

The expansion of the nitrous oxid and oxygen, as they are allowed to escape from their storage cylinders, furnishes the positive pressure. The mixed gases are delivered into a mask and can escape only when they are under sufficient pressure to force open an exit valve, which is closed by a spring set at the desired pressure.

As the patient inhales, the valve closes, and he inhales nitrous oxid and oxygen. As he exhales, this exit-valve opens and the expired gases escape. This takes place with ordinary anesthesia with the Teter gas-and-oxygen-apparatus without differential pressure. The pressure on the valve, which is the only open part of this respiratory system, is then atmospheric pressure. When the spring device is applied physiologic conditions are not altered, but a little additional pressure is added to atmospheric pressure on the valve. It is the same as if the head of the patient were in a cabinet with pressure at a little more than atmospheric (say at 768 instead of 760).

The pressure in the mask can never exceed this amount because the valve will open, and it can never fall below this amount because of the flow of gases into the mask. The result is that the pressure in the respiratory system remains practically constant, so long as there is sufficient flow into the mask. It will be seen that the lungs will remain inflated to any desired degree, and if an extra large gush of gas should rush from the tank, the impulse is not visibly transmitted to the lungs, but merely spends itself through the exit-valve.

THE APPARATUS

The only special apparatus needed is a small spring device. This is made to snap on to the valve stem of the mask of the regular Teter nitrous oxid and oxygen apparatus which is in general use throughout the country. As can be seen in the picture, the slider is set at any desired point and presses the spring that pushes the lever which presses the valve of the Teter mask. Thus, the position of the slider controls directly the degree of inflation of the lungs. The device could, of course, be made to fit any other nitrous oxid and oxygen machine, such as the economical rebreathing apparatus of Gatch, or of Boothby.

DIRECTIONS FOR USE

The patient should first have morphin, gr. 1/4, and atropin, gr. 1/150; less nitrous oxid will then be required. One person should give the anesthetic and another should manage the mask and pressure. When the chest is about to be opened, the spring device should be snapped on to the valve on the mask and the slider moved down to the mark corresponding to 8 mm. Hg. This extra pressure is not noticeable in the breathing, and now when the chest is opened the lungs do not collapse. The mask should be kept snugly on the face with the pneumatic brim well inflated. If it does not quite fit, a towel permeated with petrolatum should be looped around it. This will make it air-tight. In adjusting the position of the slider, one should be governed entirely by the degree of inflation of the lungs. They should be kept almost flush with the chest-wall. Great care should be taken to move the slider slowly. It will be found that at all times one can cause a great inspiration by suddenly moving up the slider, thus removing the pressure. A sudden collapse of the lung is the greatest stimulus to an inspiration and is a terrific shock to the patient, as such collapse never occurs during life. Sudden releasing of slider should be carefully avoided and used only to cure apnea.

The lungs should never be allowed to bulge into the wound but should be brought up to it as the chest is closed.

Before the operation the nitrous oxid and oxygen apparatus and mask should be gone over while it is under water and all leaks should be repaired with adhesive plaster. Much gas may be saved by so doing.

The experimental basis for this work was done in August, 1909, and through the extreme courtesy of Dr. Crile, of Cleveland, I was allowed to carry out in his laboratory experiments on dogs, make pulse-tracings, etc.[1] Since then I have tried the method on more dogs and on three human subjects.

The first impression is that the irregularity of the flow of gases endangers the lungs to sudden bursts of pressure. This is not the fact. The exit-valve is a safety-valve and, being large, it never allows the pressure to exceed the amount for which the slider is set. Clinically the degree of inflation of the lungs is not visibly altered by the irregularities in the flow of gases but remains constant and under perfect control by the position of the slider. The elastic contracting force of the lungs themselves is exactly counterbalanced by the slight increase of pressure within them; and the size of the lungs, even with both pleural cavities open, is then easily influenced by the expansion and contraction of the chest-walls which closely surround them. In expiration it is as easy for the gases to pass down the trachea and push the lung periphery ahead of it, to follow the receding chest-wall, as it is for air to enter the chest through the wound, so it will be seen that the inflated lungs expand and contract during the thorax operation to the same extent that they do in ordinary quiet breathing. The chest-wall excursions are slightly greater than in quiet breathing, though with much reserve ability and not in the least labored. The valve opens and closes rhythmically with respiration and the quiet hissing of the gases escaping through it can be heard at each expiration. With a greater flow of gases a slight hissing is heard in inspiration also.

Some hospitals, as St. Luke's in Cleveland, have a nitrous oxid generator in the building and the gas is stored under pressure, piped to the operating room, and by virtue of a reduction valve is delivered at a low pressure. The cost is thus reduced to almost one-third.

The spring device may be used for artificial respiration, for by moving the slider up and down the lung can be rhythmically filled with oxygen and allowed to collapse. In case the chest is not open, the slider may be moved down without danger of overdistention, but with the chest open it should be moved not more than to the one-half inch mark, which corresponds to a pressure of 8 mm. Hg.

REPORTS OF CASES

CASE 1.—Patient: Mr. V. Operator: Dr. W. I. Terry. Anesthetizer: Dr. Edith Williams. This patient was so exhausted from prolonged and fetid bronchitis that when he came to the operating room he was moribund and cyanosed. This was not a complete test of the pressure method as the lungs were held from total collapse by universal adhesions. The apparatus did, however, maintain as good or better ventilation than there was before the chest was opened and cyanosis was never marked and could always be driven away by turning on more oxygen. The ear remained pink. Parts of three ribs were resected, allowing a wide opening of the left pleural cavity. During the fifty minutes this hole was open, the degree of inflation of the lung could be perfectly controlled and sufficient ventilation was maintained. Occasionally, from manipulation of the lung, the patient would stop breathing but could always be made to breathe at once by rhythmically moving the slide. Sudden release of pressure was always followed by an inspiration even when in apnea. When the pressure was temporarily discontinued, just to see the result, the lower half of the lung made large excursions and the respiration became labored. (The patient lay on the sound side.) Before the opening of the chest, when ether was being used, the patient coughed constantly. The coughing ceased entirely when nitrous oxid was used and from then on there was no cause to remove the mask from the face. A large bronchiectatic cavity was opened and the chest was closed except for a drainage-hole, which was covered by a rubber dam, and a dressing was applied. On removing the increase of pressure, the respiration became labored as the deossified chest-wall made great excursions, and soon cyanosis appeared and the pulse quickened. The resumption of positive pressure immediately relieved the condition till a larger and firmer dressing could be applied.

The patient died in seven hours, but owing to his former condition and the gravity of the operation, this was not surprising. Also no caution was used in allowing sudden lung collapse by suddenly releasing the slider and this causes reflex shock.

CASE 2.—Patient: Mrs. M. Operator: Dr. Thomas W. Huntington, at the University of California. Anesthetizer: Dr. Mary Botsford. After performing an amputation of the breast, a cancerous piece of chest-wall, 3 by 4 inches, was removed, including part of the third, fourth and fifth ribs. This hole remained open for thirty-five minutes, during which time there was not the slightest unfavorable sign. The lungs remained pink and constantly inflated to just the right amount. The lung moved to and fro for about half an inch to 1 inch following the respiratory movement of the chest-wall and was sufficiently still to have any operation of reasonable delicacy performed on it.

The degree of inflation of the lung could be controlled to a nicety by simply adjusting the slider and the lung was kept almost flush with the parietal pleura. When a sudden burst of gas would come with a rush from the cylinder, it spent itself entirely through the valve and the impulse transmitted to the lung was not observable. Though the pressure varied in the tubes of the Teter machine, the pressure in the lungs remained constant, as it could never rise above the pressure on the valve. Respiration was not in the least labored nor hardly perceptibly changed, and its rate kept between 25 and 30. The wound was closed with skin and the patient was sent to bed in good condition after an operation lasting two hours and twenty-five minutes. The lung was free from adhesions, making this a rigid test for efficiency of the apparatus. It must be said, and without a qualification, that the apparatus worked perfectly. The patient awoke at once, had no shock, and with the exception of a slight hematothorax, which eventually disappeared, made an uninterrupted recovery.

CASE 3.—Patient: Mr. K. Operator: Dr. W. I. Terry. Anesthetizer: Dr. Mary Botsford. Pressure applied by Dr. W. I. Baldwin. This patient had a large, three-year-old, encapsulated sarcoma of the chest-wall which was crowding the right lung, and a resection of it was attempted as a palliative operation. A piece of the anterior chest-wall, 7 inches in diameter, including the clavicle and first four ribs, was severed from all but its connections posteriorly and along the great vessels, during which time the chest cavity was open. As the lung and tumor adhered, it was necessary to cut across the upper lobe and sew it over. The man was large and a professional athlete and difficult to keep anesthetized with nitrous oxid until considerable morphin was given. Narcosis was then easily maintained. At one time, through an avoidable error, the flow of oxygen was interrupted and the patient became cyanosed and ceased to breathe. As soon as the oxygen tank was again connected, the spring device was used as described for artificial respiration and breathing was resumed. The chest cavity was kept open for one hour and twenty-two minutes, during which time the degree of inflation of the lung was always under control and, barring the exception mentioned, respiration was maintained without any embarrassment of breathing. The lungs did not collapse and never were in the least overdistended. They were kept almost flush with the chest-wall and receded from the opening about an inch with each inspiration. The condition of the patient remained good through two hours of operating and then, owing to the great amount of hemorrhage, the pulse became rapid and the incision was rapidly closed, intending to complete the excision in a second operation.

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[1] Report of these experiments on dogs, pulse-tracings, etc., can be found in the California State Journal of Medicine, January, 1910.

The patient was in an exsanguinated condition and lived but twelve hours, 82 yards of gauze having been saturated in the sponging. Throughout the one hour and twenty-two minutes, the pressure apparatus accomplished its share of the operation in a perfectly satisfactory manner and was not in any way the cause of death.

CONCLUSIONS

Nitrous oxid and oxygen has many advantages over ether as an anesthetic for operations in which the pleural cavities are opened and moreover will provide positive pressure.

This small and simple apparatus will, in any hospital, maintain respiration while the chest cavity is open. The method has been found to be easy of application, practical and efficient.

240 Stockton Street.

A STUDY OF THE SIGNIFICANCE OF THE HABIT-MOVEMENTS IN MENTAL DEFECTIVES *

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AND
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This small study was originally undertaken for quite other reasons than that stated in the above title. It occurred to one of us (Clark) that in the course of clinical investigations of certain of the spasmophilia, such as the degenerative tics and habit-movements of so-called mental or cerebral type, and the varied forms of myoclonia whose pathogenesis is a neuropathic constitution, one ought to see these disorders most exquisitely in the proved degenerative field of mental defectives. Much to our surprise, on close investigation of the large material at our disposal (over 500 feeble-minded and 600 idiots and imbeciles) in the Randall's Island service, we were able to find but three patients suffering from tic. We might say that we follow the neurologic designation of tic, namely, that type of spasmodic movement occurring in varying degree of excursion, intensity and rhythm after the purpose of such movement has disappeared. We took facial tic as the paradigm of the tic type. Continuing our investigations, we found that while tics, as such, were wanting in mental defectives, even in the so-called highest grade of the feeble-minded, peculiar habit-movements were very frequent, especially in the idiot and imbecile class, some form of habit-movement being seen in the majority of the non-apathetic cases of imbecility and idiocy. The term "habit-movements," as employed here, may be defined as the frequent or constant repetition of uncalled-for and exaggerated movements, which are devoid of convulsive element, but from which the patient seems to derive pleasure or satisfaction. These habit-movements we found most commonly in the idiot class. Pelvic rocking or swaying is an example of such habit-movements. In Figure 1, three adult male idiots are shown in sitting posture engaged in this pastime. The picture was taken indoors with one-fifth second exposure. The middle figure is a colored boy who makes at least sixty excursions per minute forward and back, rocking on the pelvis and banging his back forcibly against the back of his seat. All of these boys are masturbators and have mature sexual development and libido. They belong to the uneducable class.

Many observers of the feeble-minded have made these movements objects of study, but have not usually sharply distinguished between tics and habit-movements. From our data and studies it would seem that tics develop on a neuropathic diathesis, while habit-movements are generated from psychopathic soil, especially on a basis of imbecility and idiocy.

The entire class of idiots and imbeciles (600), on our service, were under study. It may be said that nearly all of the 600 had some kind of peculiar movements of a rhythmic, automatic, imitative or impulsive character. Only those with certain definite habit-movements are noted in our paper. Practically all adult idiots of both sexes are masturbators. About 200 of the 600 had habit-movements. These habit-movements were more common proportionately in idiots under the age of puberty. Especially was this noticeable in the thumb- and finger-suckers. There were extremely few known masturbators in idiots under puberty. We found habit-movements of some sort more common in paralytic idiots than any other class. The paralytics sit or lie down most of the time. All the habit-movements noted bear some relation to or suggest a sexual libido. In adult female idiots with habit-movements, these movements often preceded, led up to or replaced the masturbatic act. In such instances they were intense and when interrupted were replaced by evidences of anger and motor excitement, the patient screaming, jumping about, making violent gestures, biting herself or attacking others. The excitement in such cases is probably less under hospital discipline than it would be in the home without such restraint. The most common forms of habit-movements are volitional and are done because the children like to do them and they seem to be attended by pleasure and satisfaction. Interruption of these patients also causes resentment. A few patients were found who hurled themselves against walls or posts on the floor or beat themselves (masochistic tendencies). These usually show pleasure while doing so, some laughing and screaming with delight.[1]

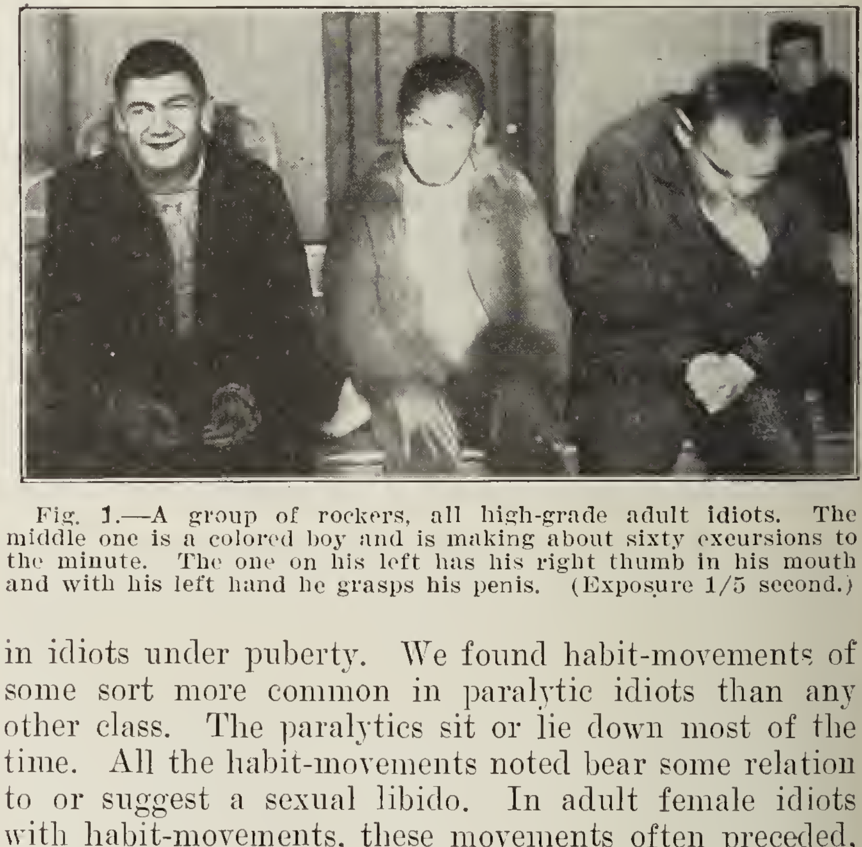

Fig. 1.—A group of rockers, all high-grade adult idiots. The middle one is a colored boy and is making about sixty excursions to the minute. The one on his left has his right thumb in his mouth and with his left hand he grasps his penis. (Exposure 1/5 second.)

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* Read before the New York Psychiatrical Society, Jan. 4, 1912, and the New York Academy of Medicine, Section of Neurology and Psychiatry, Feb. 13, 1912.

[1] This paper makes no attempt to deal with the numerous and important instances of sexual perversion, as such, in the imbecile and idiot class.

Diagrammatic analysis of all the cases studied permits us to group the habit-movements of the idiot and imbecile in three regions of the body. If we accept the fact that these habit-movements are attended by more or less sexual libido, these three regions may be termed, for our purposes, "erogenous zones." An erogenous zone, according to Freud, is that organ, the stimulus of which bestows on the impulse the sexual character. In neurotics the oral cavity and anal opening may behave like a part of the sexual apparatus and become the seat of new sensations and innervating changes in a manner similar to the real genitals when under the excitement of normal sexual processes.

As shown in Table 1, nearly all adult idiots, both male and female, are masturbators, while very few of either sex, under puberty, masturbate. The substitution movements found in young idiots under the age of puberty were mostly finger-sucking, rag-sucking, and pelvic rocking. One idiot, a boy, sucked the thumb of one hand and at the same time with his free hand pushed others away. Another rimmed his mouth with his tongue for hours at a time, producing a circular dermatitis about the mouth (Fig. 2). Seven small boys were hand-biters. One of these was the worst of the five masturbators found in the 197 small boys studied. Six stroked their noses or faces. Five stroked the faces of other boys. One of the latter was seen lying on another boy in the position of copulation while he gently stroked the other boy's face. All of these movements described were carried on, if not prevented, for long periods of time, repeated many times a day, and every day, and were attended in all cases by evident pleasure or satisfaction.

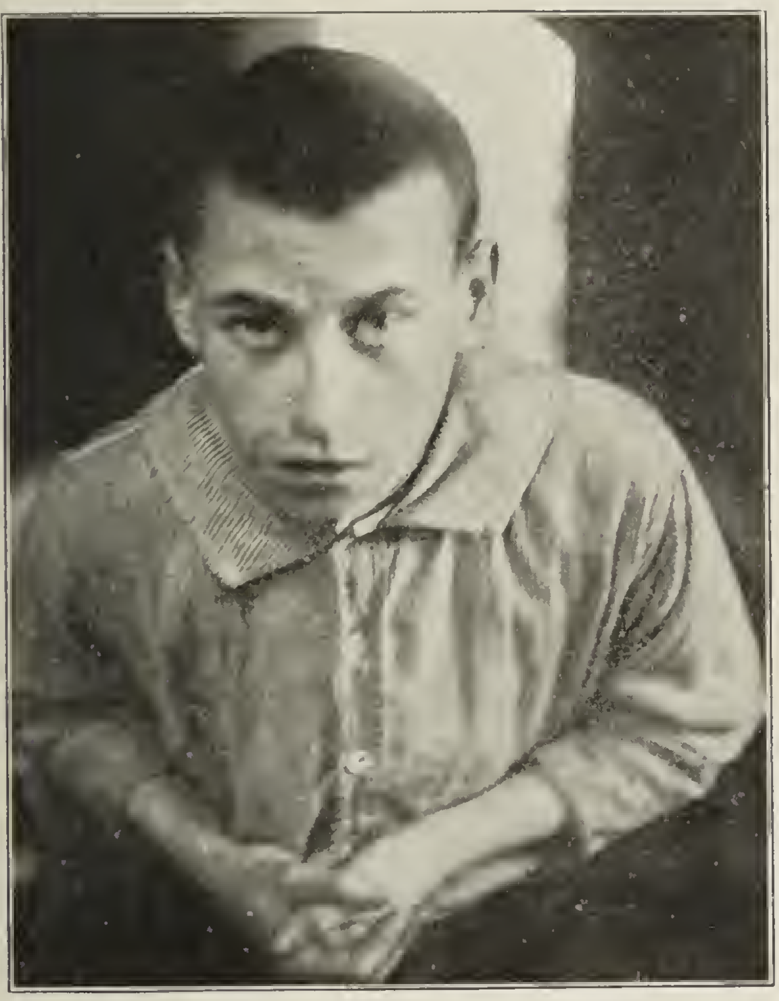

Fig. 2.—J. W., a high-grade idiot under puberty, showing dark spots of dermatitis encircling mouth, caused by constant "rimming" of the lips by the tongue and finger.

Analysis of the males over the age of puberty (Table 2) showed a prevalence of the habit of masturbation and some diminution in the number subject to habit-movements. Of the 120 adult male patients studied twenty-two had such movements. Of these eleven were pelvic rockers or swayers; three biters; one beat himself in the face; another bit others; still another swung his hands to his eyes; one rubbed his head furiously; another rubbed his ears, with his thumbs therein; one chewed his tongue and had a combination of movements (Fig. 3).

Analysis of the females over the age of puberty (200) showed that all were bad masturbators and that twenty-nine had habit-movements (Table 2). The latter number is under- rather than over-estimated. The number of rockers and swayers (twelve) was proportionately greater than in the men. The habit-movements in many cases led up to the masturbatic act. One rocked and pounded her eyes just before the act; another poked her fingers in her eyes, while another pushed her tongue against her teeth and pulled at her teeth with her fingers; still another rubbed one hand with the other and then carried it to her mouth; one put buttons in her ears; two bit their hands, and another pulled one hand through the other; two rubbed their thumbs against the palms, and one entwined her fingers, etc. Nearly all of these patients, like the adult males, are uneducable idiots or low-grade imbeciles. Habit-movements among the adult girls were frequently accompanied by noises such as grunts, squeals, humming, "singing" or barking. There is more active resentment on their part at interruptions.

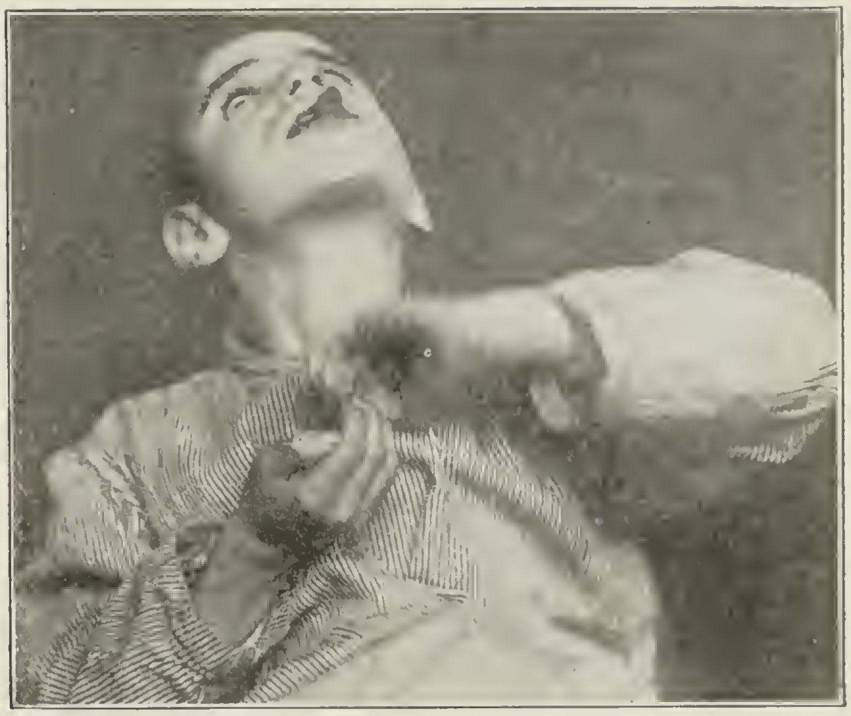

Fig. 3.—Low-grade idiot in a combination of habit-movements: tongue-sucking and biting, pelvic rocking and twisting of his hands. These acts precede masturbatic orgasm.

Of the seventy-three active girl defectives under puberty fifty had habit-movements and twelve were known masturbators (Table 3). All of the masturbators had habit-movements. The worst types had several of these movements combined. There were ten swayers or rockers, nine biters, eleven finger- and hand-suckers, six rag-suckers, nine either rubbed their eyes or put their fingers in their eyes, one banged her head against the wall, another rubbed her head and masturbated, and three made forcible movements with the thumb or other fingers in the palm.

As previously stated, in making a regional classification of the movements and their purports one finds three rather constant regions or confines on the human body involved: (1) that of the lower trunk embracing the genital and anal zones; (2) the face, and (3) the hands, their frequency or dominance being in the order named. As might be expected, the preponderant rôle of the first zone is fairly easy to understand, as it is in the normal sexual zone. The second and third zones are not so easily disposed of. It is fairly well proved that the idiot and imbecile show no physical or mental characteristics that are not noted at some period of development in the ordinary neurotic child. Abundant evidence is at hand in the literature of neurotic child study, showing that all these types of habits occur and may or may not persist for a short time only in most cases. All the above movements, as outlined, are phases of the neurotic child habits, but it has been contended that through development and the advancing barriers of shame, disgust, moral and esthetic training, in the neurotic child, repression occurs, or at any rate these habits disappear. May not these types of habits then seem to be a continuance of neurotic infantile habits, often perverted and enhanced by lack of physical and mental development in the imbecile and idiot class?[2]

In nearly all the patients under study the habit-movements were of a pleasurable sort, as forced interruptions were repelled, at times even by violence (Fig. 4). Thus in the case of an adult female idiot, when forced to discontinue her rapid rocking just prior to masturbating, she usually bit herself or struck those about her (Fig. 5).

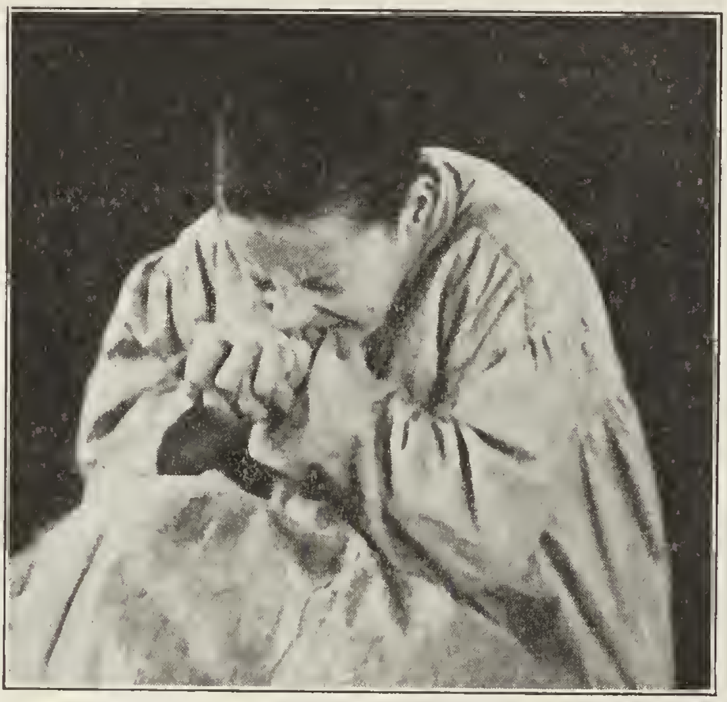

Fig. 4.—An "interruption." M. G., adult female idiot; a very bad masturbator. She has been interrupted and is furiously biting her wrists through the sleeves of her dress.

To the lack of an enlarged mental scope of the pleasures of play and recreation must be ascribed a large part of the initiative of these auto-pleasurable acts in the imbecile and idiot class; this lack is also shown in the gregariousness of the feeble-minded. It is a well-known fact that the imbecile and neurotic child gains much petting and fondling and in their absence the child strives to keep up this pleasurable pastime by self-indulgences of rocking, rhythmic movements and other auto-pleasurable acts. As Freud says: "Neuropathic parents should realize that an excess of petting is a nearer way than inheritance to transfer their disturbances to their children." The same may be said of the blind and other sense-maimed children. The progressive mental development which takes place in normal children, however, builds effective barriers against these apparently senseless acts and habits of the imbecile class.

May not these habit-movements be considered to parallel the views of Freud in sex genesis for the normal child as laid down in his well-known essays, "Three Contributions to the Sexual Theory"? We believe they can be so interpreted. Studies of idiocy contribute to our knowledge of normal child development in somewhat the same degree and are of the same value as researches in psychiatry are to normal psychology. Note the promulgation of new methods in normal education following the line of Seguin's plan of an "intellectualization of the senses" seen in the industrial and manual training of our schools, even to the wholesale adoption of the plan in the Montessori method of most recent date. The reasons for the adaptation of methods of teaching the feeble-minded to normal children are not far to seek, as in this middle ground of imbecility the trained pedagogue, psychologist, alienist and physician meet. It is a matter of considerable surprise to us that those studying sex genesis have not observed idiots more thoroughly; the subjects, because of defective will, lack of attention and the absence of the conventional barriers of shame, loathing, disgust and esthetic training, furnish an ideal field, wherein the infantile state may and often does persist throughout a lifetime.

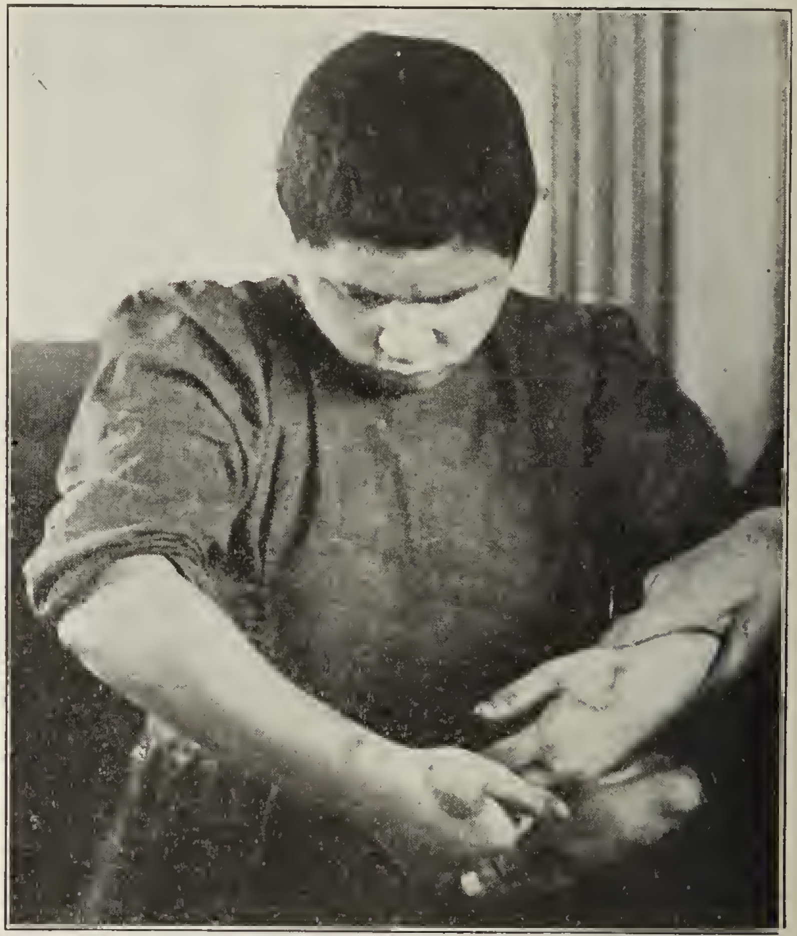

Fig. 5. A biter. E. P., an adult female idiot and a bad masturbator, has been forcibly posed to show the thickened patches on the backs of the hands which mark the impress of her upper teeth. She fiercely bites the fleshy part of her thumbs.

The infantile irradiating non-clustered erogenous or pleasurable zones are prolonged for years. It therefore offers many advantages to study obscure or fleeting phenomena, such as the phases of sexual development of normal children. Unfortunately, subjective analysis is rarely possible either in the normal or the defective child, thus many motives and feeling are lost. Again, there is no great chance for sublimation in the idiot and imbecile; there can be no sex-finding at puberty, hence masturbation, or continuance of infantile erogenous acts and habits with or without masturbation.

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[2] Granting that training and other factors contribute to the riddance of these abnormal trends of sex development in neurotic children, may not an explanation for the discontinuance of these habits, sexual in character, be found, on still other and more basic grounds, in the developmental adjustment of the whole organism to a maturity in which infantile habits are no longer satisfying?

For years these habits and movements of the idiot, sometimes called "dermal habits," have been explained on the ground that such acts are forms of automatism, propitiations or compensatory manifestations of incomplete will control owing to imperfect external and internal adjustments. These views are not essentially wrong, but they lack finality. The older view is not sufficiently psychobiologic to make the phenomena clear. Let us examine somewhat more in detail our material and see how the matter bears on the abnormal sexuality of these habits.

In observing the continuance of the habit-movements in idiots it was very noteworthy that the movements were much lessened or abolished altogether immediately after pollution acts (Fig. 6). While the carefully observed cases of castration of idiot boys and oöphorectomized girls show that these habits and sexual activities, in more frankly pronounced acts, are much modified or diminished in ardor, very early castrations are necessary to bring about complete cessation of habit-movements and self-pollutions. The fact that these phenomena do not entirely cease in asexualized idiots is a decided point in favor of the hypothesis that the chemical substances, so-called libidogenous in character, exist in the blood and that the ovaries and testicles are but accessory receptacles in forming the sexuality of childhood.[3]

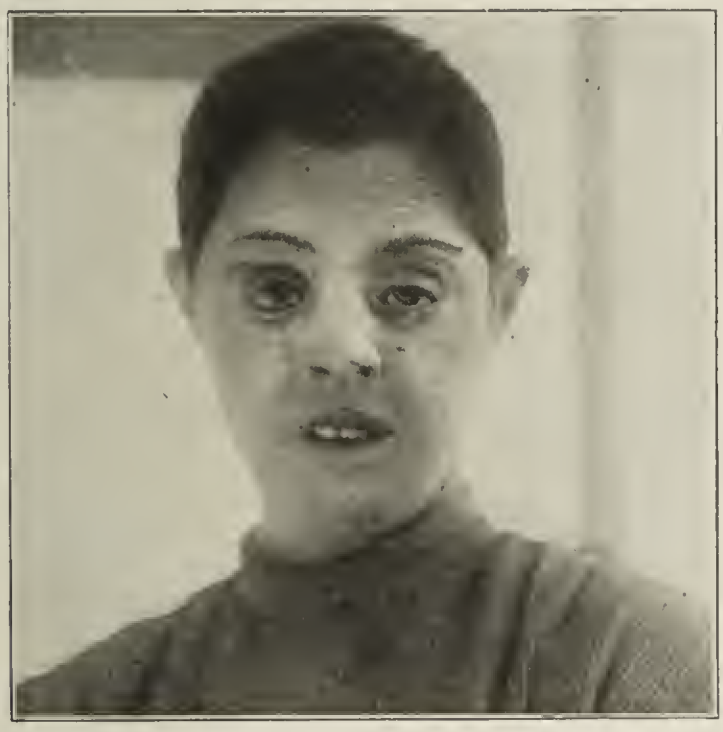

Fig. 6.—Extreme inflammation and thickening of the eyelids due to the constant habit of picking and rubbing and putting the fingers in the eyes in a low-grade imbecile girl. This habit especially precedes the act of self-pollution and is discontinued for hours afterward.

The preponderance of the hand habit-movements in the defective boys may be due to the fact that the girls obtain satisfaction in self-pollutions by the pressure reflex of the clasped thighs. On the other hand, exhibitionism and clothes-destroying impulses are much more common in the female idiots than among boys of the same class.

Looking at our subject somewhat more in detail and in the chronologic order of development, the first genetic principle of the development of the auto-pleasurable zone and acts connected therewith is that of pleasure-sucking. The idiot is rarely satisfied with the thumb alone (Fig. 7); he uses all the fingers and in not a few instances passes the whole hand into the mouth. A group of these pleasure-sucking low-grade idiots is also well shown here (Fig. 8). Oftentimes nurses and attendants in idiot asylums permit or encourage pleasure-sucking; in much the same way the nurse allows the normal child the "pacifier" in the nursery. Many idiots fall asleep with their hands in their mouths. This occurs also indifferently before or after meals and is independent of the hunger-impulse. Indeed, the idiot seems most pleased with sucking and rocking after a full meal.

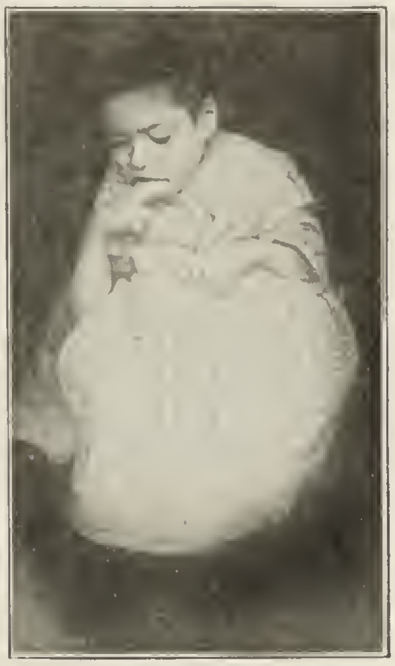

Fig. 7.—Low-grade idiot sucking thumb and two fingers. She usually puts her whole hand in her mouth for the act.

We have found that pleasure-suckers rarely take up other erogenous zones in their auto-pleasurable activities until pleasure-sucking is forbidden. One little patient frankly said: "If mamma would only let me suck my thumb or hair, she would not have to tie my hands for that other habit [masturbation]." Undoubtedly the sensitiveness of the parts to the type of rhythmic sensations employed is more important than the region of the body used. Often the ease of access plays no part. The regions, however, are not unimportant for the maintenance of the acts.

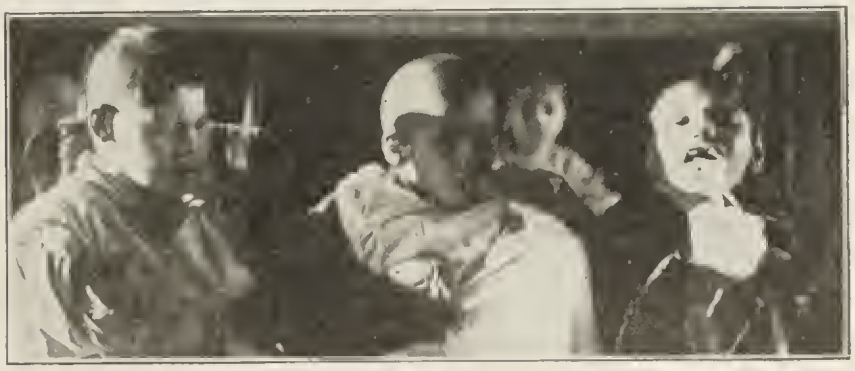

Fig. 8.—A group of rag-suckers. All three are young paralytic low-grade idiot boys. The center one was given a large rag, as he tries to swallow every rag he can get into his mouth.

In the absence of sublimation or opposite sex-finding at puberty for idiots, they masturbate, or if incompletely transformed in the changes at puberty they continue their infantile auto-erogenous habits and acts. Asylum attendants and teachers still look on the sex perversion as the cause rather than a part of the mental defectiveness, and, of course, labor in vain to remove these "bad

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3. The modifying influence of oöphorectomy on the sexuality in idiocy and feeble-mindedness is well shown in the patients so treated during the last three years at the Randall's Island institution (Table 6). In a material of twenty-one patients ranging from 8 to 43 years of age we find, in an observation period of time of several months to nearly three years after, that as a class six patients were made worse sexually by oöphorectomy, eight were bettered and in seven the condition remained unchanged. Thus only about 38 per cent. were distinctly improved by asexualization. The average age of those bettered was 20 years; that of the patients made worse after operation was about 25 years of age, while the average of those whose sexuality remained unchanged after the operation was 21 years. The crudity of estimating the value of such procedures by age standard alone is shown in the age of the unchanged group, in which the extreme ages of 8 and 43 are embraced. Nevertheless, the main contention of the paper is here shown to be true, that oöphorectomy relatively early in adolescence is attended by best results. However, a careful individual analysis of every patient is always necessary before trying to estimate the degree of benefit to any special patient and one should avoid trying to generalize from a few patients to the whole class of mental defectives. Then the data in regard to the alterations in the whole make-up of the individual patient need to be collected on a large material before we can be sure of oöphorectomy as a prevention to improve the condition of sexual excesses in mentally deficient girls.

habits." Sexuality is thus seen as a moral question and not as a biologic concretion of developmental facts.

The whole phase of mechanical excitation and movements, both passive and active, is bound up in biologic laws of development. This fact is well shown in the contrast and comparison of the tables of habit-movements of the juvenile paralytic with the active idiots. Apparently the former (the paralytics), through a forced inactivity, present a striking excess of these movements over the latter class. As is well known, it forms a part of child hygiene, that a free active life diminishes the tendency to an overdevelopment of the sexual libido. Often before being required to do various disagreeable acts, as bathing in cold water, changing clothes, etc., the idiot propitiates and anticipates the disagreeable by more intensive applications of his habit-movements. No idiot asylum is without its musical equipment for dancing and swinging. While not a few dance fairly well, the "swayers and rockers" are in the majority and are inordinately fond of all music with well-marked rhythm. The muscular activity and physical restlessness of the lowest grade of idiots are only compensated for, in the eyes of the attendants, in that many of these activities are rhythmic and repetitional.

As to what is the final explanation of the real satisfaction of these psychosensory movements of the idiots no one can say, as the whole subject is novel and imperfectly understood even in normal children. While there is wide variation in the manifestations of individual habit activity in idiots, the types of movements are constant. Certain kinds of movements are enduring; in other patients during later development other new movements are substituted, and in others they are lost in habit training (sublimated in part) by systematic education in vogue, such as occupational and sense training. It may be possible that one may train these vicarious and accessory activities of sexual expression into hopeful purposes of activity, as Freud states the roadways are probably passable in both directions. However, the possibilities in this respect remain in the domain of speculation.

Many idiots cease mental development at puberty or even earlier. Such cases of premature development often show extreme sexual and moral perversion. The precocity and exhibitionism of the idiot class have rightly caused pessimistic views in teachers on the educability of such pupils.

Side by side, the male and female imbeciles occupy themselves in the pleasurable content of their autopleasurable acts; but at puberty the male imbecile becomes restless, insubordinate, difficult of control and given to vicious practices, often including many of the petty offenses against person and property; while the female imbecile takes on regressive characters of indolence, neglect, perversions of sexual habits or the life of a prostitute. What are the changes in the internal economy of these two types, propelled by a common sexual impulse, yet taking such widely variant roads? These intermediary transitions in either sex are not known, but must be subjects of painstaking research. This we do know, that the transition is favored by the internal and external adjustments and the psychic reception of these stored impressions.

Finally, we may say that the adult continuance of the auto-erogenous acts is not only a sign that the individual idiot is of a low type, but that his chances of betterment are minimized because he carries with him another evidence of infantile mental make-up. In other words, he is mentally and physically defective in his sexual sphere, as in other faculties of mind and body. Unfortunately, one has no chance to open the amnesic period of ordinary childhood to subjective analysis, much less the idiot mind for the same developmental period.

At every part of the long roadway of sexuality the idiot may digress or be waylaid by habits which in themselves carry the hall-marks of his inability to advance.

To not a few following this tentative study of the significance of the habit-movements, the criticism will seem pertinent that we have surrendered too much to the views of Freud, the recognized master in this field, or that Freud has been too inclusive in the definitions and descriptions of the sexuality of childhood. However this may be, we can only answer that, taken at a conservative valuation, no work has been so pertinent to our inquiry as his has been. We are therefore willing to stand with him and say, so far as we are able to observe, that the significance of the habit-movements and apparently senseless acts of idiots are irrevocably bound up with a defective and perverted sexuality of infancy and childhood, and we believe that more exact and worthy data of the future along this line will only confirm this opinion.

In conclusion we would say that this study is presented not alone as a contribution to the academic issue of the biologic significance of the habit-movements in idiots, but also that it may help to make clearer and sharper the distinction of slight grades of mental defect now under analysis in the feeble-minded delinquent class in which sexual misdemeanors and crimes are calling for trained psychiatric analysis and suggestions for corrections.

EXPLANATION OF TABLES

In this study it is admitted that masturbation *per se* should not be considered as a type of habit-movement. Masturbators are considered in the tables and text merely for contrast and comparison with habit-movements and for their correlation with sex genesis and gratification and the interpretation of the phenomena of these movements. The omission of masturbators from the table of classified groupings of the habit-movements

TABLE 1.—COMPARATIVE ANALYSIS OF TOTAL DATA AS TO SEX, AGE AND MASTURBATION OF 609 IDIOTS AND IMBECILES, ACTIVE AND PARALYTIC

Adult males		120
Masturbators	120	
Habit-movements	22	
Adult females		200
Masturbators	200	
Habit-movements	29	
Boys under puberty		197
Masturbators	5	
Habit-movements	100	
Girls under puberty		92
Masturbators	13	
Habit-movements	50	
Total masturbators of all ages and both sexes		338
Total with habit-movements		201

TABLE 2.—ANALYSIS OF 320 ACTIVE MALE AND FEMALE IDIOTS OVER PUBERTY

	Male (120)		Female (200)
Pleasure-suckers	0		0
Biters and tongue-chewers	5		3
Face-stroker	1		0
Eye-strikers	1		2
Lip-stroker	0		1
Aural inserters	1		1
Head-rubber and pounder	1		0
Rotators	0		5
Pelvic swayers and rockers	12		12
Thumb-rubber	1		0
Hand- and finger-rubbers	0		5
Total habit-movements	22		29
Masturbators (practically all)	120		200
Masturbators (practically all)		320	
Habit-movements (both sexes)		51	

diminishes the apparent importance of the pelvic zone as compared to the others.

Tables 3 and 4 strikingly illustrate the greater frequency of habit-movements in the paralytic as contrasted with those in the active juvenile idiots. Tables 2 and 3 contrast the relative preponderance of habit-movements in the juvenile idiots over those seen in the adult cases; and the inverse frequency of masturbators in these two classes.

TABLE 3.—ANALYSIS OF 223 ACTIVE BOY AND GIRL IDIOTS UNDER PUBERTY

	Boys (150)		Girls (73)
Pleasure-suckers	17		17
Biters	9		9
Face- and lip-strokers	13		0
Pelvic rotators	4		0
Pelvic rockers and swayers	10		10
Fingers in eyes	0		9
Head- rubber or pounder	0		2
Palm- and finger-rubbers	0		3
Total habit-movements	53		50
Masturbators	3		12
Masturbators (both sexes)		15	
Habit-movements (both sexes)		103	

TABLE 4.—ANALYSIS OF SIXTY-SIX PARALYTIC BOY AND GIRL IDIOTS UNDER PUBERTY

	Boys (47)		Girls (19)
Pleasure-suckers	23		12
Pelvic rockers and swayers	8		6
Rotators	3		0
Total habit-movements	34		18
Masturbators	2		1
Masturbators (both sexes)		3	
Habit-movements (both sexes)		52	

TABLE 5.—CLASSIFIED GROUPING OF 201 CASES OF HABIT-MOVEMENTS, ARRANGED WITH REFERENCE TO THE LOCATION OF THE EROGENOUS (FREUD) ZONES

Face and head zone, total		123
Pleasure-suckers (fingers, rags, tongue, lips, etc.)	75	
Biters (hand, tongue, etc.)	14	
Strikers and rubbers of eyes	13	
Strokers of own or other faces	13	
Pounders of face and head	6	
Aural inserters (fingers and foreign substances)	2	
Pelvic zone		66
Pelvic rockers	12	
Rockers and swayers	54	
Hand zone		12
Rubbing, pulling, entwining fingers and hands.		

TABLE 6.—SHOWING RESULT OF OÖPHORECTOMY ON SEXUALITY IN IDIOCY AND FEEBLE-MINDEDNESS *

Name	Age (Yrs.)	Time Observed	Result
M. B.	21	2 yrs., 5 mos.	Made worse.
E. L.	31	4 mos.	....
L. R.	14	2 yrs., 1 mo.	Improved.
M. H.	22	6 mos.	Unchanged.
M. R.	22	8 mos.	Made worse.
R. M.	14	4 mos.	Improved.
R. H.	..	5 mos.	Made worse.
L. G.	37	9 mos.	Made worse.
K. D.	23	6 mos.	Improved.
S. C.	30	2 yrs., 5 mos.	Improved.
A. D.	25	7 mos.	Made worse.
C. H.	20	2 yrs., 10 mos.	Improved.
F. F.	16	1 yr., 5 mos.	Unchanged.
D. M.	23	2 yrs., 4 mos.	Unchanged.
J. B.	29	3 mos.	Improved.
L. W.	43	2 mos.	Unchanged.
E. T.	15	2 yrs., 1 mo.	Unchanged.
S. S.	..	2 mos.	Improved.
C. R.	17	6 mos.	Improved.
L. J.	20	11 mos.	Unchanged.
L. F.	18	2 yrs., 3 mos.	Unchanged.

* This table is inserted through the courtesy of the Randall's Island surgical staff, who operated for diseased conditions and for other purposes than those of this paper.

84 East Fifty-Sixth Street; 14 East Sixtieth Street.

A NEW METHOD FOR CONTROLLING THE ADMINISTRATION OF SERUM IN EPIDEMIC MENINGITIS

PRELIMINARY NOTE *

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At present I am compiling my records of about 200 cases of meningitis in which, in all, about 600 lumbar punctures were done. Most of the cases were studied in the present epidemic at Dallas, Tex. I thought it would be desirable, before waiting for the compilation of the complete records, to write a preliminary note on an improvement in the method of administering intraspinally the antimeningitis serum which I have been using for the past seven months and which I believe has now definitely proved its efficiency and superiority over the old method of administration.

The present method of standardizing the antimeningitis serum, as generally accepted, is by determining the opsonic index and by similar immune-serum tests. There is, however, no measure of efficiency placed on the serum such as we have in the case of diphtheria or tetanus antitoxin; the dose is therefore measured entirely by volume. Since the serum acts principally by its local action, the idea was, and still is, to introduce as much serum as possible without injury. It was believed that, after removal of a quantity of cerebrospinal fluid by lumbar puncture, one could, to a certain extent, reestablish conditions in the central nervous system by injecting an equal or slightly smaller volume of serum. Thus in an ordinary, moderately severe, case in an adult, if one withdrew 45 c.c. of cerebrospinal fluid, an injection of 30 c.c. of serum would be safe and ample, while in a severe case one would be justified in injecting 45 c.c. or more of serum.

It is seen by analyzing this method that one hopes and believes that conditions are established, but one has no proof. On this assumption many severe symptoms occuring either during or a few hours after an injection had been attributed to the disease proper. Undoubtedly toxemia, in some cases, accounts for the symptoms; an analysis, however, of many cases would make one suspicious that possibly the symptoms, in some, were the direct result of the injection, especially when they occurred immediately during or after the operation.

I had been dissatisfied with the old method for a long time. There was no reliable guide indicating the quantity of serum one could safely inject. It occurred to me that if one could make determinations of the cerebrospinal fluid pressure during the operation, one might so have a definite guide, the idea being to inject serum only in sufficient quantity to bring the cerebrospinal fluid pressure to the original reading before the removal of fluid. In that way one would cause least disturbance or shock. To obtain such result was evidently the reason for instituting the old arbitrary method. I therefore began to take cerebrospinal fluid pressure readings during the puncture. After withdrawing a quantity of fluid, which reduced the pressure to normal, I attempted to inject serum in sufficient quantity to raise the pressure to the original reading before the removal of fluid. Thus, if the initial cerebrospinal fluid pressure reading was 400 mm. (water-pressure), I removed the fluid till the pressure dropped to normal, or below, usually to between 20 to 100 mm. I then attempted to inject serum in sufficient quantity to raise the pressure to about 400 mm. I shall not cite cases in this paper; the results by this method, however, were misleading and unreliable as indicating the true intracranial pressure. Theoretically one would expect a return to the original pressure on injecting a volume of serum equal to the cerebrospinal fluid withdrawn; this was not the case. One could inject even larger quantities of serum than fluid withdrawn, but the pressure-readings were frequently lower than the initial reading before the removal of fluid. Even with readings showing a lower intracranial tension after the injection of serum, one would meet severe, even very dangerous, symptoms. I learned very quickly that this method was misleading and even dangerous. I believe that the error was very probably mechanical and that the later readings were not a true index of the intracranial tension. It is very probable that injecting serum, even with little pressure, would produce a local distention of the subarachnoid space at the site of injection and give readings which did not make a true picture of the uniform intracranial pressure.

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* From the Research Laboratory of the Department of Health, New York City.

I now began to study blood-pressure during lumbar puncture, especially with reference to the effect on injection of serum. I have now made blood-pressure readings in about 200 cases of meningitis, making from 500 to 700 lumbar punctures. I have found almost uniform results in blood-pressure-change on injecting serum, and have applied those changes as a guide to the quantity of serum that could safely be injected. The blood-pressure-change was also frequently a guide, indicating the quantity of fluid that could be withdrawn safely. In a later paper I shall refer in detail to Robinson's work[1] on blood-pressure in meningitis, and to Cushing's[2] studies on the relationship of blood-pressure to change in intracranial pressure.

The effect on the blood-pressure is inconstant on withdrawing fluid by lumbar puncture in meningitis; most often there is a drop in blood-pressure, occasionally quite large, especially on withdrawal of large quantities of fluid. My ordinary procedure in an adult case, beginning with an average blood-pressure of 110 mm. of mercury, is to stop the further withdrawal of fluid if there is a moderate drop in blood-pressure, for example of 10 mm. of mercury; in children, of 5 mm. Occasionally the blood-pressure begins to drop very quickly as soon as the removal of fluid is begun; the blood-pressure then is a guide indicating how rapidly or slowly the fluid may be withdrawn. In other cases there is no change in blood-pressure, or there may even be a rise, on removing fluid; one can withdraw as much fluid as possible, usually till the cerebrospinal fluid pressure is normal, this being roughly measured by counting the drops of fluid as they flow from the needle; one drop of fluid every three to five seconds corresponds roughly to a normal pressure.

After withdrawal of a suitable quantity of cerebrospinal fluid, the serum is ready to be injected. As usual, the serum is warmed to body temperature and then injected slowly, either by the gravity method or by syringe. I much prefer the gravity method of injecting the serum; it has many advantages and few of the disadvantages of the syringe method. As a rule, as soon as the injection of serum is begun, the blood-pressure drops and continues to drop steadily. Reasoning by the old method of injecting serum, one would expect a rise in blood-pressure; this, however, is rarely the case. As stated, in the great majority of cases when the injection of serum into the subarachnoid space is begun, the blood-pressure drops and continues dropping steadily as the larger quantity of serum is injected; after there has been a material drop, for example, of 20 to 30 mm. of mercury, the blood-pressure begins to drop relatively much faster if more serum is injected. Thus if an injection of 15 c.c. of serum causes a drop of 20 mm. of mercury in blood-pressure, injecting only a few more cubic centimeters of serum may cause a sudden drop of 40 more mm. of mercury, making a total drop of 60 mm. or more. In one robust adult whom I treated, there was a drop of 30 mm. of mercury after injecting only 12 c.c. of serum. His was a very severe case, and I wished to introduce as much serum as possible; I injected 3 c.c. more, making a total of 15 c.c. of serum. His blood-pressure, at one bound, dropped 30 mm. more, making a total drop of 60 mm. His clinical signs at this time did not indicate shock; the pulse was fair; the color was good, but rapid, but breathing was shallow and a little irregular. I decided, however, to watch him for a time. A few minutes later he suddenly stopped breathing, then his heart stopped. Immediate active treatment, which I shall indicate later, gave immediate response. It is easy to see how these patients who have had a large drop in blood-pressure, with not much other evidence of shock, may thus suddenly succumb either during or after the injection.

My usual technic in the operation of administering serum is to have one assistant take blood-pressure readings throughout the whole operation. If the blood-pressure drops during the removal of cerebrospinal fluid, I use it as a guide indicating when to stop withdrawing fluid. I accept, as a rule, the arbitrary drop of 10 mm. of mercury. I use the blood-pressure as an absolute guide, indicating the quantity of serum that I can safely inject; here it is also a guide as to how quickly the serum may be injected. As a rule, very rapid injection under considerable force will cause a greater drop in blood-pressure. By the gravity method the serum is allowed to run in slowly by gravity, the funnel being raised or lowered to regulate the flow. The barrel of a 10 to 15 c.c. antitoxin syringe may be used as the funnel, attached to about 12 inches of rubber tubing about one-quarter inch in diameter. Ten minutes is a good average time to allow for the fluid to run in, though I have frequently taken twenty minutes or longer, especially in cases beginning with a low blood-pressure, or when the blood-pressure dropped very quickly. It is much harder to control the rate of injection by the syringe method and one may accidentally use too much force in injecting. I have found that a total drop of 20 mm. of mercury in an adult with average blood-pressure of 110 to 120 mm. of mercury is a safe indication to stop the further injection of serum. Occasionally there is an initial rise in blood-pressure after the injection of a few cubic centimeters of serum, followed by a subsequent drop as larger quantities of serum are injected. Very rarely the blood-pressure shows a material rise after the injection of serum.

Since I began using this method, the average dose of serum that I have used has been considerably smaller; frequently not more than 15 c.c., averaging 20 to 25 c.c. in adults and in proportion in children. When the blood-pressure has allowed, I have injected larger quantities also, 30 to 40 c.c., very rarely more. Judging by the good results with the smaller doses of serum, I believe that it is very rarely necessary or beneficial to inject more than the maximum of 40 c.c. of serum. The method is of great benefit not only in the average case, but also in the atypical and difficult one; thus in cases with thick plastic exudate, when the fluid will not flow through the needle, it is a beautiful guide, absolutely indicating how much serum one can inject safely under pressure; similarly, in cases with little exudate, in which one introduces a larger quantity of serum than the cerebrospinal fluid withdrawn. If the fluid be injected into the subarachnoid space, under wrong diagnosis, in cases with posterior basic meningitis, the drop in blood-pressure will be very large after injecting only a few cubic centimeters. The blood-pressure is also a guide in injecting serum directly into the ventricles, in cases of posterior basic meningitis.

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[1] Ayer: Clinical Laboratory Bull. No. vi, November, 1910.

[2] Cushing: Bull. Johns Hopkins Hosp., 1901, xii, 290.

What clinical symptoms are associated with the drop in blood-pressure? In the order of their appearance these are: Stupor, which deepens more and more as the blood-pressure falls; respiration becomes superficial and irregular, at times deep, stertorous, slow and irregular; with a large drop in blood-pressure, breathing may stop suddenly; pulse will often continue good, even with a large drop in blood-pressure, and even with marked change in the breathing; at times the pulse becomes slow and irregular; the pulse therefore, is very often misleading; the pupils dilate, increasing with the greater drop; incontinence of feces and urine occurring during a lumbar puncture usually accompanies a drop in blood-pressure, and is a warning.

What is the immediate treatment for severe symptoms during or after the injection of serum? As already indicated, with a material drop in blood-pressure, further injection of serum should be stopped. If, however, the blood-pressure suddenly drops very much, possibly accompanied by the above-mentioned symptoms, the indication is immediately to remove fluid from the canal; if one uses the gravity method for injecting, this is easily done by lowering the funnel; in bad cases in which the breathing stops, as much fluid as possible should be removed and active artificial respiration begun. Epinephrin in large doses by intramuscular injection, and other vasomotor stimulants, and atropin help. Even with severe symptoms, if these measures be applied immediately and actively, the patient usually responds.

What effect has epinephrin administered by intramuscular injection, before the puncture in preventing the symptoms mentioned? Epinephrin administered before the puncture will tend to prevent the large drop in blood-pressure on injecting serum. I prefer not to use epinephrin in this way except in cases with initial low blood-pressure.

In reference to the use of general anesthetics during the operation, I shall say here, briefly, that in my experience general anesthesia is dangerous, and that it should be used only where absolutely necessary in violent patients. During the administration of an anesthetic the blood-pressure is a comforting guide. I have found that giving many patients water through a straw will keep them quiet; even delirious adults will reflexly suck on the straw and quickly become quiet. During the operation the patient will sometimes drink as much as nine or ten glasses of water. It acts especially well with children; I have referred to it as "water anesthesia."

I am now tabulating my results, since I have used the blood-pressure method in treatment. Most of the cases were studied in the present Texas epidemic. The results were extremely good. The general reaction following the injections was usually not as severe as formerly; temperature did not rise as much; the patient was usually more comfortable and the general condition better. The dose of serum, as stated, was much smaller; very young children about or under one year especially, at times could not bear more than 2 to 3 or 4 c.c. of serum and, in a number of cases, responded wonderfully well. In 185 cases, roughly tabulated, the total mortality was 25 per cent., this including many patients who were brought to the hospital in very bad condition. A number were brought in during the very last stages, and some were brought in from a distance of up to a hundred miles; others, with pulmonary edema, who died a few minutes later. Excluding these apparently hopeless cases in which the patients died in from a few minutes to twenty-four hours after admission, the mortality was about 10 per cent. The cases considered hopeless were marked so on the chart immediately on admission.

Most of the meningitis cases studied were in adults; many patients were past middle age; they included negroes and whites. The mortality was highest among negroes; they seemed to offer little resistance, and easily developed bronchopneumonia. In children the mortality after exclusion of apparently hopeless cases was roughly about 5 to 6 per cent., among them a number being below 1 year of age. There were also about seven cases of posterior basic meningitis on the list.

CONCLUSIONS

1. The old method of administering serum is inaccurate and sometimes dangerous.

2. Blood-pressure change is a very accurate guide to the quantity of serum that can be safely injected, frequently also indicating the quantity of cerebrospinal fluid that can be withdrawn.

3. The average dose of serum as controlled by blood-pressure is smaller than by the old method.

4. Following an injection of serum, controlled by blood-pressure, the after-effects are usually much less severe.

Mortality figures which will be accurately tabulated later show unusually good results.

I desire to express my thanks to Dr. A. W. Nash, city health officer of Dallas, Tex., with whom I studied the cases in the City Hospital, Dallas, for his courtesy in allowing me to use the hospital records, and for his very valuable cooperation in the studies.

210 West One Hundred and Seventh Street.

What the Doctors Have Done.—"Now and then someone abuses the medical profession, and often the funny man springs a joke at the expense of the doctor, but for all that," remarks the *Herald*, Palestine, Tex., "he is a crusader whose work needs no boosting and whose ministrations have been of inestimable value to the world and to mankind. The laity appreciate him most and understand him best as a combater of epidemics and contagious diseases. And his work has been little less than marvelous. To begin with, the discovery of all ethical doctors is based on an obligation that as soon as he has found a remedy, a preventive or cure for disease, he must give it to the world and to the profession without reserve and without cost. And through his research and sacrifice the dread of small-pox has been almost eliminated, whereas a few short years ago people went into hysterics at its name. And yellow fever has been almost eliminated from the face of the earth. And even the dreaded typhoid fever has yielded some of its horrors to his wisdom and treatment. And now he turns his attention to the latest contagion to disturb the happiness of this people, meningitis, and he will in time conquer that. A good doctor is a necessity to mankind, while a crook in the profession is a disgrace to humanity."

AN OPERATION FOR PROLAPSUS UTERI

WITHOUT DISTURBANCE OF ANATOMIC RELATIONS AND WITHOUT THE NECESSITY FOR ABDOMINAL SECTION *

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Turning the uterus upside down and fixing it in the vagina, hysterectomy, suspending the uterus high on the abdominal wall near the umbilicus, burying it in the muscles of the abdominal wall, injecting quinin or paraffin in the pelvic connective tissue, are examples of the bizarre and unanatomic procedures advocated and practiced at present for the attempted cure of prolapsus uteri. It is surprising that operations without the slightest relation to the causes of prolapse, or to the anatomy of the region, should be considered necessary.

For a number of years my clinical material in gynecology has been one of the largest, if not the largest, in a city of a million and a half population, aggregating about 4,000 women a year in the ambulatory dispensaries, outpatient service and ward patients.

It is apparent, therefore, to any one who knows what such patients are, that cases of prolapse of the uterus are commonplaces in my clinics at the University Hospital and the Howard Hospital of Philadelphia, the number in the last ten years amounting to several hundred. Out of all this number, not a single patient has returned on account of a recurrence.

It may be said that one does not see one's own failures; that they go to other men. This is true as a rule, but with the average amount of control over my patients, had my failures reached the proportion admitted by many clinics, I should certainly have seen some of them.

It is probable, therefore, that there is something in the routine procedure adopted, based as it is on anatomy and a study of the injuries resulting in prolapse from the moment of their occurrence to their ultimate consequences, which is giving a better result than is the rule in many so-called gynecologic clinics dealing only with certain phases and with certain stages of the pathologic phenomena peculiar to women.

Further, as there is nothing entirely original in any one of the three steps in the operation for prolapse, with partial or complete inversion of the vagina, it is perhaps to certain details of operative technic that success is due.

There are three injuries responsible for prolapse which must be kept in mind, and there are three regions which must receive attention, in a uniformly successful operation. The three injuries are: (1) The stretching, with possible actual lacerations, of the fibers of the cardinal ligaments of the uterus in the bases of the broad ligaments supporting the cervix, lower uterine segment, and, indirectly, the vaginal vault; (2) the complex injury of the anterior vaginal wall, consisting in (a) an over-stretching of the longitudinal fibers of the fascial plate derived from the bases of the broad ligaments, extending downward between the bladder and the vagina; (b) a lateral separation of these fibers by the eccentric pressure of the child's head in labor; (c) a glacier-like movement of the vaginal wall on its subjacent attachments, tearing them loose; and (d) a laceration of the muscle and fascia of the urogenital trigonum, the only support of the lower third of the anterior vaginal wall; (3) a laceration of the levator ani muscle in the posterior vaginal sulci, with a certain amount of that glacier-like movement of the posterior vaginal wall noted in the anterior wall.

With the ultimate results of these injuries we are all familiar: the elongation of the lower uterine segment, the descent of the uterus, especially the lower uterine segment and cervix, the inversion of the vagina, the protrusion of the posterior vesical and anterior rectal walls and the detachment of the vaginal walls from their subjacent tissues so that they descend further than any of the pelvic structures, to the grade of complete inversion and entire emergence from the body.

With the anatomy of the pelvis clearly understood and with the facts in mind as to the original injuries and their results, it is simply a question of surgical carpentering to remedy each defect and to correct it permanently.

The problem presented is to shorten the elongated lower uterine segment, to shorten the elongated cardinal ligaments of the uterus, to insure an anterior position of the latter, to restore the anterior and posterior vaginal walls and their subjacent structures *ad integram.*

TECHNIC

This, I contend, can be done by the following operative technic:

The cervix is seized with double tenacula in each lip; the uterus is pulled as far out of the body as it will come. A longitudinal incision is made in the anterior vaginal wall its whole length. A circular incision is made around the cervix. The anterior wall is dissected free from the bladder and the uterovesical ligament is cut. The cervix is amputated above the internal os; the cervical canal is then dilated and the uterus curetted. The lateral and posterior sutures for an amputated cervix are inserted but not tied. Then a curved needle threaded with No. 3 chromicized catgut (40-day) is passed with the point turned downward through the base of the left broad ligament, then transversely through the anterior wall of the corpus uteri as high as possible without opening the peritoneum; then through the base of the right broad ligament, again with the needle point down. By making this ligature tense and pushing the detached bladder up, the laterally dislocated edges of the fascia are plainly marked; they are brought together in the middle line by figure-of-eight sutures of catgut No. 3 (40-day), the needle always being inserted from above downward to avoid the ureters. These sutures are usually three or four in number. When they are tied, the orifice through which the bladder prolapsed is firmly closed. The redundant vaginal wall is cut off. The anterior sutures for an amputated cervix are inserted. The cervical sutures are tied. A few transverse sutures unite the anterior vaginal wall over the sutures joining the pelvic fascia.

The posterior vaginal wall and the pelvic floor are strengthened by an extensive Hegar operation as follows: A fold of mucous membrane in the middle line just below the cervix is seized by a hemostat. Two Allis intestinal forceps are fastened to the labia majora a trifle above the original level of the posterior commissure of the vulva. By pulling the center of the posterior vaginal wall to one side with tissue forceps, it is possible to draw a straight line with a knife from the hemostat to one Allis forceps. The same is done on the other side. The triangle thus marked is partly stripped, partly dissected off. The upper part of the triangle is closed by a double-tier catgut suture, the middle portion by transverse deeply inserted vaginal sutures of silkworm-gut, shotted to facilitate their removal. The perineal body and the lower third of the triangle are united by transverse silkworm-gut perineal sutures, knotted on the external skin surface of the perineum.

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* Read before the Southern Surgical and Gynecological Association, Dec. 12, 1911

A CASE OF DIABETES MELLITUS ASSOCIATED WITH TUBERCULOSIS OF THE ADRENAL GLANDS

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The following case deserves to go on record for a number of reasons, chiefly because of the association of diabetes mellitus and tuberculosis of the adrenal glands, and also because of the occurrence of apparently primary tuberculosis of the adrenal glands. The notes on the previous history and the diabetes and the adrenal glands are given in full; the other notes are abbreviated.

For the privilege of reporting this case I am indebted to Dr. Alfred Stengel, to whose service at the University Hospital the patient was admitted. The case records were encountered while making some investigations in regard to diabetes.

History.—J. O., a man, aged 45, farmer, native of Pennsylvania, entered the hospital on Jan. 20, 1902, and died there five days later. Diagnosis: diabetes and consolidation of the left lower lobe. The patient's father died of pleurisy, his mother of an unknown cause; one sister died of lung trouble. Two brothers are living and well. There is no rheumatic, nervous or neoplastic history. The patient had the usual diseases of childhood including scarlet fever. He did not recall any other diseases.

Present Illness.—Eighteen months ago he began to void larger amounts of urine, the quantity thereafter gradually increasing. He likewise lost weight and became very weak. A physician was consulted who now states that the patient had been under his care for the past twelve months suffering from diabetes. One week ago he contracted a cold and since then has had pain in the left breast and cough with abundant expectoration.

Physical Examination.—The patient's gait was unsteady from weakness and there was marked tremor. He complained of feeling cold and the skin was moist and clammy. He had pain in the left breast and cough with mucopurulent expectoration. There was some dysphagia. Nutrition was poor. The muscles were poorly developed and wasted. The complexion was cloudy. The conjunctivæ and scleræ were pale. The pupils reacted to light and accommodation. There was no edema and no cutaneous eruption. There was slight labial herpes. The pulse was weak and slightly irregular, and the superficial vessels were slightly sclerosed. The patient complained of dryness of the throat; his breath was fetid and also had an odor of acetone. The nails of the fingers and toes were normal except for slight clubbing. There was no thyroid or lymphatic enlargement. The heart was negative except for some irregularity and weakness of the sounds. There was diminished expansion on the left side and localized tenderness with signs of some inflammation over the lower lobe, later developing into signs of consolidation. The abdomen was negative except for some rigidity.

Sputum: The sputum was thick and yellowish and slightly blood-streaked. Streptococci were present and tubercle bacilli were mentioned, but with a question mark, indicating lack of certainty as to their identity.

Urine: January 21, clear, light amber, no precipitate. Specific gravity, 1024. No albumin. Sugar, 3.5 per cent. Indican, a trace. Urates and a few epithelial cells. January 23, specific gravity, 1028. No albumin. Sugar, 3 per cent. Acetone and diacetic acid present. January 24, specific gravity, 1026. Sugar, 2.5 per cent. Acetone present. The amount of urine varied between 38 and 40 ounces in twenty-four hours.

Blood: January 21, hemoglobin 54 per cent. Erythrocytes, 3,940,000. Leukocytes 10,600.

The temperature varied between subnormal and 99 3/5, the pulse between 78 and 120 and the respirations between 18 and 27. The patient's condition remained much the same till the day of his death. The record states that he died suddenly in the morning.

Necropsy.—This was performed twenty-four hours after death, by Dr. Pearce.

Anatomic Diagnosis: Gangrene and abscess of the lungs. Acute serofibrinous pleuritis. Fatty degeneration of the heart and liver. Cloudy swelling of the kidneys. Chronic interstitial pancreatitis. Atrophy of the right adrenal. Acute splenic tumor. Multiple superficial erosions of the esophagus. Atrophy of the thyroid gland (?). Arteriosclerosis.

Histologic Diagnosis: Slight chronic interstitial pancreatitis. Tuberculosis of the adrenals.

Bacteriologic Diagnosis of Abscess from Lung: *Streptococcus pyogenes, Staphylococcus pyogenes aureus, Bacillus coli communis.* Spleen sterile.

The lungs and pleura were normal except for the condition above described which was limited to the lower lobe of the left lung. The body was well developed, greatly emaciated and free from pigmentation. There was no mention of the bronchial lymph-nodes. The mesenteric lymph-nodes were normal. The pancreas was smaller and firmer than normal. The shape was more distinctly triangular than usual. The surface was grossly nodular, the irregularity being increased while the spaces between the lobules of the pancreas were depressed or filled with serous fluid. On section an increased firmness was evident which was found uniformly throughout the pancreas. The duct was patent. There were no adhesions. The microscope revealed a slight increase of connective tissue throughout the pancreas. The islands of Langerhans were negative.

Right Adrenal: A small tense firm mass was found in the position of the right adrenal. It did not measure over 1 cm. in diameter. On section it was found to be made up of dense white tissue quite firm and fibrous, relieved here and there by small yellowish brown areas, the color of the normal cortex of the adrenal. The microscope revealed extensive caseous tuberculosis. Small masses of normal adrenal were present. Attached to the right adrenal was a ganglion in which a dense growth of connective tissue had taken place.

Left Adrenal: The left adrenal was larger than normal, both the cortex and medulla being apparently proportionately increased. The cortex was chrome yellow, the medulla white, glistening and lard-like in appearance. Under the microscope the cortical cells showed moderate pigmentation (fine yellow pigment). The center of the medulla was moderately infiltrated with lymphoid cells.

In the literature I have found only one or two other cases of tuberculosis of the adrenal glands in diabetes. One of these was described by Ogle,[1] each adrenal gland containing a small patch of fibrinous material in the center. I mention this case because it is referred to by Naunyn[2] as one of tuberculosis of the adrenals. The other case is Rabé's,[3] in which the adrenal glands were totally destroyed by tuberculosis. In this case the author considered that bronzed diabetes and Addison's disease coexisted.

In the case now reported it seems to have been a mere matter of coincidence that the diabetes and the tuberculosis of the adrenal glands were associated in the same individual, and there is no evidence to show that any causal relationship existed between the two diseases.

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[1] Ogle, J. W.: St. George's Hospital Reports, 1866, i, 178.

[2] Naunyn, B.: Der Diabetes Mellitus, 1906.

[3] Rabé: Cirrhose hypertrophique pigmentaire d'origine diabétique, Bull. Soc. anat. de Paris, 1900, p. 459.

AN INSTANCE OF UNUSUAL SENSITIVENESS OF THE COLON TO MERCURY

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The study of the disagreeable effects of drugs is most profitable and enlightening to the physician, as the disagreeable manifestation, whatever it may be, is only an exaggeration, in the individual in question, of some one or of a group of the usual actions of the drug. The individual, whose case is here recorded, exhibited, for example, an unusual sensitiveness of the lower bowel to mercury. In all probability the lower bowel in everyone reacts to the stimulus of mercury, and in anyone this stimulation may go on to the production of a dysenteric diarrhea, bloody stools, erosion and even ulcerations of the colonic and rectal mucous membranes.

Furthermore, when prescribing a drug it is a profitable therapeutic exercise to review quickly at least some of its main actions; that, for instance, calomel acts as a biliary, renal and general glandular stimulant, and also that it stimulates the mucous membranes, especially that lining the large bowel.

Patient.—A stout, full-blooded man applied for treatment Dec. 20, 1908, saying that he had acquired syphilis eight years previously. The primary sore had been followed by a suppurating bubo and by sores in the mouth.

Examination.—When he first came to me he had patches of skin disease situated over each elbow tip. These patches were very itchy, especially at night. The one on the right forearm was an ordinary thickened, lichenified patch of eczema, while that on the left forearm consisted of two ringed, focal, slightly infiltrated but excoriated lesions, and was diagnosed as a syphilid modified by eczema. There was also opalescence of the mucous membrane behind each corner of the mouth.

As far as the gastro-intestinal canal was concerned, he presented the usual state of affairs found in those robust individuals that love to eat heavily: constipation, a coated tongue, yellow conjunctivæ, increased stomach tympany, clapotage, dulness over the descending colon, and a history of having had piles. The movements of the bowels were scanty, and the patient was addicted to saline purgatives such as Hunyadi Janos water. The skin of the face and in fact of the whole body was florid.

The patient said his mother and two sisters suffered from eczema.

Treatment.—While prescribing for the patient's eczema it was determined also to give him a course of salicylate of mercury injections. The suspension used was one part of mercury salicylate to nine parts of liquid petrolatum.

Fifteen minims of this were injected into the buttock. The next morning I was called to see the patient, who was suffering from a severe dysentery with tenesmus and bloody stools. Every few minutes he would arise, suffering the most severe bearing down pains, with excruciating pain across the abdomen below the navel. He attributed his trouble to ptomain poisoning from eating some boiled beef. Not being able to refute his theory I prescribed the usual remedies.

Dec. 29, 1909, he was given another similar injection, but this time of 12 minims. On returning to see me the following month he said the injection had been followed by the same symptoms as the first one, and intimated that the injection was the cause of the trouble. He then also remembered he had suffered the same way after an injection given by the late Dr. Edward Perrault, and that he had had much the same symptoms while taking a course of mercurial rubbings at Arkansas Hot Springs. There was now no doubt of the sensitiveness of the bowel to mercury. The form of mercury used by Dr. Perrault and myself was the same, but that used in the rubbings in Arkansas Hot Springs was probably mercurial ointment. It was therefore the mercury that was the real factor in the case.

Slighter grades of this symptom of mercurialism are frequent; but its occurrence in such an exaggerated form, on giving a moderate dose of a mercurial salt, is rare. All my records were lost at the time of the earthquake and fire, April 18, 1906, but a couple of years ago I had occasion to make a list of patients treated with salicylate of mercury injections. Fifty-eight patients received in all 433 intramuscular injections. The usual dose was 15 or 20 minims of a 10 per cent. mixture of the neutral salicylate of mercury. In none of them did any of the above symptoms of mercurial colitis develop. Usually the only disagreeable symptoms noticed were the pain at the site of injection, and a slight touching of the gums. The pain is sometimes severe, and comes a short time, maybe an hour, after the injection. One of my patients said that after leaving the office he felt as if he had received "a swift kick," and this describes the pain exactly. Just here we may remark a curious feminine trait. Suffering comes naturally to women, and they even welcome it, often through the pathetic illusion that the pain in itself makes the treatment more effective. Of the fifty-eight patients treated, the two who received the highest number of injections were women. One of them received forty-three injections and the other thirty-five. All courses of treatment have to come to an end sometime, but these two women were so bent on this particular treatment that they begged its continuance.

The salicylate of mercury is not an entirely insoluble preparation. Merck says it is insoluble in water, but slightly soluble in salt solution. It is, however, much less readily soluble than the bichlorid of mercury, and so acts less harshly on the tissues. If properly used it does not leave nodules and scars as the bichlorid of mercury does. My attention was particularly drawn to this by Werther, of Dresden. Sublimate sometimes scars very extensively. In 1902, I treated for about a year, with sublimate injections, a woman who had an extensive late ulcerating syphilid of the face. As through idiosyncrasy she could not take potassium iodid, and mercury by the mouth disagreed with her, and as at that time I was not using the salicylate of mercury, she was given three injections a week of a 2 per cent. solution of sublimate. The patient's buttocks are still badly scarred from the treatment.

The slower absorption of the salicylate of mercury has another advantage. A relatively larger dose than of the bichlorid of mercury may be given, and the injections need not be so frequently repeated. One injection of from 15 to 20 minims of a 10 per cent. suspension given every eighth day is almost always sufficient to control the symptoms, and the control of the symptoms is regarded as a satisfactory indication of the effectiveness of the remedy. One of our patients, with whom the treatment was carried out by a friend, returned not long since suffering from symptoms of irritation of the large intestine. He had pain below the navel, tenesmus and blood and mucus in the stools. He had been carefully directed to get 20 minims of a 10 per cent. mixture of the salicylate of mercury every eighth day. He was, however, given this dose every fifth day, which to my mind is by far too much. In a microbic disease like syphilis one must never lose sight of the fact that there are self-curative elements engendered in the body itself that combat the disease, and that, although mercury is a powerful aid in treating syphilis, the antibodies are probably still more powerful, and that if we through mercury decidedly lower the vital forces, we probably also lower the formation of the antibodies, and so do harm instead of good. It is not desired in this paper to enter into the question of the Wassermann reaction, and its relation to antibodies, and its further relation to the question of treatment. It seems perfectly reasonable, however, to suppose that overtreatment, like any other debilitating agency, may lower the patient's resistance.

Opium is the correct drug in the treatment of mercurial colitis, and here arises the very important question of the association of mercury and opium in the treatment of syphilis. Almost always this association is treated as being eminently proper, whereas in my own practice, and in that of my immediate associates, it is very rarely employed indeed. My reason for not employing opium is the belief that the mercury acts as an eliminative, and that the speedy passage of the drug through the body is essential to the success of the treatment, and that as all such drugs as opium decidedly interfere with this elimination they should be used very rarely indeed.

As a further reason for not using opium, Hartung, in an interesting note on "Unfortunate Occurrences in Using Mercurial Injections," mentions with what reluctance he prescribes opium in this association, and then quotes a curious note from Kobert showing the incompatibility between these two drugs. The note runs as follows:

> Remarkable and up to the present not explained is the fact that opium-eaters can take the enormous dose of 1.8 gm. (about 27 grains) of sublimate without injury. It must be assumed that an insoluble combination of sublimate and opium is formed in the bowel.[1]

If opium acts in this way as an antidote to sublimate, it is one of the most interesting facts in medicine, for in all probability a number of the salts of mercury, as for instance calomel, act constitutionally by first turning into sublimate. If, therefore, mercury and opium are prescribed together, as not infrequently advised, the opium may, in a large measure, offset the sublimate and render the treatment ineffective.

Recently Juliusberg has published a report of a most interesting case of poisoning, ending in death, consequent on a course of mercurial inunctions of moderate dosage.[2] There was a rise of temperature, a scarlatiniform eruption, and severe involvement of the kidneys and intestines with no trouble in the mouth. The author takes occasion to refer to the fact that these cases fall into two groups: In one the fury of the drug is spent in the mouth, and in the other, in the intestinal tract and on the kidneys. Of course the case here reported did not show this severity. At no time was the patient in danger of death, nor had he any rise of temperature, or any involvement of the kidneys. After the pain and inconvenience were over he was in perfect health, so far as mercury was concerned. The case showed, however, an unusual sensitiveness of the lower bowel to the drug, and indicated what might have happened if an unusually large dose had been administered. These instances of disagreeable by-effects or of poisoning from mercury are of unusual interest at the present time, when the two drugs, mercury and salvarsan, are on competitive trial. To have some derangement of the bowels on giving mercury is, of course, not rare; to have severe cramps and dysenteric discharges is quite rare; and exceedingly rare, indeed, are those severe cases of stomatitis or of lesions of the kidneys and intestinal tract that lead to death. The administration of mercury, especially of late years, when even the slighter by-effects and symptoms are avoided, must be looked on as being safer than salvarsan. In regard to the comparative efficacy of mercury and salvarsan, opinion is now shaping itself fairly definitely. For example, it is now determined that syphilis should not be treated with salvarsan alone, but that mercury must also be given, and that the chief reliance must be placed on the latter drug. It remains for the future to decide whether we may hope for a better result in the prognosis of syphilis by using both mercury and salvarsan, than if we use mercury alone. We also know that there are certain manifestations of syphilis that are most refractory to mercury and to potassium iodid, such as late palmar syphilids and persistent mucous patches in the mouth that often clear up in an astonishing way after a dose of salvarsan.

323 Geary Street.

A CASE OF SPORADIC CEREBROSPINAL MENINGITIS SIMULATING THE UREMIA OF BRIGHT'S DISEASE

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While the occurrence of sporadic cases of cerebrospinal meningitis is generally recognized as a possibility, it probably occurs more frequently than is commonly supposed. It is perhaps true, as Preble has said, that many of the cases which have been so reported are not genuine, but it is quite likely true that many genuine cases pass unrecognized. There is no longer any reason that the diagnosis should remain in doubt. It can be either established or refuted with perfect confidence by suitable bacteriologic examinations of the spinal fluid and blood. That the epidemic form is always due to an infection by the *Diplococcus intracellularis meningitidis*, and that the only cases which should be called sporadic cerebrospinal fever are due to the same organism, are two propositions which appear fully established. Wollstein, e. g., produced fatal meningitis in monkeys indifferently with organisms derived from these sources. Furthermore, the organism appears to be fairly widely distributed, maintaining its viability in the nose and throat of meningococcus carriers much the same as the Eberth bacillus does in the gall-bladder, etc., of typhoid carriers. It is just as reasonable to suppose that sporadic cases of this infection may occur as of typhoid, scarlatina, etc. Koplik says that they are constantly occurring in all large cities, and found in New York several isolated cases of typical posterior basic meningitis due to this organism. The failure of the sporadic case to propagate its kind is no more difficult of explanation than is the similar failure frequently observed in sporadic cases of other infections. It is well known that the virulence of pathogenic microorganisms varies within wide limits, depending on conditions at present unknown whether atmospheric, telluric, electromagnetic, variations in radio-activity, or something else. With low virulence a special susceptibility, a greatly exaggerated vulnerability may be essential in order that the germ may produce its specific effect. Such a condition may present itself on the part of the victims of so-called sporadic infection.

The importance of early and accurate diagnosis in suspected cases cannot for many reasons be too strongly emphasized, and suspicion should be ever alert. In the first place the mortality is much the same in the sporadic as in the epidemic cases, and this we know is very large. The result, as already indicated, depends not alone on the intensity of the virulence of microorganisms, but also on the personal equation of the patient. Then again, and complemental to this fact, stand the brilliant therapeutic triumphs of Flexner's serum. We may cure the patient by early diagnosis and prompt treatment. We may safely affirm that there is no material distinction between the sporadic and epidemic form of the disease, so far as the individual case is concerned. The specificity of the microorganism and the serum are alike established, and the antimeningococcus serum should be used in both alike at the earliest possible moment.

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[1] Kobert: Intoxikationen, 1892, p. 263. Quoted by Hartung: Dermat. Ztschr., January, 1906, p. 73.

[2] Juliusberg, Fritz: Ein Fall von schwerer Quecksilbervergiftung, Arch. f. Dermat. u. Syph., Vienna, December, 1911, p. 409.

The following case illustrates one clinical type of sporadic cerebrospinal meningitis, and the difficulties which may attend its early diagnosis:

Patient.—May 26, 1911, I was called, in consultation with Drs. Schwartz and Dickes of Portland, Ind., to see Mr. M., a banker, aged 45. The patient's father died at 72 of paralysis; mother at 40 of consumption; one brother had committed suicide. His health had always been good until present illness began, excepting that he had "considerable trouble with head from eye-strain"; had "granulated lids," and corneal ulcers. His habits were sedentary; he was a hearty eater. About two weeks before examination he began to have daily headaches of rather severe type, with general malaise, but was not compelled to go to bed, and was at his place of business a part of the time. This continued about one week when one evening, about 10 o'clock, he was found unconscious on the floor of the bath-room. A few minutes before this he had been conversing with his family, and nothing unusual was observed at that time. No other data in regard to temperature, pulse, etc., prior to this attack could be obtained.

When first seen by his physician a few minutes later he was entirely unconscious, and cyanotic with embarrassed respiration. He had probably just recovered from a convulsion, as he had a general tonic convulsion with rigid limbs, retracted head, and lacerated tongue about five hours later. He remained unconscious for fifteen or twenty hours, after which he was in a dazed mildly delirious state, which had grown much worse during the twenty-four hours previous to his examination. When seen by me he could be roused with difficulty and could not converse coherently. On the morning following this attack he had a temperature of 103; at time of my visit temperature was 102.8; pulse, 90, full and strong.

Examination.—The patient was an average-sized, well-developed man, of phlegmatic and rather heavy type. The heart was moderately enlarged, with a rough systolic bruit over upper sternal region; aortic second accentuated; otherwise normal. The liver was easily palpable and slightly enlarged. There was no edema. Systolic blood-pressure was 160. Shortly after the second convulsion he was catheterized, the bladder containing only two or three teaspoonfuls of urine heavily loaded with albumin. Several quarts of normal saline solution were thrown into the colon, and in twelve or fifteen hours free diuresis was obtained. The albuminuria persisted for two or three days and then disappeared. A specimen taken to my own laboratory had a specific gravity of 1018, was of acid reaction, and contained neither albumin, sugar acetone nor indican. Microscopic examination was entirely negative. The blood contained 100 per cent. hemoglobin (erythrocytes not counted); leukocytes, 15,000; polymorphonuclears, 72 per cent.; small lymphocytes, 22 per cent.; large lymphocytes and transitionals, 5 per cent.; eosinophils, 1 per cent.

Up to this point, the blood and later urinary findings of course being not yet available, I felt inclined to agree with the provisional diagnosis of uremic convulsions and coma already made. It was apparently well grounded. There was nothing in the case entirely incompatible with it. Two circumstances, however, led me to look further. The first one was the comparative suddenness of the evolution of the symptoms without a definite history of anything pointing in that direction; second, the rather high temperature known to exist during the last week, but which might of course have been incidental.

Further examination showed a well-defined Kernig's sign, perfectly typical in character, and marked rigidity of the neck. I apparently made no note of the pupillary and eye-ground findings, and cannot distinctly recall them. Believing that we might have a cerebrospinal infection to deal with, I made a lumbar puncture. The spinal fluid was so thick that it flowed with difficulty, and was very turbid; about 10 c.c. were procured in a clean bottle which was not reliably sterile so that no cultures were attempted. Two c.c. of blood were taken from the median cephalic vein with a Luer syringe and transferred to sterile bouillon tubes which I always carry. This was done with perfect technic.

The spinal fluid was examined within four hours from the time of its removal, by Dr. B. W. Rhamy, pathologist to Hope Hospital, who reported as follows:

"Examination of spinal fluid, May 26, 1911:

"Fluid cloudy with blood.

"Sediment equals ½ of 1 per cent. of bulk of fluid.

"Blood equals 4/5 of sediment.

"Serum albumin present in large quantity.

"Sediment shows cellular elements with the following proportion of cells:

"Polynuclear neutrophils, 60 per cent.; lymphocytes, 5 per cent.; endothelium, 35 per cent.

"Stained slide shows a few biscuit-shaped diplococci, nearly all of which are in the pus-cells. One polynuclear cell had about twelve pair of diplococci in its protoplasm. These diplococci decolorized by the Gram method. Bacteria correspond to the *Diplococcus intracellularis meningitidis*."

The blood culture was placed in the incubator and developed a typical growth of the same organism, which was fully verified by Dr. Rhamy to be *Diplococcus intracellularis meningitidis*.

Treatment and Course.—Immediately after getting the report of the pathologist, or about four hours after the examination of the patient, I telephoned the attending physician that it was probably a case of sporadic cerebrospinal meningitis, and that without waiting for confirmation by blood culture I would advise the administration of Flexner's serum. They telephoned to Dr. Hurty, who procured the serum in Indianapolis. At their request Dr. Neu visited the patient, taking with him the serum, which he administered about ten or twelve hours after my examination. The patient was very nearly moribund at the time of Dr. Neu's visit and died several hours later. There was no autopsy.

This patient had the cardiovascular conditions incidental to long-continued high blood-pressure. When in addition to this there was found very scanty urine heavily loaded with albumin the diagnosis of "uremia" from Bright's disease would seem to be fully supported, and yet the comparative suddenness of the onset in ordinary health, the high temperature, and finally the return of completely normal renal function were, it seemed to me, sufficient grounds for scrutinizing it very closely. The cytology and bacteriology of the spinal fluid, together with the bacteriology of the blood of course settled the diagnosis beyond a doubt. The suppression of renal function and the albuminuria were probably the result of venous stasis incidental to the convulsions, further evidenced by the extreme cyanosis and respiratory embarrassment. The convulsion itself was probably an incident of the general infection. The case was not only a fatal sporadic infection with the *Diplococcus intracellularis meningitidis*, but an ambulatory case at that, for at least several days after the development of the disease, as indicated by continuous headache, malaise and probably fever, the temperature being 103 F. at the close of the first convulsion.

407 West Main Street.

CHLORID EXCRETION IN ALCOHOLIC CIRRHOSIS

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NEW YORK

The action of the chlorids in nephritis has been so extensively discussed since the work of Widal, in 1903, and is so significant in certain types of nephritis that the knowledge of any such action in localized accumulations becomes a therapeutic necessity. The paucity of the literature on chlorid metabolism in cirrhosis of the liver has induced me to report the following case in detail.

It is shown that, in this particular case, there was a diminished excretion of chlorids in the urine throughout the course of the disease. The retention of salt was in some cases primary to the retention of water. An increased excretion of water by the kidneys was not accompanied by a proportionate increase in the chlorid elimination.

Shall the practitioner consider the local accumulation of fluid in ascites as inflammatory, and content himself with medication directed to the relief of the inflammation; or shall he regard the fluid as non-inflammatory in origin and attempt to remove it by mechanical means? Or, as a third possibility, do both of these processes play a part with the consequent double therapeutic indication?

In such a common and important condition as the ascites of alcoholic cirrhosis these questions are by no means satisfactorily answered, and there is to-day little or no literature to which one may turn for advice.

Are the diuretics of value in this condition, and if so, which types are indicated? In the present case none seemed to possess more than a transitory influence on either the excretion of water or of salts, and there was no change noted in the amount of fluid in the abdomen after the use of any of them.

History.—The patient, a French chef, aged 66, was admitted to the hospital on April 7, 1910, with signs of a large accumulation of fluid in the abdomen and in an advanced stage of malnutrition. The family history was negative. The patient had always been healthy, had had to work hard and had always taken moderate amounts of alcohol in the form of beer and light wines. He had never been addicted to sprees. The onset of the present trouble was gradual. About a year previous to admittance the patient noted slight dyspnea and palpitation. Six weeks before admission there had been a slight protrusion of the abdomen which had slowly increased. More recently there had been edema of the legs and a diminished amount of urine.

Examination.—There was malnutrition, marked anemia, dyspnea and slight cyanosis. There was no jaundice. The heart was enlarged and there was a systolic murmur. The pulse was regular and of good quality; the vessel-wall was palpable. The abdomen was enlarged, symmetrical, dull in dependent portions and gave a distinct fluid wave. The circumference was 99 cm. at the umbilicus. Temperature was 98.4; pulse, 88; respiration, 20. The blood showed secondary anemia (hemoglobin 50 per cent.) with normal leukocytes. The clinical examination of the urine gave only the very slightest signs of kidney involvement. There was occasionally a very faint trace of albumin and a rare hyaline cast. Often the examination showed a normal urine.

Operations.—Paracentesis was performed five times:

	Fluid in c.c.
April 7	6,720
April 14	4,560
April 25	7,250
May 4	6,950
May 13	6,700

The fluid obtained was examined and was found to be as follows: Specific gravity, 1011. Color, yellow. Cloudy. No coagulum. No sediment. Albumin bodies, 25 per cent.; NaCl, .637 per cent. Differential count showed polymorphonuclear cells, 9 per cent.; large mononuclears, 0; eosinophils, 0; lymphocytes, 16 per cent.; endothelial cells, 75 per cent.

There was slight improvement after each operation, but there was a steady loss of flesh and strength and on May 25 death occurred from inanition.

The urine was examined for sodium chlorid and the daily amount determined. The daily amount of urine and chlorid is shown in the following table. For convenience, the chlorids are calculated in terms of sodium chlorid, although the sodium was not determined. This is accurate enough for clinical purposes. The chlorids of the sweat and feces were not determined.

TABLE SHOWING EXCRETION OF URINE AND SODIUM CHLORID IN A FATAL CASE OF ALCOHOLIC CIRRHOSIS

Date	Amount, c.c.	Specific Gravity	Reaction *	NaCl, gm.	Weight	Regular Diet and Remarks
4/17	560	1,030	+	2.44	.....	
4/18	.....	.....	+	....	.....	Spec. lost.
4/19	510	1,030	+	2.90	.....	
4/20	340	1,032	+	2.00	141.0	
4/21	290	1,028	+	1.37	141.5	
4/22	.....	.....	..	....	143.5	Spec. lost.
4/23	770	1,017	+	1.80	144.5	Farinaceous diet.
4/24	1,120	1,009	+	1.03	.....	
4/25	440	1,018	+	1.91	145.0	Paracentesis, 7,250 c.c.
4/26	430	1,020	+	2.13	.....	
4/27	660	1,017	+	2.59	.....	
4/28	350	1,020	+	0.90	133.0	
4/29	210	1,030	+	1.13	135.5	
4/30	130	1,037	+	1.00	.....	A. B. C. diuretic.
5/1	200	1,026	—	1.05	136.5	
5/2	680	1,013	—	1.83	.....	Levulose test negative.
5/3	520	1,017	0	1.87	136.5	Restricted chlorids (about 5 gm. daily).
5/4	310	1,024	—	1.53	.....	Paracentesis, 6,950 c.c.
5/5	270	1,030	—	1.83	.....	Theocin gr. v, t. i. d.
5/6	370	1,033	+	2.45	121.5	
5/7	300	1,030	+	1.98	.....	
5/8	240	1,030	+	1.80	121.0	
5/9	210	1,029	+	1.10	119.5	Theocin stopped.
5/10	290	1,026	+	1.27	121.0	NaCl gm. 10 p. o.
5/11	330	1,024	+	1.25	123.7	
5/12	270	1,030	+	0.93	125.0	
5/13	180	1,027	—	0.57	127.0	Salt-free diet. A. B. C. diuretic stopped. Paracentesis, 6,700 c.c. (NaCl .637 per cent. = 42.6 gm.).
5/14	230	1,032	—	0.78	114.5	
5/15	310	1,026	+	0.90	114.0	
5/16	270	1,029	+	0.69	114.0	
5/17	280	1,026	+	0.81	116.7	
5/18	440	1,019	+	0.68	.....	Low chlorid diet. Fluids increased.
5/19	820	1,019	+	0.95	116.7	
5/20	750	1,016	+	1.52	115.5	Vomiting.
5/21	370	1,024	+	1.04	114.8	Vomiting.
5/22	310	1,030	+	1.04	.....	Vomiting.
5/23	260	1,032	+	0.59	.....	Vomiting.
5/24	470	1,028	+	0.94	.....	
5/25	.....	.....	..	....	.....	Died.

* In this column + indicates acid reaction ; —, alkaline reaction ; 0, neutral.

The pathologic diagnosis, as a result of the post-mortem examination, was: Cirrhosis of the liver—atrophic; chronic aortic endarteritis; cardiac hypertrophy; general arterial sclerosis; chronic interstitial pancreatitis; chronic interstitial splenitis.

The kidneys are not mentioned, but that there was a slight change was shown by the note that "the right and left kidneys weigh respectively 120 and 130 gm.; capsule strips easily; cut surface opaque; pyramids not well-formed; glomeruli visible; microscope shows a few hyaline glomeruli, but little increase in stroma."

We have, therefore, in a case with slight evidence of kidney-change by the usual clinical and post-mortem findings, several noteworthy features. The urine was diminished throughout, the largest quantity being 1,120 c.c., and the smallest 130 c.c., an average daily excretion of 403 c.c., or less than one-third the normal average. Regardless of the intake of salt, which varied from 3 gm. to 15 gm. per day, the excretion was never above 3 gm. per day, average of 1.42 gm. During the nine days from April 25 to May 4, the salt intake averaged a little over 7 gm. per day, or approximately 65 gm. for the period. During the same period 14 gm. were excreted by the kidneys and, at the end of the period, 44.4 gm. were removed from the body in 6,950 c.c. of ascitic fluid. The balance may be shown as follows:

NaCl intake		65.0 gm. (approx.)
Excretion by kidneys..............	14.0 gm.	
Content of ascitic fluid............	44.4 gm. =	58.4 gm.
Difference, excretion in feces and sweat =		6.6 gm.

During the period May 4 to May 13, the salt in the diet was approximately 52 gm., to which should be added the 10 gm. given on May 10, making a total of 63 gm. Following the introduction of 10 gm. of salt there was a rapid increase in body-weight amounting to 2.7 pounds, approximating the amount of water required to hold 10 gm. of salt in solution in the percentage recovered from the ascitic fluid three days later. That is, 10 gm.÷0.637 gm. (the amount in each 100 c.c. ascitic fluid)=1,570 c.c.=3.4 + pounds.

		Gm.
Salt intake in diet....................		52.0
Salt given on May 10..................		10.0
Excreted in urine.....................	13.2	62.0
Recovered from ascitic fluid............	42.7	
	=	55.9
Excretion in feces and sweat.......		6.1

It may be noted that in this case, in which hepatic cirrhosis was proved at autopsy, the result of the levulose test was negative.

SUMMARY

In this case of alcoholic cirrhosis of the liver, with but slight involvement of the kidneys (confirmed by autopsy), the following points were noted:

1. There was a constant and continuous decrease in the elimination of water and chlorids.
2. Diuretics had only a slight and transitory effect on elimination.
3. A dose of 10 gm. of salt was followed by a retention of water, and a corresponding increase of body-weight.
4. The retention of salt appears, in some cases, to be the primary process.
5. A diet of low salt content may be of service in prolonging the ascitic stage of cirrhosis, thus allowing time for the desired collateral circulation.

157 West Seventy-Ninth Street.

Albuminized Bread.—Serum obtained by straining the coagulated blood of slaughtered cattle is added to rye bread; 10 pounds of rye flour are mixed with 5 pounds of the serum and ½ pound yeast. When the dough has risen, 6 pounds of rye flour and 6 pounds of serum are added. These directions are given in the *Jour. Army Med. Corps*, 1912, xviii, 234. They are taken from a Russian article on an "iron ration" for soldiers, a ration to be carried only for emergencies. The bread is to be dried and with it are to be carried tea, sugar and bouillon cubes. This albuminized bread has been found to supply the extra proteid in a satisfactory form. The taste does not differ from that of ordinary rye bread. Wheat bread made with it has a pinkish tinge, which is not noticeable with darker flour. It is stated that 800 gm. of the dried albuminized bread or zwieback represent 221 gm. of proteid and 576 gm. of non-nitrogenous food material

THE EFFECT OF INTERCURRENT PNEUMONIC COMPLICATIONS ON THE COURSE OF CHRONIC PULMONARY TUBERCULOSIS

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Pulmonary tuberculosis presents a varied picture. Some cases are continuously afebrile, others run a low-grade temperature without an afternoon rise above 99.6 for months, others run a low-grade temperature as a rule, but are subject to acute exacerbations, while others run a continuously high fever of the intermittent type and progress rapidly to a fatal termination.

We are in the habit of looking on the afebrile cases with low-grade fever as the most favorable and the cases showing acute exacerbations as unstable, uncertain and unfavorable. In general this assumption is correct, and is borne out by clinical observation, but there is a certain group of these cases in the acute exacerbation class that are not unfavorable, and the acute exacerbation seems to have a profound influence on the tuberculous process. These cases are those showing an intercurrent or superimposed pneumonic infection of a rather severe character during the course of the chronic tuberculous disease.

Ordinarily, acute tuberculous pneumonia is looked on as unfavorable and cases with acute bronchopneumonia show a tendency toward disintegration rather than calcification, but not rarely the acute pneumonic process set up by a mixed infection heals (Ophüls).

Osler considers tuberculous pneumonia — the acute pneumonia due to the tubercle bacillus alone (the so-called caseating pneumonia)—as unfavorable, but it is not this type of tuberculous pneumonia that I wish to discuss, but rather the acute pneumonia (presumably of pyogenic origin) superimposed on a chronic ulcerative tuberculous process. Coyon and Fiessinger report a case showing symptoms of acute tuberculous pleurisy that later became torpid with encapsulated pneumothorax. The effusion was evacuated occasionally and signs of secondary infection with the *Staphylococcus aureus* were discovered in a few months. "This transformed the tuberculous process and a cure followed."

These cases may run the usual course of chronic ulcerative tuberculosis for months—low-grade afternoon fever, rapid pulse, moderate amount of expectoration—and remain practically stationary. A sudden rise of temperature may occur, ushered in by a sharp chill, pain in the side, dyspnea and the other signs of an acute pneumonia may develop. The patient, his friends and physician become alarmed and the condition of the patient is believed to be very grave. After from twenty-eight to thirty days, however, the fever subsides, the pain and dyspnea disappear and while the patient has lost weight and is weakened by the fever, an examination of the lungs does not show an advance of the tuberculous process as might be expected, but the pulmonary findings are much improved.

Ordinarily an intercurrent pneumonia or pleurisy with effusion in pulmonary tuberculosis is considered unfavorable, but this observation I have made in a number of cases, and at present, instead of looking on the condition as unfavorable, if it is not too severe, I am inclined to consider it favorable, and regard the prognosis after such an attack as good.

Out of 1,200 cases admitted to the Ottawa Tent Colony in the past seven years, at least twelve were of this type. Of this number eight patients are cured and self-supporting (66⅔ per cent), two are still under treatment, one died during the attack, and one died subsequently from other causes. The prognosis in the cases of the two patients still under treatment is extremely good—much better than before the pneumonic attack—but leaving these two cases out of the consideration, the results achieved in the remaining ten are very striking—success in 90 per cent. These cases are all in the advanced class and in this type of case 35-40 per cent. cures is considered a good average. These results lead me to believe that those acute intercurrent infections are not as detrimental as is generally believed, but on the contrary are favorable.

It is unnecessary to give histories of all the cases observed, but examples of the different types may be of interest.

Case 1.—H. R. (advanced case), had been under treatment prior to pneumonic attack for four and one-half months. Maximum temperature was from normal to 100. Pulse ranged from 100 to 120. Appetite and digestion, as a rule, were good. Weight was 126 pounds. At onset of pneumonic attack temperature suddenly rose from 99 to 104.2 in twenty-four hours and remained above 103 for seven days, above 101 for fourteen days, and on the twenty-eighth day dropped to normal. For the succeeding seventeen days temperature varied from 98.8 to 100, with an average of 99.6. For the next sixty days maximum temperature was not above 99. Pulse average about 100. Patient lost 11 pounds during attack, but gained 16 pounds in the next sixty days; made a good recovery and is now in good health, four and a half years after discharge. Diagnosis was based on clinical symptoms.

Case 2.—J. D. (moderately advanced case), had for two months after admission maximum temperature 100.2, with an average daily maximum of 99.2. Pulse ranged from 85 to 100. Onset of pneumonic complication was sudden, temperature rising within twenty-four hours to 103.8, when patient had two hemorrhages aggregating 6 ounces. In the three succeeding days he had four hemorrhages aggregating about sixteen ounces. On the tenth day temperature rose to 104.3 and remained above 104 until the twenty-second day, when patient died from exhaustion. Diagnosis was based on clinical findings.

Case 3.—F. E. (advanced case), gave history of recent acute pneumonia with marked consolidation which had not cleared up. Maximum daily temperature from time of admission to onset of pneumonic complication ranged from normal to 99.8. Pulse was 95 to 122. In eight months consolidated area showed marked improvement. Patient's general condition was good. He gained seventeen pounds, then developed pneumonia, temperature rising to 102.4 within twenty-four hours. Highest temperature during attack was 103, which was on the ninth and eleventh days, gradually but irregularly subsiding. On the twenty-second day temperature was normal. For the succeeding forty-eight days temperature did not range above 99.4, with an average of 99. Pulse was 80 to 92. Patient returned to his home. He was making steady improvement when he suddenly developed some brain trouble which was not diagnosed, but from the history as I obtained it, was probably an abscess of the brain. Diagnosis was based on clinical symptoms, pneumococci in sputum, and recovery of the pneumococcus from the blood.

Case 4.—L. K. (advanced case), had been under treatment four months prior to the pneumonic attack, during which time he was making satisfactory progress. Maximum daily temperature was 98.8 to 100.2; average 99.4. Within twenty-four hours after the onset of the pneumonic attack the temperature rose to 102. On the seventh day it reached 104.2, and gradually subsiding, touched normal on the thirtieth day. The patient remained under treatment for two and a half months longer, during which time the maximum temperature was 99.4, with an average of about 99. The temperature was normal two weeks prior to discharge. Patient lost six pounds in weight during attack, which was rapidly regained. Patient now living, after two years, and reported as in good health. Diagnosis was based on clinical symptoms and recovery of pneumococcus from sputum and blood.

Case 5.—W. C. (moderately advanced case), had on admission maximum daily temperature averaging 99.4. Pulse ranged from 98 to 114. Two weeks after admission she suddenly developed pneumonia. Temperature rose within twenty-four hours from 99.2 to 104.1; second day 105. Pulse 132. Temperature gradually subsided, touching normal on the twenty-sixth day. Patient remained under further treatment for four and a half months, during which time the maximum temperature was 99.3, and for two months prior to discharge, temperature was normal. Patient has been discharged for three months, during which time improvement has been steady. Diagnosis was based on clinical symptoms and recovery of pneumococcus from the blood and sputum.

Case 6.—A. C. (advanced case), weighed on entrance 103; normal 115. Appetite and digestion were poor. Temperature was very irregular, ranging from normal to 103.6, at no time remaining above 100 for more than two or three days consecutively. Four months and a half prior to the onset of the pneumonic complication temperature did not range above 100.2. Appetite and digestion were still poor. Patient alternately gained and lost in weight with net gain of only one pound. With the onset of the pneumonic complication the temperature rose within thirty hours to 103, and reached the highest point on the eleventh day. It began to subside on the sixteenth and touched the normal on the thirtieth, since which time the temperature has not been above 100.2. Appetite and digestion are very much improved. Patient gained 11 pounds in the past two months, and general condition is very much better in every respect than at any time since admission. Patient is still under treatment. Diagnosis is based on clinical symptoms and recovery of the pneumococcus from the blood and sputum.

Case 7.—F. M. (advanced case), has had present illness for three years, and is still under treatment. Weight on entrance 136 pounds; normal 142. Maximum daily temperature ranged from time of entrance to onset of pneumonia from 98.6 to 100.2. Six weeks after admission temperature suddenly rose to 102.2. On the sixteenth day after attack, 104.6. Gradually subsided and on the thirtieth day dropped to normal, since which time it has not been above 99.4, and is now normal. Patient lost eight and a half pounds during pneumonic attack, which he regained within three weeks and now weighs 151 pounds. Diagnosis based on clinical symptoms.

Lung findings in all these cases were found much improved on the first examination after pneumonic symptoms had subsided.

There is a preponderance of evidence at hand that the immunity in pneumonia is a phagocytic one; the total number of circulating leukocytes is increased. There is also a local accumulation of leukocytes in the lung and it has been demonstrated by Metchnikoff, Opie and others, that these leukocytes contain various ferments that kill and digest bacteria. A plausible explanation of the above phenomenon is that the intercurrent pneumonic infection causes an accumulation of leukocytes in the lung and these leukocytes not only overcome the pneumonic infection, but in their zeal act on the tuberculous infection also and after recovery from a rather hard siege the patient, instead of being in worse condition than before, was found benefited.

The effect of acute intercurrent pyogenic infection on chronic tuberculosis has been observed in other parts of the body. The effect of erysipelas on chronic, indolent tuberculous ulcers has been repeatedly noted. If tuberculous ulcers of the skin heal rapidly after an intercurrent attack of erysipelas, is it not reasonable to assume that a similar reaction can occur in the lung?

These observations lead me to the conclusion that intercurrent pneumonia during the course of pulmonary tuberculosis is not unfavorable, but appears to exert a favorable influence and in the cases cited appears to have been an important factor in the production of a cure.

If an accumulation of leukocytes could be induced artificially in a tuberculous focus by the use of some positively chemotactic substance—not necessarily bacterial—this artificially produced accumulation of leukocytes might be of value in hastening the "cure" of the tuberculous process. Animal experimentation along this line, I believe, would be exceedingly productive.

CASE OF ACUTE MERCURIAL POISONING FOLLOWED BY GENERAL NECROSIS OF MAXILLARY BONES AND PURULENT OTITIS MEDIA

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On Dec. 3, 1910, Mrs. E., aged 28, drank a solution containing six 7½-grain tablets of mercuric chlorid. She vomited freely within five minutes; her stomach was washed at the end of thirty minutes, and in the interim she drank the whites of half a dozen eggs and two glasses of sweet oil. At the end of an hour she became unconscious and was removed to the hospital. Urine, drawn by catheter for the first time at the end of sixty-two hours, was bloody, four ounces in all. Patient was unable to take nourishment except by rectum, as everything taken by mouth was immediately expelled by vomiting.

A diffuse papular rash appeared over the entire surface of the body at the end of twenty-four hours; the left heart was dilated and sounds were weak; pulse, 120, weak, thready and of low tension; liver enlarged to about three fingers' breadth beneath the free margin of the ribs; examination of urine showed presence of albumin (0.3 per cent.), large quantity of pus, large numbers of hyalin and granular casts and renal epithelium. The patient's ankles, knees, hips and elbows became sore and stiff, and by Jan. 1, 1911, she had lost 35 pounds.

By the second day her teeth had turned black, and were extremely loose, while from the sockets there exuded a free discharge of foul-smelling pus. Breath was intensely offensive; the saliva fairly ran from her mouth in a stream. She could only open her mouth about three-fourths of an inch and was unable to close it because of the extreme soreness of her mouth and teeth.

The entire oral mucous membrane, but especially that over the alveolar processes, was covered by a mass of large vesicles, which on bursting discharged a thick hematoserous fluid. As the condition (i. e., mercurial stomatitis) progressed, small areas of necrosed bone were exposed and showed over the entire alveolar process, first appearing in the regions between the teeth themselves, and then spreading laterally in all directions. The teeth finally became so loose that, during the first month eight lower teeth, the right bicuspids and molars and the left bicuspids and first molar, and four upper teeth, the right and left second bicuspids and first molars, either dropped out or were taken out by the patient herself, through fear of swallowing them. The remaining teeth, although also very loose at this time, subsequently tightened in their sockets and at the present time are firm and normal. A large abscess mass formed externally on the left side beneath the bicuspids, and was opened and drained into the mouth.

Coincident with the development of this condition in the mouth, there occurred an acute purulent otitis media, with an associated intense pain over the mastoid region and back up over the neck and head. The eardrum ruptured in the upper posterior quadrant and there was a free discharge of pus. There was complete loss of hearing on the left side.

By Jan. 1, 1911, the alveolar processes of the upper and lower jaws had necrosed and were completely denuded of gum tissue on their articulating surface.

Patient was operated on Feb. 1, 1911, and eighteen sequestra were removed from the exposed alveolar processes and from between the necks of the teeth which had not been lost. The largest pieces removed measured 1¾ and ¾ inches in length. At this time the abscess mass beneath the left maxilla, having continued to increase in spite of being drained into the mouth, was opened externally on the face, and was drained daily by means of through-and-through irrigations and kept open by means of a rubber tube and gauze packs. With the exception of this one area, the mouth had entirely healed by February 15. This sinus continued to discharge about one dram of pus with each daily irrigation, being reduced to but a few drops at the end of two months, i. e., April 15. At this time a large sequestrum was removed through the external face incision and by May 1, the patient's mouth was entirely clean and healthy.

The condition in the ear was successfully treated by Dr. W. S. Franklin without operation. Discharge has entirely stopped and the patient's hearing on the left side has been restored to about one-third normal.

By means of tonics and an out-door life she has regained about 20 pounds, but still suffers from extreme anemia, due to a very weak heart. She also has a chronic parenchymatous nephritis.

This case is simply an aggravated form of a condition which is seen in the mouth during the normal administration of mercury, as it is given in the treatment of syphilis, or which quite frequently results from an overdose of calomel. The fact that mercury is, to a very large extent, excreted through the mucous membrane of the mouth, probably accounts for the peculiar susceptibility of the oral tissue to overdoses of this drug. In ordinary salivation, we get the beginning of a mercurial stomatitis and a mercurial necrosis of the alveolar processes, which accounts for the gradual destruction of the bone around the teeth and which, if allowed to continue, would ultimately result in the loss of the teeth owing to the complete softening of the alveolar processes supporting them, and the cementum of the teeth, which is typical bony tissue, histologically, takes part in the same destructive process and hastens the tendency toward tooth exfoliation.

There are a great many cases on record in which this latter condition has occurred, but I am unable to find any in which such extensive destruction as took place in the present case has been reported. The unique character of the case is perhaps due to the fact that the condition usually ends fatally, and it is only by the rarest good fortune that this patient's recovery, owing to prompt medical attention and to her own remarkable vitality and resistance, has enabled us to witness and to treat the interesting condition which we are able to report in this paper.

177 Post Street.

The Tongue of the Wise Useth Knowledge Aright.—"Some physicians are so conscientious—and so tactless—that they think they must tell patients the whole truth when they believe they cannot recover, instead of giving them the benefit of the doubt, for every physician knows that nearly always there is a doubt which way the case will turn. Cheerful encouragement has saved many a life by helping it to pass a crisis favorably, when the actual truth might have killed the patient or reduced his rallying powers to the danger-point."
—O. S. Marden.

INTRAVENOUS LOCAL ANESTHESIA *

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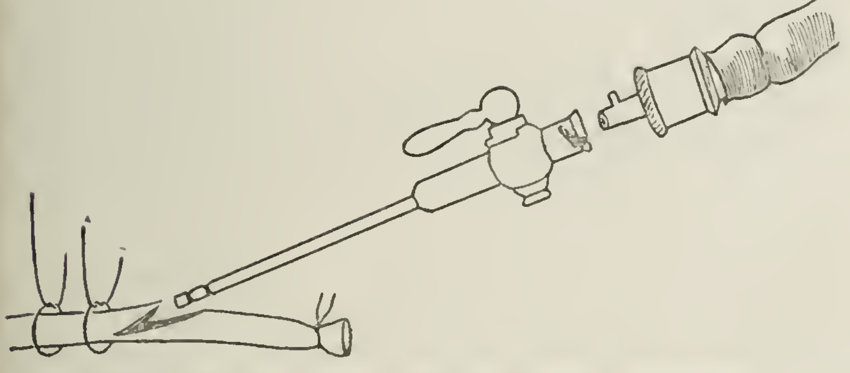
In searching for a method to avoid the difficulties of nerve-blocking anesthesia, Bier[1] developed the idea of *Venenanästhesie* which he reported at the thirty-seventh German Surgical Congress, in 1908. In 1909, he reported a series of 134 cases and gave in detail the technic of the method.[2]

The anesthetizing solution is injected into the veins, in a bloodless segment between two Esmarch bandages. The tissues in this segment become anesthetized almost at once. This is called the "direct anesthesia." After a short time the limb distal to the segment becomes anesthetized followed by motor paralysis. This is the "indirect anesthesia." The injected solution reaches the smallest vessels in all tissue, even to the bone-marrow. The veins swell as the injection proceeds, but the swelling soon disappears due to the rapid diffusion of the anesthetizing solution throughout the tissues. The whole thickness of the limb becomes anesthetic. The direct anesthesia is due to the action on the nerve-endings and smaller nerves within the segment, while the indirect anesthesia is due to the action on the nerve-trunks. A 0.5 per cent. solution of novocain in sterile physiologic saline solution has been found to be the most satisfactory. It is not necessary to boil the solution after adding the novocain but if desired it may be heated for a short time on a water bath. Suprarenal preparations are not used. They do not prolong the anesthesia and they may hinder good results by contracting the smaller vessels.


Bier's special cannula showing method of attachment.

Besides the usual instruments used in exposing a vein, the following are necessary: three Esmarch bandages, one 6 meters, and two 3.5 meters long; a 100 c.c. Janet type syringe; and Bier's special cannulas (1.5 mm. in diameter for children; 1.75 or 2 mm. for adults). The 2 mm. cannula is large enough for the dilated saphenous vein in the varicose veins. The cannula (see illustration) is grooved at the distal end in order to catch the ligature which is tied about the vein. The other end is provided with a stop-cock and fits over a conical connection from which a pin projects to catch in a slit on the cannula. This connection in turn is attached to the syringe by a strong rubber tube such as a Nélaton catheter. This construction is important as much force is often necessary to accomplish the injection.

The Esmarch bandages are boiled and kept in a 3 per cent. phenol (carbolic acid) solution. The syringe, with the plunger and attachments removed, is boiled in water or saline solution. If boiled in a soda solution the parts must be rinsed in water or saline, because the soda irritates the tissues and may impair the action of the anesthetic.

It is best to find a suitable vein and mark its location by a knife-scratch before preparing the extremity. When the method was first introduced only the larger veins were used, but any vein which will admit the cannula gives just as good results. The entire extremity should be made aseptic because the whole limb frequently must be handled in applying the elastic bandages.

For an operation at the elbow the following technic is employed: After marking the position of the vein, the hand, arm and forearm are asepticized. The longer Esmarch bandage is tightly wrapped about the arm from the finger-tips to within about 10 cm. above the elbow-joint. Beginning at this place, one of the shorter rubber bandages is wrapped several times about the arm overlapping the first or expulsion bandage and extended 8 or 10 cm. up the arm. The expulsion bandage is now removed and the second short bandage is firmly bound around the forearm at about 10 cm. below the joint. Between the two bandages is the bloodless segment which should not be under 10 cm. or over 30 cm. in extent. Under Schleich infiltration anesthesia, a transverse cut is made over the marked vein as near the proximal bandage as possible, for the upper part of the segment may remain sensitive if the vein is opened too low. The vein is exposed, cut tributaries are tied, and three ligatures are placed loosely about the exposed vessel. With the first ligature the vein is ligated high up, a slit is now made in the vein and the cannula is introduced distally well into the lumen. The second ligature is tied tightly about the vein over the cannula, which is slowly withdrawn until the ligature catches the groove. The novocain solution, at body temperature, is injected distally into the vein, as the best anesthesia of the skin is obtained by injecting in this direction. Some force is necessary to fill the veins properly. Only twice in 134 cases reported by Bier have the valves of the veins hindered the entrance of the solution, and in both cases the obstruction was overcome by using more force in the injection without any injury to the valves. Leakage of the solution at the cannula or at cut tributaries of the vein must be avoided. The swelling of the subcutaneous veins shows that the solution is entering properly. After the injection the vein is ligated beyond the cut, with the third ligature, the cannula is removed and the wound closed. In amputations and resections the stop-cock may be closed and the cannula left in place so that saline solution may be injected later, through the veins, in order to show the location of unligated blood-vessels.

The operation under the direct anesthesia within the segment may be begun at once, as a rule. Sometimes the anesthesia of the skin on the side opposite the injection area is delayed — at most, five minutes; however, the skin near the upper bandage may continue sensitive. If direct anesthesia is not complete within five minutes some technical error is responsible (Bier[3]).

In about six to ten minutes the forearm distal to the segment is anesthetized, and very soon thereafter (one to two minutes) motor paralysis appears. This is the indirect anesthesia. Motor paralysis serves as an indication that sensation is lost. When this indirect anesthesia appears, the distal bandage may be removed, but not the proximal. In case the proximal bandage is painful, another bandage may be placed just below it on the anesthetized area and the first one removed; or a subcutaneous injection of 20 c.c. of 0.5 per cent. novocain containing two drops of suprarenin may be made around the arm just above the bandage.

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* Read before the St. Louis Medical Society, Oct. 7, 1911.

* For other articles on this subject see The Journal A. M. A., Sept. 19, 1908, p. 1040, and May 1, 1909, p. 1466.

[1] Bier: Ueber einen neuen Weg Localanästhesie an den Gliedmaassen zu erzeugen, Arch. f. klin. Chir., 1908, lxxxvi, No. 4.

[2] Bier: Ueber Venenanästhesie, Berl. klin. Wchnschr., 1909, No. 11

[3] Bier: On Local Anesthesia, with Special Reference to Vein Anesthesia, Edinburgh Med. Jour., New Series, 1910, v, No. 2.

The same technic may be used on the leg, but here the indirect anesthesia usually comes on later, sometimes being delayed as long as twenty minutes. In the foot and hand the expulsion bandage is wrapped up to a position just above the ankle or the wrist, the proximal bandage applied, and the expulsion bandage removed. No distal bandage is necessary. About 60 c.c. of the solution is injected as described above. The direct anesthesia comes on almost at once to the whole extremity distal to the bandage. When a vein cannot be found near the hand it is necessary to use indirect anesthesia, employing the median or cephalic vein in a bloodless segment higher up. In cases requiring long incisions, indirect anesthesia should be used.

The above methods are not applicable when the parts are too sensitive to bear the elastic pressure. In such cases the expulsion bandage may be begun well above the tender or inflamed area and extended upward for 20 to 40 cm. The proximal bandage is applied at the upper limit of this bandage and the first bandage is unwrapped over a sufficient area to allow a bloodless segment for the injection, the first turns of the expulsion bandage being left to serve as the distal bandage. The operation may be carried out in the inflamed area under the indirect anesthesia after about six to ten minutes. Direct anesthesia may be employed in such cases as follows: The extremity is elevated to lessen the blood content. Esmarch bandages are applied above and below the tender area. A vein is opened near the proximal bandage and allowed to bleed, after which the anesthetizing solution is injected.

In a child (not under 10 years of age) about 30 to 50 c.c. of the solution may be used for the arm and 40 to 60 c.c. for the leg. As a rule, not over 70 c.c. should be employed. In an adult 50 to 80 c.c. may be used for the arm and from 80 to 100 c.c. or even 150 c.c. for the leg.

The anesthesia remains as long as the proximal constrictor is left in place. On the removal of this bandage the anesthesia rapidly comes to an end (two and one-half to seven minutes, according to Bier[3]), consequently it is imperative that the operation be completed before the bandage is removed. Neither the duration of the operation nor the use of suprarenal preparations has any effect on the rapidity of the return of motion and sensation.

The anesthesia is always good if the technic is good. According to Härtel,[4] the causes of failure are usually due to (1) underdosing (5 per cent.), (2) equipment disturbance, (3) varices (often only one side being anesthetized, which is overcome by using more solution), (4) incomplete emptying of the veins, or (5) the use of suprarenal preparations. Disturbances of indirect anesthesia are usually due to the employment of a bloodless segment which is too small, or a loose distal bandage which allows the solution to diffuse to the whole distal part of the extremity.

Apparently the danger of poisoning may be disregarded. Bier[2] reports two cases in which he employed the anesthesia, and the patients became anxious and vomited. The pulse became rapid and small. Both patients recovered speedily. Hitzrot[5] reports a patient who had a chill and was nauseated three hours after the bandage was removed. A hypodermic injection of 1/8 grain of morphin relieved the symptoms. Page and McDonald[6] report that they have frequently noticed a fast and irregular pulse on the second or third day after the operation. In the earlier work the danger of intoxication was guarded against by two means; the solution was let into the general circulation in two stages by loosening the Esmarch bandages for a short time and then tightening them again, or the veins were washed out with saline solution. These procedures may be dispensed with as such precautions are not necessary.

According to Bier,[2] the anesthetic goes speedily through the vein wall and a great part of it is bound in the tissues, especially the nerve tissues, returning to the circulation gradually. He has shown that more than ten times the fatal dose of cocain may be retained for one hour in the veins of a bloodless segment, in a rabbit, without toxic symptoms on removal of the bandages. Härtel[4] has shown that the anesthesia remains even after washing out the veins with saline. Furthermore, he has observed that the anesthesia remains the same, or is but little affected, when the bandages are loosened slightly and then tightened again. Motor paralysis behaves to the two procedures in the same way. Härtel believes that these two observations confirm the idea that the anesthetic combines with the cells of the body and requires arterial blood to release it. He believes the novocain is given back to the blood in a changed form.

Varicosities or other damages to the veins have not been caused by the method. There is no danger of air embolism even when air is injected into the veins. Motor paralysis may persist for a while, but eventually disappears.

The method may be used wherever an Esmarch bandage can be applied. It is especially useful in cases with heart and lung complications, which are bad general anesthesia risks. In Bier's clinic the method is preferred for the greater operations on the limbs. Diabetic and senile gangrene and arteriosclerosis seem to be the only general contra-indications. It is better not to use the method in children under 10 years of age, or in nervous people; not because of danger, but on account of the nervous element. Acute and chronic infections are not contra-indications. The method is not preferred where the Schleich, Hackenbruch, or nerve-blocking methods are satisfactory.

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[4] Härtel: Die Technik der Venenanästhesie, Wien. med. Wchnschr., 1909, No. 35

[5] Hitzrot: Intravenous Local Anesthesia, Ann. Surg., 1909, l, 782.

[6] Page and McDonald: A Report of Some Cases of Venous Anesthesia, Lancet, Lond., Oct. 16, 1909, p. 1135.

Limits of Heredity.—Whatever disease or infection is conveyed to the embryo after the fusion of the parental germs cannot be regarded as inherited. Disease transmitted through the fetal cord, as in variola; syphilis conveyed to the embryo *in utero* by the father, the mother escaping the infection; these and many more instances of intra-uterine infection can in no sense be regarded as inherited, no more so than that which develops later in the child as it lies in its crib or mingles with its playmates. Heredity is bound up within the walls of the spermatozoon and the ovum.—Sweeney in *New York Medical Journal.*

A CASE OF STATUS EPILEPTICUS WITH AN UNUSUALLY LARGE NUMBER OF CONVULSIONS

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LINCOLN, ILL.

Patient.—Delia N., a girl, white, aged 8½, was admitted to the Lincoln State School and Colony Jan. 29, 1912. Family history shows both mother and father and grandparents on both sides to be living and well. Brothers and sisters of the patient are living and well. She was the fourth born of five children, weighing 9 pounds at birth, full term. It was noted at birth that she had a nevus covering all of the right side of the body and a small blotch on the left thigh. It was also said that she had had a convulsion at the age of 1 year, the character of which is not known. No history could be obtained as to the exact time when epileptic seizures commenced.

Examination.—The patient was a well-nourished child weighing about 58 pounds with a large reddish-purple discoloration of the skin on the entire right side with a small amount on the left thigh on its upper third. There was no deformity of the osseous structure. There were several scars on the child which she no doubt received during convulsions. There was a slight myocarditis and some tympanites. Eye reflexes were unattainable on account of the constant tossing and restlessness of the child during the examination. The patellar reflexes were exaggerated on both sides, somewhat more on the left. Tendo Achillis reflexes were much diminished. The Babinski sign was absent on both sides. No definite information could be obtained, but it seemed as though the hearing and sight of the child were faulty. Gait was affected due to a talipes equinovarus of both feet.

The child was unable to feed and dress herself, was very untidy in her habits and not attentive to the calls of Nature. She cried and fretted very much. The child's parents said that she had been subject to a varied number of seizures for some time but they had never kept any record, so they did not know how many she did have at times.

Clinical History.—She suffered one convulsion on the day of her admittance, January 29; the next day six, and five on the 31st. In the morning of February 1, eleven, and during the night forty-three. On February 2, there were 461, February 3 there were 573, on February 4 there were 403, on February 5, 158, the child dying at 10:15 p. m. The attacks were all of the grand-mal type, the child lying in a stupor between convulsions. She would respond to stimulation of the pain sense as on pricking the ear she would turn her head slightly, or on pinching the arm she would try to move it away. Bromids were administered from the time of her admission in doses of 15 gr. of the triple bromids every four hours. On the afternoon of February 2, she was anesthetized three times with chloroform. During the surgical anesthesia she showed no convulsion, but as soon as the first evidence of the pupillary reaction occurred she would immediately suffer a terrific convulsion much worse than those previous. Morphin in 1/12 gr. doses hypodermically gave no results. Patient was unable to take nourishment at any time. She had no involuntary passages of either urine or feces and it was necessary to catheterize her on the 3d, which was twenty-four hours after her severe seizures started. All other efforts proved of no avail to induce urination. The temperature rose to 102 F. during the afternoon of February 2. At 8 p. m., it was 104.8 F. From then on it showed marked fluctuations until the evening of February 3, when it returned to normal and stayed practically at normal, going to 100.6 a few hours before death. During seizures there would be marked rotation of the head to the right side with a nystagmus of both eyes with the long jerk toward the right side. The pupils would dilate markedly. She would perspire profusely, especially after a severe convulsion. On February 5 continuous normal saline per rectum was started and she absorbed 1 liter in four hours, after which she had a voluntary urination. Her urine examination on admission showed an occasional hyaline cast with no albumin. Catherized specimen during the convulsions showed twenty-four hour collection of only 6 ounces with an enormous number of hyaline casts and a large amount of albumin. A blood examination on February 4 showed normal number of red cells per cubic millimeter, large leukocytosis of 41,400 per c.c. The hemoglobin was 85 per cent. There was nothing unusual in the appearance of the red cells. A differential count of 100 white cells gave the polymorphonuclear neutrophils 85 per cent., the greater percentage of which were evidently young cells, being about 10 microns in diameter and the granules taking a deep stain, whereas the remaining cells were of normal size and staining much paler. The young cells averaged about five nuclei each, whereas the older cells averaged about two. Blood coagulated rapidly.

This case holds interest for the great number of grand-mal seizures that may occur in a case of status epilepticus. Spratling refers to LeRoy's case of 188 grand-mal seizures in twenty-four hours and to another case showing 1,000 seizures in three days, and also refers to cases ranging from 1,400 to 3,000 seizures ranging over a period of three weeks or more, which, he says, is too long a period for status epilepticus to persist, the average time being from twelve hours to three days.

My case gives a total of 1,649 grand-mal seizures in 4½ days, with the largest number for any one twenty-four hours being 573 convulsions.

I wish to thank Dr. H. G. Hardt, Superintendent of the Lincoln State School and Colony, for his kindness in permitting me to report this case.

EPITHELIOMA OF THE TONGUE

WITH NO RECURRENCE NINE YEARS AFTER CLINICAL CURE WITH THE X-RAY

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This case is of interest as it had every clinical symptom of an epithelioma of the tongue. The clinical diagnosis was confirmed by several of the leading surgeons and dermatologists in this city, and in Chicago.

The patient appeared May 30, 1902, with a hard nodule on the left side of the tongue, situated in the anterior third. The nodule was raised about an eighth of an inch above the surface of the tongue, and extended into the substance for some distance. To the touch, it was hard, indurated, and resistant. The center of the nodule was beginning to ulcerate, and there was some pain, especially when it came in contact with a hard substance. It had existed for several months, having slowly increased in size.

The infiltration, situation and peculiar character of the lesion forced one to the diagnosis of epithelioma. No specimen was taken for microscopic examination, on account of the irritation that comes from such a course, and the possible opening of vessels for metastasis.

The patient refused operation, and on account of the location of the lesion in the anterior portion of the tongue, it was decided to attempt its destruction with the *x*-ray. The following technic was employed: The tongue was drawn out and held by the patient's right hand, which made it very accessible to treatment. An opening, larger than the nodule, was cut in a piece of lead foil, which was so placed that it covered the patient's face and hands, leaving exposed the involved surface. The tube was then placed in gradually decreasing distances ranging from 5 to 2 inches of the nodule. Thirty exposures were given in all. The radiation was continued daily for from ten to fifteen minutes, until the mucous membrane was whitened, and reaction was obtained. This was allowed to subside, when another series of active radiation was begun. The last series was continued until the tumor presented a marked reaction, and all of the mucous membrane exposed was whitened.

In two weeks after the last series, the whole area became very much inflamed and painful, and continued so for a week, when a slough was formed, including the part exposed to the radiations. This, according to the patient, came away *en masse*, as dead, necrotic tissue, leaving a healthy-looking, granulated surface, which healed in a few weeks. After the last series of exposures, during the acute, inflammatory period and sloughing, including the healing of the granulated surface, the patient was at his cottage in Atlantic City; therefore I did not see him until he returned in the fall, at which time the tongue had entirely recovered. The site of the former nodule was marked by a smooth, perfectly flexible, superficial cicatrix; in other words, the whole area seemed almost normal, except on a very critical examination.

I have seen the patient many times during the last nine years, and at present the tongue seems absolutely well, the site of the former lesion being marked by a cicatricial line. To all clinical appearances, the diagnosis was that of epithelioma, although, as stated above, it was thought wise not to confirm this by the excision of a piece for microscopic examination, but I am absolutely convinced that the diagnosis of epithelioma was the proper one.

Although I have had such a favorable result in this case, I certainly would not recommend the *x*-ray as a usual method of treatment in epithelioma of the tongue. In the case under discussion, the patient absolutely refused operation, and as the lesion was so favorably situated on the anterior portion of the tongue, near the edge, it seemed, under the circumstances, a favorable case for the rays. Therefore, on account of the nature of the lesion, rather prolonged exposures were given, at a short distance, until a very decided reaction was obtained in each series.

If one should undertake the treatment of such a case with the *x*-ray, I believe that the treatment should be as radical as possible. In other words, the exposures should be arranged so that a most decided reaction or burn would be produced.

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MALICIOUS AMPUTATION OF PENIS

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History.—J. C., a well-developed and vigorous man aged 25, a railway fireman, a steady and industrious worker of fairly good habits but not strictly temperate, had married a woman much older than himself, who had twice before been unhappily married. This couple had not been living very happily together for some time; each occupied a separate part of the house, up to July 4, 1911, at which time there had been reconciliation and they had agreed to live together as man and wife; accordingly they had occupied a common apartment on the night of July 4. About 4:00 a. m., July 5, the man was aroused by a terrific pain and a frightful hemorrhage, and he found himself in the middle of the floor holding onto a more or less completely amputated penis, the stump and wound bleeding profusely. The major part of the organ was on the floor and the bed and the room were very bloody. He was alone, but cries for help brought a neighbor to his aid. The woman had taken a razor and with a sweeping cut had cut a circle around the root of the penis coming down and going wide into the skin and tissues of the scrotum turning under the penis some distance down on the scrotum crossing the median raphe and extending the incision up the other side of the scrotum to the starting-place, making an elliptical incision of the most minute precision. After this the skin had been drawn down and out until it had been detached from the root of the penis for about 1 inch, at which place it had been cut square across leaving that much of the penis without a sign of skin. The woman, after completing the amputation, rushed to a physician's residence and sent the doctor hurriedly to him, saying he was hurt.

First Operation.—The doctor put in some stitches in the skin, and a bandage around the stump to control the hemorrhage and sent the patient in to the hospital on the first train, where he arrived about 1:30 p. m. About 2 p. m. he was anesthetized and we started a rather unusual operation, which taxed all our ingenuity to devise a method by which we could save the stump and cover it with skin. We decided on a two-step operation. First, by sliding the skin of the scrotum and pubes, we were able to cover it by bringing the skin together over the dorsum making a linear row of sutures down to the urethra, where we put in interrupted sutures, suturing the skin to the mucosa. The corpora cavernosa were closed with a mattress suture to control hemorrhage. Drainage was provided for, and a catheter was fastened in place, and a sterile dressing applied.

The catheter remained in place for four or five days, at which time it was removed and left out as the patient had no further trouble about passing urine. The method of covering the denuded penis drew it down somewhat into the scrotum, and the patient was bothered very much with erections, which caused the skin to separate slightly over the dorsum and necessitated a few more sutures about the tenth day. The progress was uneventful after this, and the healing was fine. When the wound was healed we still had the penis more or less buried in the scrotum which drew down on the penis and up on the testicles, producing more or less disagreeable symptoms, which we were able to relieve quite satisfactorily at the second operation.

Second Operation.—August 9, two methods were considered for freeing the penis and making a skin cover to go around the organ. First, two lateral incisions with skin enough to close underneath or a transverse incision sutured longitudinally underneath the stump. A combination of the methods to furnish skin to close a slight defect at the meatus was worked out and proved quite satisfactory; however, this meant the stealing of much skin from the scrotum and the placing of all parts under some tension. The most difficult part of the second operation was freeing the penis from the scrotum, and the hemorrhage which seemed to come from the penoscrotal union underneath was not alarming but interfered with such delicate work.

Course.—The result would have been all that could have been expected except for a hematoma which upset part of our fine adjustment. Present condition shows a short penis, covered with skin, much wider and thicker than normal at the root; the patient says that it is enormously widened when in a state of erection, and that has been a very troublesome symptom. The patient consulted a noted surgeon in Chicago who advised him that he could graft on a penis, and that he would do it free of charge as a surgical curiosity. From the reputation of the surgeon consulted we do not doubt his ability to make good, providing the grafting material is forthcoming; and as no such material is available in these parts of the country, I have advised the patient to accept the generous offer of the Chicago specialist, but requested him to return and report on the results.

Patient insists that he was chloroformed in his sleep. I suspected overindulgence in alcoholics, which I have not been able to confirm.

Therapeutics

BLEEDERS

Whether a patient should be classed as a hemophiliac or as an accidental or temporary bleeder depends largely on the age of the patient, his personal and family history. There is a large hereditary influence in true hemophilia. Blood-vessel causes are probably rare in the true hemophiliac, and the tendency to bleed seems to be due to an abnormality in the blood-plasma. Such abnormality may be almost permanent, as occurs in hemophilia, or temporary, as in those who show a sudden tendency to bleed. The lack of ability of the blood to coagulate properly seems to be the basic cause of the profuse hemorrhage. It is quite possible, however, where the bleeding is oozing from mucous membranes, that a lack of tone in the blood-vessels may have something to do with capillary hemorrhage or oozing of blood. It is quite probable that certain abnormal conditions in the mucous membrane may be the local reason that the hemorrhage constantly recurs from this particular membrane only, which condition is of not infrequent occurrence. In bleeders, however, the trouble has been shown to be due to a prolonged coagulation period, because of the absence of some element in the blood-plasma, perhaps a slow development of the prothrombin, or a lack of development of prothrombin. It has not been shown just what the absent element in the blood is.

It has been proved that a prepared thrombin, or the blood-serum of animals, or serum from another human subject, added to the hemophiliac blood causes normal coagulation. Therefore, the coagulating ability is in the hemophiliac blood, but it does not seem to contain the proper impetus to coagulate.

It is known that the blood, properly to coagulate, needs calcium. For this reason it has been thought that the blood of bleeders was lacking in calcium. The administration of calcium has stopped bleeding, and does, temporarily at least, cure a good many bleeders, or those who have frequent hemorrhages; but nothing has acted so efficiently to cause hemophiliacs to cease to bleed as injections of blood-serum.

The first thing to consider in a bleeding patient is the momentary seriousness, and next the future, and, perhaps, a possible operation on a patient who is known to be a hemophiliac.

If there is circulatory weakness, whether from valvular lesion, or a weakened heart muscle, or a sluggish peripheral circulation from any cause, digitalis is good treatment. If there is a tendency to frequent hemorrhages or oozing of blood, either with the digitalis treatment or without it, when digitalis is not needed, a calcium salt is a most efficient treatment. It is a question of calcium, and not a question of any particular lime salt. In hemorrhage from the lungs due to tuberculosis, lime water is as efficient as any other preparation, and a tablespoonful of lime water, given in milk, three or four times a day, or even more frequently, is a most efficient aid in preventing these hemorrhages. The lime is also of advantage in aiding Nature's normal cure of the tuberculous lesion.

A more active lime salt is perhaps calcium lactate, and this is well administered as:

℞	Gm. or c.c.		
Calcii lactatis....................	4		gr.lxxij
Syrupi	25	or	fl.℥i
Aquæ menthæ piperitæ, q. s.....ad	100		ad fl.℥iv

M. et sig.: A teaspoonful in water, three times a day, after meals.

If the patient is bleeding internally, as a hemoptysis, it is often sufficient to give him a hypodermatic injection of nitroglycerin. To give drugs to raise the blood-pressure when a hemorrhage is occurring which cannot be locally reached, and to apply pressure or other local prevention, would be bad treatment. The exception to this rule would be in a venous hemorrhage with a weak heart as the cause. In this instance digitalis may be of the greatest value. A venous hemorrhage from the lungs may not necessarily be helped by digitalis.

If there is mucous membrane oozing, and vasoconstrictors are indicated, one must think of such active vasoconstrictors as the active principle of suprarenal, the active principle of the pituitary body, ergot, atropin and perhaps strychnin. All of these drugs, to be effective, should be given hypodermatically. Suprarenal especially is useless as a vasoconstrictor when taken into the stomach.

Hemophiliac patients have been treated with suprarenal extract, in the belief that the suprarenal glands were insufficient. The success has not been great.

Thyroid disturbance can cause bleeding, or may prevent it. In the majority of instances, an increased thyroid secretion causes a tendency to more profuse bleeding, either normally from the uterus, or abnormally from an injury. When there is subsecretion of the thyroid, a diminished tendency to bleeding is generally in evidence. Positive instances are recorded, however, in which the administration of thyroid, which theoretically should tend to increase the hemorrhage, has caused profuse hemorrhages to cease. Instances are known in which profuse hemorrhages have occurred at the menopause, and, after all other methods, except the blood-serum method, had been tried to stop the bleeding and had failed, the administration of thyroid in large doses caused cessation of the bleeding within a few hours. Thyroid, however, should not be administered to a bleeder except in selected cases.

The treatment of profuse bleeding of patients with a temporary or hereditary hemophiliac tendency is the administration of the serum from the blood of a human being or of an animal. The most satisfactory seems to be the fresh, normal serum of man, the rabbit, or the horse. The serums from dogs, cows, or oxen, while causing the blood to coagulate, seem to have toxic properties, and should never be used. The fresher the serum, the more active seems to be its ability to cause proper coagulation of the blood.

While this serum is most active when given intravenously, it is much better and safer, and almost as active, if administered subcutaneously as one would administer an antitoxin. The serum should be obtained from a laboratory that has the means and the technic to properly prepare it.

Direct transfusion of human blood from a donor to the patient has also proved satisfactory, but such an operation is not often needed.

An active serum will often stop local hemorrhage when applied to the bleeding part, and dried blood-serum and fibrin have seemed at times to stop such hemorrhages. It has even been suggested that a dried fibrin in capsules be administered by mouth. Such a method of administration has not yet been thoroughly proved to be successful.

Fresh horse serum, properly prepared, seems to be efficient. If such straight serum cannot be obtained, diphtheria antitoxin could be utilized, 500 units being sufficient. This amount of antitoxin could do no harm to the patient. Probably a pure horse serum or rabbit serum, however, dated at the age at which it will probably deteriorate as a coagulant, will before long be obtainable as readily as the antitoxin is now obtained.

The average dose of the serum injected subcutaneously is about 20 c.c., to be repeated as soon as the bleeding recurs. Or, two or three such doses, a few days apart, may be administered to a patient who must undergo an operation and who is known to be a bleeder. Such a patient could be tested as to the tendency to hemorrhage by a slight abrasion or a slight incision made at a convenient part.

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VIRGIN LACTATION

As stated in a recent editorial,[1] there is not a little evidence that chemical regulations outweigh the nervous influences in the various processes concerned in the development and functioning of the mammary gland.[2] The facts available, however, do not permit any final conclusion regarding the ensemble of events associated with the varied stages of lactation. The interrelation of the development of secondary sexual characters with the evolution of the milk-producing glands and the apparent dependence of their initial secretory operations on specific changes in the uterus and its appendages are familiar enough.

There is, however, a certain growing group of unique statements about mammary functions which it is difficult to reconcile completely with any current view. A classic instance is the story, related on the authority of Humboldt, of the father who successfully suckled his child. The infant, deprived of its mother, chanced to lie in bed with the father and satisfied its childish impulse by sucking at his nipple. This stimulus is reported to have induced a milky secretion, and the father succeeded in nursing his son at the breast for five months.

Taken by themselves, such seemingly preposterous traditions—and there are not a few of them compiled in the literature—might deserve little serious notice. But in many cases they are coupled with reasonably authentic reports of the secretion of milk by the virgin female. The Munich pediatrist, Professor von Pfaundler, has described a most interesting instance of mammary secretion in a non-gravid virgin heifer just under two years of age.[3] An analysis of the fluid (which has rarely been carried out in other cases on record) left no doubt that the product of secretion was actually milk. It appears that, following a not uncommon habit among calves of sucking each others' rudimentary teats, the one in question had frequently been the subject of an instinctive suckling by its companions in the stable. As a consequence of this repeated traction or suckling stimulus a true and rather profuse milk secretion resulted in the virgin animal. Quantities of 30 to 40 c.c. could often be removed by milking and the possible day's yield was estimated at 2 to 3 quarts. When the animal was removed from its companions the lactation gradually disappeared, despite continued systematic milking.

What bearing may such observation have on the possible rôle of the act of sucking or milking in the genesis of the secretion? Other illustrations of incipient lactation outside of the puerperal period are known; for example, the witches' milk of the new-born of both sexes, and the mammary symptoms associated with changes at puberty and the climacteric or at the menstrual period. We may assume, following von Pfaundler, that in lesser degree at such periods and conspicuously during pregnancy certain hormones reach the circulation and exert a specific assimilative or anabolic stimulus on the rudimentary gland whereby it experiences a marked hypertrophy. This is followed by a second phase in which catabolic processes also are initiated, leading to secretion itself. Now it is by no means inconceivable that the function of the growth hormone for the mammary gland can be supplemented or replaced by other stimuli leading to its development—perhaps even mechanical agencies. Quoting Pfaundler, the common basis for either mode of mammary development would be an impulse leading to anabolic, i. e., constructive changes whether they be instituted by mechanical means (massage, for example) or by specific chemical stimulants. An interesting case of milk secretion from the mammary glands in the male, apparently as the result of manipulating or massaging the gland, was recently reported in The Journal.[4]

Granting the possibility of milk production in a suitably developed gland which has emerged through some of these as yet obscure influences from its inadequate rudimentary structure, the real act of secretion may in turn be interpreted from various points of view. The flow of milk is known to be dependent in a measure on the emptying of the gland reservoir. It has long been maintained by some authorities that the mechanical act of suckling or milking in itself acts as a stimulus to secretion. But it is equally conceivable that the removal of the milk and the relief of the distended organ serve to withdraw an obstacle to secretion. It may be that there is a more or less continuous tendency toward milk formation in the active gland. If this is held in check by the fulness of the gland and the presence of the product in the acini, the efficiency of sucking or milking appears in a new light. Instead of acting as a direct stimulant these operations merely remove an inhibition and permit an inherent tendency to manifest itself. Thus in the various instances in which milk secretion has been reported to occur unexpectedly, the mechanical factors of sucking or milking which have usually been associated therewith may have played only the secondary part of relieving the obstruction to a normal tendency.

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[1] The Physiology of Lactation, The Journal A. M. A., March 2, 1912, p. 638.

[2] Mackenzie: An Experimental Investigation of the Mechanism of Milk Secretion, with Special Reference to the Action of Animal Extracts, Quart. Jour. Physiol., 1912, iv, 305.

[3] von Pfaundler: Ueber virginelle Lactation, Ztschr. f. Kinderh., 1911, iii, 191; abstr. in The Journal, Jan. 6, 1912, p. 72.

[4] Cressy: Lactation from the Mammary Gland in the Male, The Journal A. M. A., March 16, 1912, p. 747.

A LEGAL DECISION ON A MEDICAL QUESTION

A recent decision of far-reaching effect changes radically the interpretation and administration of the law regarding immigrants who within three years of admission to the United States become public charges from causes existing prior to landing. This is the decision (No. 120) of Solicitor Charles Earl[1] of the Department of Commerce and Labor, which decision was concurred in and approved by Attorney-General Wickersham on Feb. 3, 1912. The solicitor attempts in a legal opinion to interpret what is a pure and well-settled medical question, and for that reason the decision should not go unchallenged. The solicitor's opinion was asked "with respect to the legal deportation of aliens in a certain class of cases" of which the case cited was typical. The immigration law specifically provides that aliens shall be deported who within three years after landing become public charges from causes existing prior to landing. This test case is one of an alien girl who was certified by an officer of the Public Health and Marine-Hospital Service, and by a member of the New York State Board of Alienists, to be suffering from manic-depressive insanity. This diagnosis was concurred in by the physicians of the Manhattan State Hospital, in which institution the patient was confined, and was not disputed by the solicitor.

The essential features of the case, as summarized in the decision, are as follows:

The alien became a public charge within three years after landing, from insanity which developed subsequent to landing and was ascribed as due, in the certificates already mentioned, to constitutional psychopathic tendencies and mental instability which existed as predisposing causes prior to landing. These certificates did not present an extensive review of the facts or reasons on which they were based. It is contended, on the other hand, that there is no affirmative fact available tending to show that such constitutional psychopathic tendencies and mental instability existed prior to landing. The solicitor therefore concludes that the medical opinion — not the diagnosis, but the assumption of the existence of an underlying cause prior to landing—is wholly *ex post facto*, because the alien has become insane; and that the medical opinion assumes, since constitutional tendencies existed when the insanity developed, that therefore they existed at all prior times. He adds, very significantly and naively, that in "many cases such as this one, some event in the life of the alien since landing appears in the evidence, suggesting to the ordinary mind an adequate cause to account for the present insanity, independent of any constitutional tendencies or mental instability, e. g., in this case, the account of a sexual assault on the girl, and the ensuing shame and worry on her part."

So here we have the enlightening spectacle of a layman, eminent in his own profession of the law, calmly arrogating to himself the ability to pass judgment on a purely medical question, and at that, a question in the most abstruse and difficult department of medicine, namely, psychiatry. A moment's consideration reveals the passing absurdity of the situation. The clinical records of a sick person are critically examined by a layman, who assumes his own ability to interpret them correctly, and his examination convinces him that the physicians, experts all in mental diseases, had no grounds for their opinion as to the causes of the disease, although, strangely enough, he apparently finds no data contravening their unanimous diagnosis of manic-depressive insanity. By attempting to pass judgment on a medical question which he is neither by training nor by experience qualified to judge, he has committed himself to a self-contradictory statement. Manic-depressive insanity is known to depend, as does no other mental disease, on constitutional psychopathic tendencies and a certain mental instability.[2] There was no evidence that a sexual assault occurred in this case, aside from the unsupported statement of the patient herself, made *after* the onset of mental symptoms. It was almost certainly delusional. Yet as the decision reads, "to the ordinary mind," this problematical assault was the true cause of the insanity. We see illustrated here the fallacies inherent in the application of purely legal reasoning to medical subjects.

But Decision 120 has a very practical and far-reaching influence. In effect it becomes part of the United States immigration law, and as such it is "published for the information and guidance of immigration officials and others concerned." It becomes the basis on which warrants for deportation will be denied in the case of hundreds of insane aliens, who within three years of landing in the United States, will be admitted to various hospitals and public institutions throughout the country, because of mental disease which in the opinion of the physicians examining and treating them are due to causes which existed prior to their arrival. The State of New York, for example, which is most vitally concerned,[3] will have on its hands many more of a class which, under a more rational interpretation of the law, furnished about 350 deportations annually. Of 381 aliens certified to be deportable in New York State alone for this reason in the year ended Sept. 30, 1911, about 320 were certified to be insane from causes existing prior to landing, such causes being "constitutional psychopathic tendencies," and "mental instability."

This decision nullifies all protection afforded the country against the immigration of aliens with constitutional tendencies to insanity. That a similar construction is not in accord with the policy of other branches of the federal government is shown by the fact that enlisted men of the Army, Navy and Marine Corps who become the subjects of manic-depressive insanity and analogous conditions are not considered to have contracted the disease in the line of duty, but the disease is held to be due to causes existing before enlistment.

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[1] Decision 120, Dept. Commerce and Labor, Jan. 11, 1912.

[2] Rogues, de Fursac J.: Manual of Psychiatry, Tr. by Dr. A. J. Rosanoff, second Am. Ed., pp. 337-8. Kraepelin: Clinical Psychiatry, adapted from seventh German edition of Kraepelin's Lehrbuch der Psychiatrie, by A. Ross Diefendorf, Ed. 2, p. 382. White, W. A.: Outlines of Psychiatry, Ili, Ed. 2, pp. 21-2.

[3] Medical Aspects of Immigration, THE JOURNAL A. M. A., Dec. 30, 1911, p. 2142. See also Abstract 79 in THE JOURNAL, Feb. 17, 1912, p. 523.

It cannot be too strongly urged that Decision 120 should be reconsidered, and the immigration law in question be interpreted in accordance with justice and reason.

FOOD PRODUCTS FOR DIABETICS

One might suppose that enough had been written in recent years about the unreliability of most of the so-called gluten flours and gluten foods from the standpoint of diet in diabetes to eliminate them from use in all cases in which any serious attempt to institute a carbohydrate-free regimen is contemplated. A study of the markets shows, however, that there must be a steady and even growing demand for the products under discussion, if the increasing number of "brands" offered for sale may be taken as an index of the business. It should be frankly stated that the entirely unsatisfactory "standard" established by the government and accordingly adopted by various boards is plainly responsible in good measure for the unfortunate situation that now exists. Herein is exhibited the danger of entrusting the formulation of important rules and regulations to persons who, owing to limited experience, may be incompetent to decide problems of such scope.

The United States standard for gluten flour declares that it is "the clean, sound product made from flour by the removal of starch, and contains not less than 5.6 per cent. of nitrogen and not more than 10 per cent. of moisture." Translated into other terms, this calls for a protein content of only about 40 per cent., leaving the unfortunate possibility of having a preparation which is one-half starch marketed *in conformity with legal requirements*. The manufacturers have not been slow to grasp the situation. A recent series of analyses of goods sold as gluten preparations in the state of Connecticut[1] showed that most of them exceed the requirements of the standard; yet these very products, properly labeled and legally sold, exhibited starch contents ranging from 27 to 42 per cent. One widely advertised brand carried the label: "A minimum of starch and a high protein content. Delight to diabetics." Neither of the first claims was true; and a material containing 50 per cent. of nitrogen-free extract of which nearly 38 per cent. is starch, may be, as Street remarks, a very dangerous "delight to diabetics."

If gluten bread is to mean (as it does with the sanction of the "government standard"), at best a few less grams of starch than ordinary bread will furnish, this semi-official permit for its distribution with an implied superiority as a diabetic food product cannot be too vigorously combated. The other dietetic uses of gluten flour products are so limited that one must always bear the diabetic application in mind. A compulsory indication of the starch or carbohydrate content on the label would presumably serve to check the danger by calling attention to the undesirability of the product.

LIFE-INSURANCE COMPANIES AND CONSERVATION OF HUMAN LIFE

The great life-insurance companies are becoming practically interested in preserving and promoting the health and longevity of their policy-holders. Some have established sanatoriums for the treatment of chronic wasting diseases. One of the largest companies has begun the issue of a quarterly publication devoted to the human conservation problem as it affects life-insurance particularly, and giving instructions in hygiene and correct living, together with morbidity and mortality statistics, etc.

The great and peculiar value of the assistance given by the life-insurance companies to the human conservation problem lies in the fact that the many thousands of policy-holders are individuals in the most productive period of their lives, the men and women who really carry on the work of the world. Not only are they, at the time of their acceptance by the insurance companies, in prime physical condition, but they come from the more intelligent, educated and thrifty classes and are, from both eugenic and economic points of view, the most important individuals of their communities. Some figures given in the publication above referred to in regard to the increase and decrease in the death-rate at various age periods are interesting and are perhaps somewhat at variance with the popular belief concerning the general increase in human longevity. While there has been a decrease in the death-rate below the age of 40, the figures show that this has been due almost wholly to checking infectious diseases most common to young and early adult life. Under the age of 20 it amounted to 17.9 per cent., between 20 and 30 to 11.8 per cent., while between the ages of 30 and 40, the most important period from many points of view, the decrease has been only 2.3 per cent. While the age of 40 represents perhaps the high tide of economic effectiveness of the individual, yet it may fairly be said that an individual at that age should have practically twenty years of great usefulness before him, notwithstanding the erroneously quoted statement to the contrary attributed to a great medical authority. The mortality records in the United States since 1880, from which the above figures were also quoted, show that the death-rate between the ages of 40 and 50 has increased 13.2 per cent., from 50 to 60, 29.2 per cent., and over 60, 26.4 per cent.

It will thus be seen that the small percentage of increase in life expectation between 30 and 40 and the comparatively large percentage of diminution in life expectancy after the age of 40 imperatively call for well-directed efforts for the conservation of lives during this important period. It is an evidence of the wisdom and progressiveness of the insurance companies thus to combine considerations of humanity with good business policy.

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[1] Street, J. P.: Report of the Conn. Agric. Exper. Sta., 1911, Part II, p. 134.

HAMPERING ANIMAL EXPERIMENTATION

By an interesting coincidence the report of the British Royal Commission on Vivisection is issued almost exactly a month after the death of Lord Lister. According to the newspaper reports, it suggests a still further hampering of animal experimentation in Great Britain. Some of the commissioners ask for the exclusion of dogs, cats and anthropoid apes as subjects of experimental research on account of their intimate association with man. The general trend of the report is not so unfavorable to animal experimentation as the antivivisectionists hoped, but there is no doubt that it will seriously interfere with experimental medical research in England.

All the great English periodicals, secular and medical, have been heralding Lord Lister's work and most of them have joined in the declaration that probably what he accomplished for surgery saved more lives than were destroyed in all the contentious wars of the nineteenth century. If there is one feature of Lord Lister's character that is emphasized in all his biographical sketches more than any other, it is his kindliness of heart. All his obituaries proclaim that he might well bear the honorable designation of gentleman. He himself, when asked what was the quality most necessary for a surgeon, declared, "The first and really indispensable requisite of a surgeon is a feeling heart." Then he added "People do not always believe me when I say it, but it is so." His life was a constant exemplification of that opinion.

He himself has told us, however, of his experiments on animals. Most of his work would have involved serious and unjustifiable risks to patients if he had not previously employed animal experimentation. He tells us of using various forms of absorbable ligatures on the arteries of calves, in order to determine what special preparation of catgut was most suited to tie human arteries. How much those experiments meant for human beings, even the surgeon of the modern time can scarcely tell, but any old-time surgeon who had seen many fatal secondary hemorrhages because of septic ligatures would know very well. No patient in whom a ligature had been tied was safe from serious infection until the ligature came away. With the introduction of absorbable ligatures, however, most of that danger disappeared at once, because the wound could be thoroughly closed in from the air and the condition made to resemble those which occur in connection with simple fractures of bones. These always heal without disturbance, at least from infection, and it was this condition as far as possible that Lord Lister considered ideal and tried to reproduce in his surgery.

Many of the calves that he used for experimental purposes were apparently animals too young for the market and he obtained permission from the butchers who were keeping them to tie certain important arteries in their heads. He was afterward given these heads for careful study. There probably never have been calves that have done so much good to the human race as those on which Lister's experiments were made. It is extremely doubtful if under present conditions in England Lord Lister would have been allowed to perform these experiments. They were done in the midst of his work as a practical surgeon. He did not and could not have the laboratory facilities that are available in the modern time and without which animal experimentation is practically illegal. Is some future Lister to have his life-work spoiled because of fear that he will inflict pain on animals?

Almost at the same time as Lister's experiments were being made, Pasteur was doing, in France, work of even more vital significance for humanity. That also required animal experimentation. He, like Lister, was one of the kindliest of men. He came near abandoning his work on rabies because it included the infliction of pain on human beings. His name is sometimes cited as that of one who inflicted great cruelty on animals. He probably saved more human suffering, and animal suffering as well, than any other man that ever lived. When we take in connection with his own work the magnificent extension of it by Lister who acknowledged him as his master, it is easy to understand what two gentle scientists can accomplish by the infliction of a little necessary pain on animals in order that future generations may be spared almost untold suffering.

Shall not the facts that are so opportunely brought to mind by the death of Lord Lister and the publication of numberless biographies of him prove of service in making non-medical legislators understand just what the position of the medical profession is in this matter? We too want to save all the pain that we can. The infliction of a single bit of unnecessary cruelty we are as ready to condemn as any antivivisectionist. We want freedom of experimentation, however, in order that progress in medicine and surgery may continue as gloriously in the future as it has in the past.

WHAT'S THE MATTER WITH MICHIGAN?

Last October, under the caption "What's the Matter with Kansas?" THE JOURNAL expressed surprise that Kansas should tolerate the mail-order medical faker, "Professor" Samuels. Samuels, as will be remembered,[1] sells a weak solution of sugar and salt in water, at from $5 to $25 an ounce, for the cure of cancer, consumption, and any other disease which the gullible may have or may think they have. Surprise was expressed because

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[1] Exposed in THE JOURNAL A. M. A., Dec. 24, 1910; reprinted in "Nostrums and Quackery," also in pamphlet form. The latter will be sent on receipt of a stamped addressed envelope.

Kansas is a progressive and wide-awake state which has done splendid work in protecting its citizens against the food adulterator and the "patent-medicine" faker. But, for some reason, it tolerated Samuels. That tolerance has evidently ceased, for Samuels is now notifying his prospective dupes that, after March 27, 1912, he is going to move to Detroit, Michigan. Of course he does not admit that the reason is that Kansas has grown too hot for him; not at all. He is changing his address because the "phenomenal growth" of his business necessitates his "locating nearer the center of the United States." If we had been told that this faker was going to move into another state and presumably into one in which his mail-order fakery would be subject to less inspection on the part of officials than in any other, we should have guessed Michigan as the state to be selected. We believe we are not overstating when we say that the state of Michigan has as many mail-order medical fakes of a vicious and fraudulent character as can be found in any other three states in the Union, irrespective of population.

We have long wondered what peculiar influence protected swindlers in this state. That wonder was increased by our experience with the Van Bysterveld fraud at Grand Rapids. A member of The Journal staff, it will be recalled, worked up a clear case against this concern, the matter appearing[2] in The Journal, Jan. 7, 1911. Briefly, the Van Bysterveld Company advertised to diagnose any disease from the alleged examination of such two-dram samples of urine as might be sent in. Five samples were sent in from the Association's laboratory, three of them consisting of hydrant water, anilin dye and ammonia and two of them being merely hydrant water and glucose. They were mailed from five different addresses and five widely differing "diagnoses" came from the Van Bysterveld concern in reply. It was proved without a shadow of a doubt that the company was operating a fraudulent business.

A post-office inspector, who, by the way, not only lived in the same town as Van Bysterveld, but was a neighbor of this man, came to Chicago and asked that all of the evidence in the hands of The Journal might be turned over to the government for the purpose of making a case against this mail-order fraud. This was done more than a year ago. All of the original letters from Van Bysterveld, with the envelopes in which these letters came, carbon copies of all of the letters written to Van Bysterveld and all other matter pertaining in any way to the case we turned over to the government. No case has been brought against these swindlers and for some reason the post-office inspector to whom the matter was given has been transferred from Grand Rapids to some other location. The reason we do not know.

The list of mail-order medical concerns operating in Michigan would probably make a good-sized directory. In The Journal's files there is a very incomplete collection of these delectable institutions, a collection which is more instructive than edifying. To name a few of these: We find in Battle Creek, "Peebles' Institute,"[3] which sells a fake epilepsy cure; W. T. Bobo,[4] a goiter quack; T. Gorham, a catarrh cure faker and the F. J. Kellogg obesity cure humbug. Among the dozens in Detroit, the Interstate Remedy Company[5] advertises to cure "weak men," but doesn't; the Protone Company will make you fat and the Rengo Company[6] will make you thin, both concerns being run by the same individuals; and the Marmola Company[7] sells a laxative pill as a sure "obesity cure." In Jackson, we have the two consumption cures, "Lung-Germine"[8] and "J. Lawrence Hill,"[9] both exposed at length in The Journal; the "Magic Foot Drafts,"[10] a fraudulent rheumatism cure; "Van Vleck Pile Cure,"[11] and a dozen others equally fakish. "Tuberculozyne,"[12] a consumption cure sold by the horse doctor, Yonkerman, may be ordered by mail from Kalamazoo, while letters to Marshall may bring Gauss' combined treatment for catarrh, Brennan's cure for pimples or Brooks' cure for rupture. These are but a few from The Journal's admittedly incomplete list. Every one of these concerns advertises nationally, many of them advertise internationally, and all of them obtain their dupes through the instrumentality of the United States mail.

The post-office department has done splendid work in many instances in putting medical swindlers out of business. Why Michigan seems to be exempt from federal activity in this line is a mystery. It would be interesting to know what sinister influence makes that state such a safe harbor for mail-order medical fakers.

Current Comment

NOSTRUM ADVERTISING IN THE RELIGIOUS PRESS

No class of publications has made greater progress in censoring its advertising than the religious journals. Four or five years ago, the various church publications fairly reeked with advertisements of nostrums of the most fraudulent and vicious kinds. A wonderful housecleaning has taken place in the past half-decade, and most religious journals of the better class have dissolved their previous coalition with the "great American fraud." Here and there, of course, are to be found church papers that are still willing to share the blood-money of quackery for the sake of increasing their revenue. A correspondent has sent us an advertisement torn from the *Northern Christian Advocate*. It occupies half a page and deals with that most impudent of frauds, the Oxypathor. As our readers remember, the Oxypathor[1] is a later name given to the Oxygenator, one of the numerous devices sold in the exploitation of what we have called "gas-pipe therapy." The Oxypathor consists of two flexible cords attached to a piece of nickel-plated piping filled with an inert mixture of clay and coke dust and sold as a "cure" for diphtheria and nearly every other disease. It has just as much curative value as a tomato-can with a piece of string tied to it. The sale of this device was prohibited some time ago in the state of Vermont, and its importation into Australia has been prohibited by the government of that enlightened commonwealth. It is, in fact, a viciously wicked fraud, but the publishers of the *Northern Christian Advocate* seem to be willing to participate in the profits that accrue from the sale of this swindling device. It is but fair to say that while the *Northern Christian Advocate* is a Methodist publication it is not owned by the Methodist church, but by a number of ministers. Apparently, there is the same commercial domination of what may be called the independent religious press as that which at present afflicts a large proportion of the "independent" medical press. The evil in both cases will doubtless continue until the intelligent subscribers refuse longer to be *particeps criminis* with the publishers in perpetuating fraud.

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[2] Reprinted in "Nostrums and Quackery;" also issued in pamphlet form; price 4 cents.

[3] The Journal A. M. A., Nov. 4, 1911, p. 1554.

[4] The Journal A. M. A., Jan. 14, 1911, p. 136; also Nov. 4, 1911, p. 1554; also "Nostrums and Quackery," p. 126.

[5] The Journal A. M. A., Oct. 7, 1911; reprinted in pamphlet form, price 4 cents.

[6] The Journal A. M. A., Oct. 24, 1908.

[7] The Journal A. M. A., Oct. 16, 1909; "Nostrums and Quackery," p. 459.

[8] Reprinted in "Nostrums and Quackery;" also in pamphlet form; price 4 cents.

[9] Reprinted in "Nostrums and Quackery;" also in pamphlet form; price 4 cents.

[10] The Journal A. M. A., May 20, 1911; reprinted in "Nostrums and Quackery."

[11] Referred to in article on J. Lawrence Hill consumption cure, "Nostrums and Quackery," p. 115.

[12] The Journal A. M. A., Oct. 8, 1910; "Nostrums and Quackery," p. 100; also in pamphlet form; price 4 cents.

THE BLOOD IN UNDERNOURISHMENT

The classic studies on inanition made by Voit, many years ago, show that the blood does not waste in parallel with the other tissues of the body. Herein one may see a beneficent protective device whereby the respiratory functions of the circulation are maintained intact under conditions manifestly adverse. These claims have at times been called into question. Obviously it is of no small interest to know whether and to what extent alterations in diet, especially in the direction of undernutrition, may tend to impoverish the blood. The failure of appetite and consequent enforced complete or partial inanition may draw on the tissue-stores. Is the blood called on to contribute its share and does it thereby deteriorate from a physiologic standpoint? To this an answer is furnished by recent experimental studies of Boycott and Chisolm.[2] Rats were placed by them on unsuitable diets, especially such as were deficient in protein, until they lost a considerable portion—from one-quarter to one-third—of their body weight. This loss was such that some material wasting of important tissues must be assumed. Yet the undernourished animals showed no diminution in total oxygen capacity and the blood was left much in its original condition. The investigators conclude that the body does not feed on its red cells during protein starvation. By comparison of the animal data with human statistics Boycott and Chisolm are further of the opinion that the duration of life of the red corpuscles in larger animals and man is probably far longer than the two or three weeks which, they say, is usually ascribed. How much longer it is at present quite impossible to suggest.

WRONG DIAGNOSIS NOT SLANDER

In the Medicolegal department of this issue appears a decision of the Court of Appeals of the District of Columbia, which is of direct interest to every physician. In the case of *Brice versus Curtis,* the evidence showed that the plaintiff, a woman of 38, consulted the defendant, a physician, regarding the failure of her menstrual flow to appear. The physician made a diagnosis of three months' pregnancy. Subsequently, it developed that the difficulty was due to premature menopause. The action for slander was based on the fact that the physician told the patient in the presence of her sister, who accompanied her, that she was pregnant, when she was not The court holds that the communication was a privileged one, an expression of scientific opinion, and that no evidence of malice or vilification was shown, neither was there any evidence that the diagnosis was not a reasonable one under the circumstances. The opinion expressed was apparently a mistaken one, but was made in good faith. The substance of the decision is that a mistake in diagnosis is an error in scientific judgment and not a libel.

DR. WILEY RESIGNS

Damned with faint praise from the nation's chief executive, hampered by a reactionary departmental chief who has long since outlived his usefulness, badgered by a pettifogging lawyer of the night-school variety who, as a representative of the vicious interests, was able to nullify or render abortive efforts made in the interest of public health, Dr. Wiley has given up the unequal fight and handed in his resignation. Thus retires from the government service one of the most useful officials this country has ever had. An implacable foe of fraud and deceit, Dr. Wiley has for years stood between a more or less helpless public and the vested interests that have developed to a science the business of adulterating foods and sophisticating drugs and in other ways threatened the public health. On every debatable question regarding the wholesomeness of foodstuffs, Dr. Wiley was consistently on the side of the people; his superior officers have been just as persistently on the side of those who have made their millions by substituting cheap and often poisonous drugs for more expensive but wholesome foods. Assailed from without by some of the most powerful, vicious and corrupt of organizations, he was also antagonized from within by the political henchmen of the same organizations. To Dr. Wiley more than to any other one man, the public owes the Food and Drugs Act and to Dr. Wiley it also owes whatever of good has been accomplished by that act. It is to be hoped that his forced retirement will result in such an upheaval of public indignation that the forces of evil at present in control of the Department of Agriculture will be driven into political oblivion and the department filled by men who hold decency above dollars, probity above pelf and public health above private gain.

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[1] This fake and several other similar ones are exposed in an interesting pamphlet published by the American Medical Association, "Oxydonor and Similar Fakes," price, 4 cents.

[2] Boycott and Chisolm: The Influence of Underfeeding on the Blood, Jour. Path. and Bacteriol., 1911, xvi, 263.

WHO WILL SUCCEED WILEY?

There are two groups of people who are anxiously watching and waiting to see who will be Dr. Wiley's succcessor. In one group are the dishonest manufacturers, the food adulterators, the whiskey blenders, and the fraudulent patent medicine promoters: those "interests" that are preying on the people through fraud and misrepresentation in various ways. In the other group are the people of the United States, and the honest manufacturers. Which of these groups will be kept in mind in the selection of the man? The newspapers announce that President Taft immediately telegraphed to the leading universities asking for suggestions as to the right man to succeed Wiley. This looks as though the President were anxious to get the right man. But the right man in this case need not necessarily be the best chemist in the country. What is needed is a man who is fundamentally honest; who has the good of the public and not of the "interests" at heart; one, above all, who has honest convictions and has the courage to carry out such convictions. But will the President dare to ask such a man to take a position in which he will be surrounded with the restrictions that made Wiley consider it nearly useless? No self-respecting man, no man who is thoroughly qualified in every way for the position, would accept it under present conditions. There must be a further change in the personnel of the bureau which is by law presumed to enforce the Food and Drugs Act and a removal of the restrictions on its activities. Until that change is made, no one worthy to succeed Wiley ought to be expected to accept the position.

Medical News

COLORADO

Sterilization of Garbage.—The State Board of Health now requires the sterilization of garbage collected in towns and used for the feeding of hogs.

Screening of Food.—The Colorado Grocers' Association has cooperated with the State Board of Health by agreeing suitably to screen food exposed for sale.

Trachoma in State.—Dr. Rose Kidd Beere, Denver, examiner of children of public schools and institutions, has found 102 cases of trachoma in the State Home for Dependent Children.

Standardizing of Lodging Houses.—The United Charities of Denver has requested the health commissioner to standardize the cheap lodging houses of the city by requiring a certain number of points in sanitation, in order to be allowed to continue in business.

Pollution of Streams.—The State Board of Health is sending out thousands of circulars warning against the pollution of streams. These posters are to be tacked to trees in the forest reservations. This was done last year and it is believed this action contributed to the reduction of typhoid in the state, as there were 1,003 fewer cases in 1911 than in 1910.

GEORGIA

State Sanatorium Election.—At the annual meeting of the Board of Trustees of the State Tuberculosis Sanatorium held in Atlanta, March 6, the following officers were elected: president, Dr. T. R. Whitley, Douglasville; vice-president, Dr. W. B. Crawford, Lincolnton, and secretary, Dr. Jeff Davis, Toccoa. Dr. Davis was also made chairman of the executive committee, and Dr. H. R. Slack, LaGrange, vice-chairman.

State Board Urges Screening.—The State Board of Health, in a recent bulletin, calls the screen the family's quarantine against many diseases and urges that houses be screened to keep out flies and mosquitoes, which are the demonstrated agencies of many diseases. The board also advises that stagnant pools be drained or oiled; that rain barrels be screened or oiled, and that all food products be screened to avoid contamination by flies.

ILLINOIS

Typhoid Spread at Party.—An epidemic of typhoid has followed a dance recently held in St. Charles, where more than thirty cases are reported.

New Officers.—Canton Physicians' Club: president, Dr. D. D. Kirby; secretary-treasurer, Dr. William O'Reilly.——Galesburg Medical Society: president, Dr. C. E. Quaife; secretary, Dr. E. N. Nash.

Extension to Tent Colony.—The officials of the Ottawa Tent Colony have let a contract for new buildings, the cost of which will amount to more than $25,000. These include offices, a research laboratory, a new medical building and an operating room.

The State Board of Health.—At the last meeting of the Illinois State Board of Health, the certificate of Dr. Charles B. Bateman, Vandalia, charged with impersonating Dr. George B. Carson, Vandalia, in the examinations of the Missouri State Board of Health in July, 1911, was revoked for unprofessional and dishonorable conduct.——The mandamus suit of the Littlejohn College and Hospital against the State Board of Health for recognition as a medical college, is still pending in the Municipal Court and a hearing is expected within the next ten days.——The mandamus suit of the National Medical University of Chicago against the State Board of Health for recognition, which was commenced more than a year ago, is now in the Appellate Court.

Personal.—Dr. J. W. Pettit, Ottawa, sailed for Europe, March 14.——Dr. E. W. Wahl, Tampico, slipped on a piece of ice, March 7, fracturing his leg just above the ankle.——Dr. F. H. First has been elected president; Dr. Louis Ostrom, vice-president, and Dr. John C. Souders, secretary-treasurer, of the medical and surgical staff of St. Anthony's Hospital, Rock Island.——Dr. E. A. Hall, Henry, fell March 3, fracturing his patella.——Dr. Frank W. Rulien, Joliet, who has been ill at the Presbyterian Hospital, Chicago, for fourteen weeks, is reported to be convalescent.——Dr. R. L. Estes, Meridosia, who has been ill in a hospital in Jacksonville, as the result of injuries sustained in an automobile accident, has returned home convalescent.——Dr. C. S. Nelson, Springfield, is ill at St. John's Hospital with appendicitis.

Chicago

New Emergency Hospital.—A branch of the Emergency Hospital was opened at the East Chicago Avenue Police Station, March 12. It has accommodation for four patients and an operating room and is equipped with all appliances necessary for first aid.

Cornerstone to Be Laid.—The German ambassador to the United States, Count von Bernstorff, will come to Chicago, March 24, to deliver an address at the laying of the cornerstone of the new building of the German Hospital at Grant Place and Hamilton Court.

Epidemic in County Hospital.—It is reported that one-fifth of the nurses in Cook County Hospital are at present incapacitated for duty on account of an epidemic of contagious diseases. The nurses claim that their resistance has been lowered by the necessity of overwork.

Health Bond Issue.—The last issue of the Bulletin of the Department of Health urges on the voters the necessity of a bond issue, which will allow the construction by the city of a contagious disease hospital, to cost $300,000. The remaining $80,000 called for in the proposed bond issue are for three new public baths and extensions and repairs in two of the public bath houses already established.

Personal.—Dr. B. Barker Beeson sailed for Europe, March 19.——Dr. George C. Hunt, chief surgeon of the police department, has been elected a director and appointed chief surgeon of the Amicable Accident Association.——Dr. Alvin Helwig, city ambulance physician at Chicago Avenue, was scalded on the head and neck recently by a cup of hot coffee thrown at him by a prisoner in the station.——Dr. P. J. H. Farrell has been elected president of the newly organized Army and Navy Club of Chicago.

Health Department Acrostics.—The Department of Health, in its weekly bulletin, graphically summarizes diphtheria and measles as follows:

DIPHTHERIA
Indifference to it is fatal.
Prompt treatment is necessary.
Hospitalization gives control.
Terminates too many lives.
Hostile to child life especially.
Entraps the careless.
Requires strict quarantine.
Is easily cured.
ANTITOXIN CURES IT.

MEASLES
Easiest disease to catch.
Alarming in infants.
Scores too many deaths.
Loose quarantine spreads it.
Expose no child to it.
Sane mothers protect their children.

IOWA

Personal.—Dr. W. A. Bryan, Kent, has been appointed assistant physician at the State Hospital, Cherokee.——Dr. H. M. Stevenson, Madrid, while preparing to move to Perry, was struck on the head by the corner of a piano box and painfully injured.

New Officers.—Henry County Medical Society, February 29: president, Dr. F. R. Wilson, New London; secretary-treasurer, Dr. O. A. Geeseka, Mount Pleasant.——Linn County Medical Society, March 12: president, Dr. B. L. Sheldon; secretary, Dr. H. W. Bender, both of Cedar Rapids.

LOUISIANA

Meningitis in Shreveport.—Up to February 24, thirty-seven cases of cerebrospinal meningitis had been reported in Shreveport, with thirteen deaths.

Personal.—Dr. W. T. O'Reilly, New Orleans, has resigned as a member of the Sickles Fund Commission.——Dr. George R. Fox, Morgan City, in charge of the hookworm work in Caddo Parish, has returned and resumed his duties. Up to date he has treated more than five hundred cases of the disease.——Drs. Arthur A. Herold and Thomas P. Lloyd have been appointed members of the Board of Health of Shreveport, and Dr. Herold has succeeded Dr. A. S. Reisor as president of the board.——Dr. R. E. Swigart, physician in charge of the United Fruit Company's Hospital at Bocas del Toro, has been ordered to New Orleans to establish headquarters there for the hospital and sanitary work of the company.

New Orleans School of Tropical Medicine.—The New Orleans School of Tropical Medicine and Hygiene of the Medical Department of the Tulane University of Louisiana, New Orleans, began its laboratory and systematic course in tropical medicine, hygiene and preventive medicine in September last and is making strenuous endeavors to obtain a sum of not less than $60,000 for the equipment of laboratory, museum and a library, and an endowment of $20,000 to $25,000 a year for five years. For the founding of a new research library the sum of $1,400, representing the surplus contributed for the purpose of the fight against yellow fever in 1905, will be applied, and Miss Lodilla Ambrose has been appointed librarian and curator of the museum of the school.——Dr. Creighton Wellman, head of the department, made a strong plea for instruction in hygiene and sanitation in an address made before a large body of students and faculty of Tulane University, March 6.

Active Health Work.—Dr. Oscar Dowling, Shreveport, president of the State Board of Health and state health officer of Louisiana, has been actively engaged in the cleaning up of New Orleans and other cities in Louisiana. Improvements in hygiene and sanitation are being required of restaurants, canning factories and other plants.——Dr. Mayer A. Newhauser, New Orleans, state medical inspector, who recently inspected the Julian Canning Company's plant at Violet, reports that at least 200 children and women were working under most filthy conditions. The state board has served notice on the company so that it will be compelled to close.——The good results of the cleanliness crusade are already evident. Dr. Dowling has given notice that the ordinances of the sanitary code will be enforced relative to restaurants, hotels, markets, slaughtering pens and railway stations. Places catering to the public must be kept clean, and nuisances of all kinds, especially those on vacant lots, must be abated. Factories also must comply with the ordinances.——Dr. Dowling has caused a bill to be prepared providing for the reporting of all births and deaths throughout the state, and has also planned to have a department added to the state health department for the eradication of mosquitoes.——The Caddo Parish grand jury returned thirty-six indictments March 1 against alleged violators of the state sanitary laws. The indictments were based on the testimony of Dr. Dowling, who presented photographs showing the alleged unsanitary premises.——During the February trip of the state board of health train, Dr. Dowling instructed the health officers of the state regarding the treatment and prevention of meningitis.

MARYLAND

Tuberculosis Exhibit.—The traveling exhibit car of the Maryland Association for the Prevention and Relief of Tuberculosis had a very successful week in Baltimore, and moved to Brooklyn, March 7.

Ask for Bureau of Sanitary Engineering.—A party of Maryland physicians appeared before the committee on appropriations of the state legislature, March 5, asking an appropriation of $10,000 for the establishment of a bureau of sanitary engineering. They spoke of the importance of making the watersheds free from pollution and thus curbing the ravages of typhoid which causes 400 deaths a year in the state.

Baltimore

Medical Students Organize.—To promote closer relationship among the students of the medical department of the University of Maryland, and to foster more intimate acquaintance between the student body and the teaching staff, the Randolph Winslow Surgical Society has been organized, composed of thirty-five active members, twenty-three of whom are seniors and the balance juniors.

Dispensary Soon to Open.—The dispensary at Locust Point, connected with the Bishop William Paret Memorial, will be opened in a few days. Dr. J. Williams Lord is president of the institution, and in charge of the department of skin diseases; Dr. Anna Abercrombie is in charge of the department of diseases of women and children, and Dr. B. C. Catlin, of the department of diseases of the eye and ear.

Personal.—Dr. Adolf Meyer sailed March 16 for Switzerland.——Dr. Clapham Pennington sailed for Europe, March 30.——Dr. Louis V. Hamman is ill in John Hopkins Hospital with typhoid.——Dr. Edward E. Lamkin, Nanticoke, who underwent operation for the uniting of the bones of the arm, fractured last December, has recovered.——Dr. Carl Voegtlin, assistant professor of pharmacology at Johns Hopkins Medical School, is seriously ill with pneumonia in the Johns Hopkins Hospital.——Dr. Clarence E. Downes, health warden, is ill with septicemia, due to an operation wound.

MASSACHUSETTS

Vaccination Against Typhoid.—In compliance with the new Navy regulations, all the officers and enlisted men under 45 years of age at the Charlestown Navy Yard—1,300 in all—have been inoculated with antityphoid serum.

Chicken-Pox and Not Small-Pox.—In the case of the Cunard steamer *Ascania*, which was held at the Boston quarantine station and whose 538 steerage passengers were put in quarantine at Gallup's Island, Boston Harbor, the suspect was found to be ill with chicken-pox and not small-pox, as had been previously diagnosed. The steerage passengers were, therefore, promptly released and sent on their way.

Personal.—Dr. Charles S. Minot, James Stillman professor of comparative anatomy in Harvard Medical School, has been appointed exchange professor to Germany, and not Dr. James J. Minot, as erroneously announced in The Journal, March 16.——Dr. Frederic M. Briggs has been promoted to professor of surgery, Dr. William Merritt Conant has been appointed professor of clinical surgery, and Dr. William Allen Brooks, Jr., assistant professor of clinical surgery, in Tufts College Medical School, Boston.——The house of Dr. Hugh Cabot, Boston, was damaged by fire and smoke March 12 to the extent of $2,000.

Leper Board.—The State Board of Charity has established a voluntary board consisting of Drs. Charles J. White and Harvey P. Towle, who have lent their assistance in years in the diagnosis and treatment of leper cases in the state; Dr. Joseph W. Proctor, Boston, the leper expert of the state board; Dr. Burt Wolbach, Boston, professor of bacteriology in Harvard Medical School, and Dr. Clara P. Fitzgerald, Worcester, a specialist on skin disease, to further the scientific care and treatment of lepers and to promote the study of the disease. Dr. White is president and Dr. Fitzgerald secretary of the board.

New Dean of Graduate School.—Dr. Horace D. Arnold has been appointed dean of the Graduate School of Medicine recently established as a department of Harvard University under the Faculty of Medicine. This school is to take control of all graduate medical instruction beginning October. The work of organization has already been begun by Dr. Arnold, and plans are being developed which promise to make this department a very important factor in the medical education of the United States. The new feature in the movement is not that of graduate instruction, but in the recognition that this work is of sufficient importance to warrant the establishment of a separate department of the university successfully to carry it out.

Hospital Notes.—The Boston city council has appropriated $50,000 for a children's hospital in connection with the consumptive hospital department.——The Boston Dispensary has opened, under the direction of Dr. John D. Adams, a class in gymnastics to meet twice a week, for children with lateral spinal curvatures, round shoulders, or faulty positions in standing.——Plans and specifications for the new St. Elizabeth's Hospital, Brighton, have been approved. The buildings will be located at the corner of Cambridge and Washington streets, and because of the propinquity of the monastery of the Passionist Fathers, will have the same mission style of architecture—a white plaster exterior with red tile roofs. The large central administration building will front on Cambridge street. From either end will extend wings rising by three terraces, and the upper or back line of the rectangle thus formed will be closed by a chapel and nurses' home. The hospital will provide for one hundred and fifty patients.

MISSISSIPPI

Change of Management.—Dr. H. M. Folkes, Biloxi, announces that he has canceled the lease formerly had on his institution in that city, and that hereafter it will be conducted under the old name of Biloxi Sanatorium. Dr. Folkes is president and Dr. R. L. White superintendent of the institution.

Personal.—Dr. B. H. Paslay, West Point, was attacked with a poker by an insane negress, who had been employed as a cook in his house, and seriously bruised, and was obliged to shoot the assailant in self-defense.——Dr. S. W. Glass, Jackson, has been appointed first lieutenant, M.C., N.G., Miss.——Dr. W. W. Smithson, Jackson, has formally assumed charge of the office of secretary of the State Board of Health.——Dr. John C. Culley, Jackson, captain, M.C., N.G., Miss., has resigned.——Dr. W. S. Leathers, University, Director of Public Health and Sanitation, is to address the Health Conference of County and Municipal Officers of the State of Tennessee which meets in Nashville, April 2-4, and also the Southern Educational Conference, which meets in Nashville later in April.

NEW YORK

Sanatorium Incorporated.—A certificate of incorporation has been filed by the Medford Tuberculosis Sanatorium for Working Men and Women of Brookhaven.

New Hospital Soon Ready.—The new building for the German Deaconess Hospital, Buffalo, is nearing completion and will be ready for occupancy not later than August 1.

City Hospital Relief Fund Grows.—The relief fund for the three city hospitals of Syracuse has now reached $175,000, leaving only $25,000 to be subscribed to make up the amount required.

College Buys Site for Dispensary.—Dean John L. Heffron, of the Syracuse University College of Medicine, announces that the free dispensary to be established in connection with the college will be located on East Fayette Street, adjoining the college, where a site has been bought.

Appropriation for Tuberculosis Ward.—The supervisors of Erie County, at a recent meeting, voted to reorganize the tuberculosis ward of the Erie County Hospital, at an estimated cost of $2,940. The new ward will be known as the tuberculosis department and will be in charge of an executive physician and six attending physicians, who wll serve without pay.

Personal.—Dr. George W. Beach, Binghamton, has assumed his duties as assistant superintendent of the Iowa State Sanatorium, Oakdale.——Dr. W. M. Wells is reported to be seriously ill at his home in Fulton.——Dr. L. A. Walker, Rochester, who was operated on for appendicitis late in February, is convalescent and has been removed from the General Hospital to his home.——Dr. Charles S. Meahl, Buffalo, while examining a patient as to his sanity, was viciously attacked by the patient, but fortunately escaped injury.

Health Exhibit Board Named.—The governor has appointed an honorary committee to represent New York State in preparing a public health exhibit in connection with the Fifteenth International Congress on Hygiene and Demography: Drs. Henry L. K. Shaw, Albany; Eugene H. Porter, state commissioner of health, and Drs. Joseph D. Bryant, Luther H. Gulick and Edward T. Devine, New York City.

Mental Hygiene.—A meeting was held in the rooms of the Rochester Chamber of Commerce, March 14, for the purpose of organizing the Monroe County Committee on Mental Hygiene. One of the first activities of the committee was the promotion of a public lecture on March 28 by Dr. Smith Ely Jelliffe, New York City, on "The Causes of Insanity," under the auspices of the Monroe County Medical Association.

Horton Bill Passed.—The Horton bill, which allows Buffalo to spend $300,000 for a tuberculosis hospital, has been passed by the assembly.

New York City

New Italian Hospital.—The Italian Benevolent Society Institute has filed plans for remodeling the buildings at 615 to 619 East Eighty-Third street for hospital purposes.

To Enlarge Mount Sinai Hospital.—This hospital has acquired a five-story flat house on East Ninety-Ninth Street adjoining the properties purchased a short time ago. The hospital will erect a new pathologic laboratory on this site.

New Health Officer Asks Appropriation.—Dr. Joseph J. O'Connell, Brooklyn, the recently appointed Health Officer of the Port of New York, has asked for an appropriation of $387,000, for improvements in the equipment of the quarantine station at Hoffman's Island and the contagious disease hospital on Swinburne Island. He asks for a modern pathologic and bacteriologic laboratory to cost $42,000, $10,000 of which is for equipment. Increased dormitory accommodations are badly needed. It is said that last year, 1,400 persons were crowded into quarters which furnished accommodation for only 800.

Clinic Physicians to Make Visits.—The Manhattan East Side Tuberculosis Clinic, and the West Side Manhattan Clinic, each of which has a branch registration office, have been reorganized and will try several new procedures, among them the visiting by the clinic physician of patients too feeble to attend the clinic, and cooperation with the social and charitable workers in the district. The chief end in view is unification of the clinic and district work. Should the experiment prove successful and yield better results, the new system will gradually be introduced throughout the city. All clinic physicians will then be required to make visits at the homes of patients and to examine suspected cases of tuberculosis refusing to come to the clinic.

Personal.—Dr. James R. Hayden was operated on recently for appendicitis.——Dr. and Mrs. George Jacoby have sailed for Europe.——Dr. Charles G. O'Connor, Brooklyn, has been reinstated as a medical inspector by the Health Department.——Dr. Silas C. Blaisdell, Brooklyn, chief surgeon of the Eastern District Hospital, gave a complimentary dinner to the medical staff of the institution, in celebration of his thirtieth anniversary as a practitioner of medicine, and the last speaker of the evening, Dr. T. L. Vosseler, Brooklyn, presented to the host a silver loving-cup which bore the inscription: "Presented to Dr. S. C. Blaisdell by the visiting staff of the Brooklyn Eastern District Hospital and Dispensary as a token of affection and esteem and to commemorate the thirtieth anniversary of his entrance in the practice of medicine, March 12, 1912."——Dr. Geza Kremer has been appointed admitting physician to the Tuberculosis Preventorium for Children.

OHIO

New Society Organized.—Mercer County Medical Society met to organize at Celina, March 8, and elected Dr. G. J. C. Wintermute, president; Dr. Frank Ayers, vice-president; Dr. D. H. Richardson, secretary and delegate to the state association; Dr. H. J. Cordier, treasurer, and Dr. W. C. Stubbs, censor, all of Celina.

Penalty for Violators of Babcock Test.—The Ohio Dairy and Food Commissioner, Columbus, calls attention to all buyers and sellers of milk and cream, who are using the Babcock test to determine the value of butter fats, to section 12,724 of the General Code, which reads that "Whoever, at a cheese factory, creamery, condensed milk factory or other place where milk is tested for quality or value, manipulates, underreads or overreads the Babcock test or any other contrivance used for determining the quality or value of milk or cream, or makes a false determination by the Babcock test or otherwise, shall be fined not less than $25 nor more than $100."

Personal.—Drs. A. Ravogli, Cincinnati, and Charles M. Harpster, Toledo, sailed for Europe, March 20, to attend the International Congress on Syphilis, which meets in Rome April 8.——Dr. Alexander S. McCormick, Akron, had a narrow escape from death, when his automobile was struck by a freight train at Barberton, March 8. Dr. McCormick's hand was badly cut and his knee bruised.——Dr. F. G. Leonard, Cleveland, has been appointed physician in charge of the municipal tuberculosis sanatorium, vice Dr. V. R. Brooks, resigned.——Dr. Andrew W. Prout, Columbus, sailed for Europe, March 16.——Dr. Hugo Maetke, Dayton, sustained painful injuries in an automobile accident, March 6.

PENNSYLVANIA

New Officers.—Woman's Medical Society of Western Pennsylvania, February 27: president, Dr. Amelia Dranga, Pittsburgh; secretary, Dr. Mary Jones, Glenshaw.

Appropriation for Sanatorium.—At a meeting of the commissioners of Berks County, March 7, a motion was passed appropriating $1,000 to the Berks County Tuberculosis Society to help defray the cost of maintenance of the Neversink Mountain Sanatorium.

State Hospital Report.—The tenth annual report of the Scranton State Hospital shows that 1,290 surgical cases, 937 medical cases and 177 special cases were treated during the year, a total of 2,404; and that of these, 2,021 were residents of Lackawanna County.

New Hospital.—At a recent meeting of the Board of Trustees of the Dubois Hospital Association and the State Board of Charities, it was decided to begin active preparations for the building of a new hospital. Ground has already been purchased for the new building and the board will give this ground together with an appropriation of $10,000 to the association. The title of the institution will be held by the Sisters of Mercy of Titusville.

New Dispensary.—The Tuberculosis League of Pittsburgh has opened in connection with its work a new dispensary on the South Side. The object of the dispensary is the treatment and care of babies and children for the prevention of diseases and the production of immunity. The league has apparently felt for some time that money could be better spent in the prevention of tuberculosis before money had been spent in educating and caring for those that were to suffer from tuberculosis during early adult life. The territory of the South Side is sharply circumscribed by the Monongahela River and the South Hills, and it is hoped that in five or ten years definite results will have been achieved which will prove the value of this plan of approaching the tuberculosis problem. Dr. William Charles White is the medical director of this work, and Dr. H. C. George is in active charge of the dispensary.

Personal.—Dr. and Mrs. Robert Dunlop, Pittsburgh, have started on their return to China, where Dr. Dunlop is a medical missionary.——Dr. John R. Borland, Franklin, was struck by a trolley car, March 6, fracturing his right leg, clavicle and a rib.——Dr. D. R. Beaver, Conshohocken, had a narrow escape from being crushed by a trolley car, while driving in Morristown. His carriage was wrecked and he sustained severe cuts and bruises of the head and face.——Dr. W. H. Seibert, Steelton, slipped and fell from a trolley car, March 4, but fortunately escaped serious injury.——Dr. George F. Potteiger, Hamburg, has been promoted to surgeon, M.C., N.G., Pa., with the rank of major and has been assigned to the Fourth Infantry.——Dr. W. H. Ammarell, Reading, is ill, in Reading Hospital.——Dr. J. B. Siggins has been elected mayor of Oil City.——Dr. H. H. Penrod, Johnstown, while making a professional call in Morrellville, February 27, slipped on the ice and sustained a slight concussion of the brain.

Philadelphia

Ophthalmologic Society Dinner.—The L. Webster Fox Ophthalmological Society, composed of students of the Medico-Chirurgical College of Philadelphia, were the guests of Dr. Fox at a dinner, March 9.

Typhoid in City Water.—Reports of the bacterial tests of the water supply during the period following the breaking up of the ice have been forwarded to the bureau of health and show that colon bacilli were present in the water from the Torresdale, Queen Lane and Belmont filtration plants.

Silver Jubilee of Society.—At the twenty-fifth reunion of the William Pepper Medical Society of the University of Pennsylvania, March 7, Dr. George Norris was toastmaster and addresses were made by Drs. Alfred Stengel, R. C. Norris and B. F. Stahl, Philadelphia, and by Dr. Joseph Bloodgood, Baltimore.

Ships Detained at Quarantine.—The British bark *Brilliant* from Bombay reached the quarantine station below Philadelphia, March 17, with two members of the crew dead and six others ill with well developed cases of beriberi.——The steamship *Rhein* spent ten hours in quarantine because of a supposed case of small-pox, which was later shown to be chicken-pox.

New Public Bath Planned.—The Public Baths Association, which at a nominal charge provides hot and cold water baths and laundry centers for the poor in various sections of the city, is about to open a new bath house at 1203-1205 Germantown Ave. Toward the estimated cost ($25,000) of the structure, $18,000 has already been raised by voluntary subscriptions. The association's fiscal statement shows that the total receipts last year were $18,067, and the expenses $17,931.

Personal.—Dr. William H. Hutt, Philadelphia, has been designated by the Department of State as a delegate to the Seventh International Congress on Tuberculosis, to be held in Rome in April next.——Dr. J. William White has been reappointed a member of the Fairmount Park Commission.——Dr. Arthur Jackson Brewe sailed for Egypt, March 2, and Dr. S. Weir Mitchell for Bermuda, March 9. Dr. Burton Chance has been appointed ophthalmic surgeon and Dr. Archibald G. Thomson consulting ophthalmic surgeon to the Pennsylvania Railroad Company.

Baby Show Planned.—Plans for a baby show to be held May 18 to 26 to demonstrate what science is doing for the prevention of infant mortality, were made public by Dr. Joseph S. Neff, Director of Public Health and Charities, March 9. A communication has been sent to Councils stating that the exhibition will cost $11,000, and asking that the city contribute $5,000 to help defray the expense, the balance to be paid by private subscription. The details of the management are in the hands of committees, of which the following are chairmen: finance, Dr. Lawrence F. Flick; arrangements, Dr. Henry D. Jump; social organization, Alexander M. Wilson; education, Dr. Jesse D. Burke; lectures and demonstrations, Dr. S. M. Hamill; publicity, Dr. William Duffield Robinson, and procuring exhibits, Dr. Charles A. Fife.

To Investigate Blockley Abuses.—As the result of a speech made by Alexander M. Wilson, assistant director of health and charities, at the City Club several weeks ago, one hundred business and professional men have been requested to become members of a proposed Committee on Municipal Charities, to investigate municipal institutions for the purpose of correcting abuses. The committee on organization comprises Dr. J. H. Musser, Max Herzberg, John S. Newbold, George Vaux, Jr., Walter G. Smith, John Wanamaker, Dr. George Woodward and B. Franklin Pepper. It is the desire of the projectors of the movement to devise a comprehensive plan by which proper quarters will be provided for the insane and indigent wards of the city and that the present system be overturned and succeeded by methods that will end scandals. Bromley Wharton, general agent and secretary of the State Board of Charities, has written Assistant Director Wilson, commending him for his zeal and energy and offering the cooperation of the state board.

GENERAL

Public Health Officials to Meet.—The fifth annual meeting of the Lake Michigan Sanitary Association will be held in Hammond, Ind., April 4, and will be attended by public health officials and sanitary experts from the four states bordering on Lake Michigan.

Important Organizations to Meet in Philadelphia.—The International Association of Medical Museums will meet at the University of Pennsylvania, Philadelphia, April 4, and the American Association of Pathologists and Bacteriologists at the same place, April 5 and 6.

Asks Appropriation for Federal Exhibit.—Surgeon General Rupert Blue, U. S. P. H. and M.-H. Service, through the Treasury Department, has asked Congress to appropriate $51,510 for federal exhibits at the Fifteenth International Congress on Hygiene and Demography, to be held in Washington in September.

Bequests and Donations.—The following bequests and donations have recently been noted:

White Haven Sanatorium for Consumptives, $5,000; Mercer Home for Invalid Women, Atlantic City, N. J., $2,000; Home for Incurables, Philadelphia, $2,000, by the late Louise M. Spear.

German Hospital, Philadelphia, a contingent bequest of $2,000, by the late Emilie Schwarz.

University Hospital and Gynecean Hospital, Philadelphia, $10,000 each, by the late Mrs. Joseph Drexel.

Investigation on Ozena.—At the meeting of the third International Laryngologic Congress held in Berlin, September, 1911, it was resolved that a universal investigation on ozena should be made and the full report be presented at the next Congress, to be held in Copenhagen, Denmark. Laryngologists were appointed to assume charge of these investigations for their respective countries. Dr. Emil Mayer, New York City, represents the United States.

Wants Statistics Regarding Anesthesia.—Dr. James T. Gwathmey, 40 East Forty-First street, New York City, is sending out circulars in the endeavor to obtain statistics regarding anesthesia, which will assist in making the proper deductions regarding the various anesthetics, apparatus for anesthetics, etc. Circulars with blanks to be filled out have been sent to every hospital in the United States, and Dr. Gwathmey asks that the information be returned not later than April 1.

Surgeons of Pacific Northwest Organize.—On March 9 a meeting was held in Portland, attended by surgeons from Seattle, Tacoma, Spokane, Portland, Victoria and Vancouver, at which it was decided to organize the North Pacific Surgical Association, with the membership limited to sixty. The object of the association is the cultivation of the art and science of surgery; the uplift of the medical profession; the promotion of the highest ethical standards in the practice of surgery, and the deprecation of secret fee division between physician and surgeon. The following officers were elected: president, Dr. Kenneth A. J. Mackenzie, Portland; vice-presidents, Drs. Meredith Jones, Victoria, B. C., and C. W. Sharples, Seattle; secretary-treasurer, Dr. Otis B. Wight, Portland; recorder, Dr. J. M. Neff, Spokane; and councilors, Drs. Alfred Raymond, Seattle; J. R. Yocom, Tacoma, and T. L. Catterson, Spokane.

Sanitary Regulations for Railroads.—The Northwestern Sanitary Association, consisting of representatives of the state boards of health and the railroad commissions of Minnesota, North Dakota, Montana, Idaho and Washington, and the railroads traversing these states, met in Helena, March 8, and organized the Northwestern Sanitary Association. The object of the meeting is to codify and make uniform the railroad sanitary regulations in the states named. B. T. Stanton of the Montana Railroad Commission was made president and Dr. T. D. Tuttle, Helena, secretary of the state board of health of Montana, secretary. The association decided to ask every state board of health represented to prohibit the use of common drinking-cups in trains and in stations, and to ask the railroads to discontinue the sale of fruits, nuts, etc., in trains, as such sales are believed to be detrimental to the health of the public.

Needs of the Navy Medical Corps.—In the recent hearing before the house naval committee, Surgeon General Stokes stated that the disability of the Navy had fallen from 5.21 in 1905 to 4.43 in 1911. The Medical Corps of the Navy is so restricted in the matter of surgical dressings that it could not provide one dressing for 10 per cent. of the possible wounded in a naval battle. There are forty-seven vacancies in the Medical Corps and the conditions are not encouraging, as it has no flag rank and as promotion is much slower than in the line. He advocated the establishment of a Medical Reserve Corps and stated that his plan was to charter large freight carriers, each capable of accommodating at least one thousand wounded. One of these transports would be assigned to each division of four battleships, and on this officers of the Medical Reserve Corps would serve. These transports would take the wounded to a sanitary base, two of which are planned—one at Norfolk, Va., the other at Honolulu, H. I.

FOREIGN

Changes in the Obstétrique and the St. Petersburg Wochenschrift.—The editors of the *Obstétrique* wish to emphasize that gynecology is included in its scope, and hence they enter on the seventeenth year of its publication by calling it the *Archives Mensuelles d'Obstétrique et de Gynécologie.*——The *St. Petersburg. Med. Wochenschrift* at the close of its thirty-sixth year, changes to a fortnightly with the name, the *St. Petersburg. Med. Zeitschrift.* This journal is the organ of the German-speaking physicians in Russia, and has always made a practice of publishing systematically monthly lists with brief reviews of the contents of over a dozen of the leading Russian medical journals. Both the above exchanges are listed regularly in our Current Foreign Literature Department.

LONDON LETTER

(From Our Regular Correspondent)

London, March 9, 1912.

The National Insurance Act

The government has received a severe rebuff by the loss of one of the Manchester seats at a by-election. The center of the cotton trade is a great free-trade stronghold and if the election had been fought on this issue it is certain that the seat would not have been lost. But the main issue was the insurance act, which is very unpopular, not only with the medical profession, but with certain other sections of the community, such as clerks, who think that the burden imposed by it outweighs the advantages. The representative meeting of the British Medical Association has formulated demands far in excess of the capitation fee of $1.50 for medical attendance and drugs suggested by the government. A minimum capitation fee of $1.75, which is not to include drugs, is demanded, or, where the capitation is not adopted and payment for work done is given, 60 cents a visit, with a wage limit of $10 a week. The following extras are not to be included but paid for separately: miscarriages; vaccinations; fractures; dislocations; consultations; anesthetics (general and local); night calls between 8 p. m. and 8 a. m.; special visits (that is, visits made in response to and on the same day as calls received after 10 a. m., or made on Sundays at the patient's desire); certificates and reports; illnesses, the consequence of personal misconduct; illnesses arising from confinement and miscarriage within one month; operations requiring local or general anesthesia; operative dentistry; special examinations, for example, *x*-rays, bacteriology, etc., lunacy certificates; examinations, court attendances, etc., mileage; drugs, cod-liver oil, linseed meal, leeches, serum, oxygen, etc.; bottles, jars, dressings, bandages (except for first dressings). These terms are much more favorable to the profession than those at present obtained from friendly societies, which pay capitation fees of about $1 for medical attendance and drugs, including many of the "extras" above specified. One effect of the act is greatly to increase the membership of these societies, which at present include a large proportion of the men of the working class. Many physicians have contracted to attend the members of the friendly societies at this low rate and have no power to prevent the increase of membership resulting from the act. For many years the British Medical Association has struggled in vain to improve the conditions of contract practice, but the difficulty has been that physicians could be easily obtained to undertake the work at the societies' terms. The association has succeeded in bringing practically the whole profession into line to resist the act. Unless the further problem is solved of bringing it into line to resist the terms of the friendly societies its efforts will, to a large extent, be nullified.

The Treatment of Cancer

At the annual meeting of the governors of the Cancer Hospital the general committee reported that the most prominent feature of the year's work had been the completion of the cancer research institute. In the electrical and radiotherapeutic department (for which a new building will be ready about next May) they had secured a relatively large supply of radium and one or two advanced cases showed a slight improvement under its treatment.

The Great Coal Strike

The complete stoppage of coal mining, in which a million persons are employed, if continued threatens a national disaster comparable only to a great war. The railway companies have curtailed the service of trains and the sanitary services and water-supplies are already beginning to be interfered with. Even the hospitals are affected. In some of them fires have been discontinued in the nurses' sitting-rooms and warm water is no longer supplied for washing. In the wards economy in the use of coal is being carried out.

The London School of Tropical Medicine

The London School of Tropical Medicine, which was founded thirteen years ago, has been of great service to tropical medicine, both in promoting investigations and in training colonial doctors. Buildings equipped with the latest scientific appliances, a library and museum have been erected at a cost of $225,000. Connected with the school is the Seamen's Hospital, in which fifty beds are devoted to tropical diseases. The annual expenditure is $15,000, which is met nearly entirely by students' fees. The number of these has steadily and satisfactorily increased: in 1900 there were seventy-five students; in 1911, 159. During its existence the school has trained 13,000 students. They come from all parts of the world—the European continent, the United States, China, Japan, India, etc.—as well as from this country and its colonies. Nearly 500 physicians, who have passed into the service of the Dominions and the Colonies, have been trained here. Many colonial officials who have contracted tropical diseases abroad have been treated in the hospital; as many as forty have been treated in the last two years.

Discontent of the Native Doctors in India

In India most of the important civil medical posts under government are held by the officers of the Indian Medical Service (i. e., the Indian army), who are generally Europeans. As a result of the education on western lines of many native physicians, an outcry has been raised that the system is unfair to native practitioners and is stopping the development of independent medical practice. A certain number of these posts are held by the Eurasians or natives, and it is difficult to see how the government can alter the present system, which provides a large reserve of European physicians for the medical service of the Indian army in case of war. It has been suggested that in such a contingency any number of physicians could be obtained at short notice, but to this there is the serious objection, that for service with Indian troops men are required with a knowledge of their language, customs, etc.

First Red Cross Ship for British Navy

A new departure has been made in the British navy in the provision of its first hospital ship. The new vessel will be what is called a belligerent hospital ship—that is, she will belong to a state, and not to a private society, and in case of war will be subject to special conditions, having an official commission notified to the Powers. She will be painted white, with a green horizontal band, about 5 feet wide, and will fly the Red Cross, as well as the national flag. Her construction will be welcomed by all nations, because under the convention she is to assist all belligerents independent of their nationality. The belligerents will have the right to control and visit such ships, to direct their course, and even to define it if important circumstances require it.

The new vessel will be fitted for work both in peace and war. She may accompany the fleet to receive severe cases of illness, especially infectious cases, and convey them to port, and will have every necessary instrument for surgical operations. In war time she will have duties which can scarcely be appreciated or measured without war experience. The sick-bays of war ships, and the places laid out for the reception of the wounded, will by no means meet the demands. The vessel will have accommodation for 260 patients in time of peace, and for 330 during the operations of war, and the standing staff will include eight medical officers, four male nurses and a dispenser. The ship will have a displacement of 5,000 tons, a speed of about fourteen knots, and will be propelled by turbine engines. The furniture of the operating-rooms will include all the results of the latest experience of hospital practice, while in lighting and ventilation she will be admirably adapted for the work required of her. There will be isolation wards for infectious cases, a complete equipment for x-ray examinations, bacteriologic tests, optical practice and dispensary work. As in the sick-bays of modern war ships, the cots will swing, and be of the latest type. Special arrangements will also be made for the accommodation of patients suffering from severe fractures and other injuries. The value of such a vessel has been shown by the work of the hospital ship *Maine*, and by that of vessels of this class for Japan in the late war.

PARIS LETTER

(From Our Regular Correspondent)

Paris, March 1, 1912.

Reform of Medical Examinations

The Superior Commission of Medical Studies, the formation of which I mentioned in a previous letter (The Journal, Feb. 24, 1912, p. 568) has decided on the introduction of physicians, surgeons and obstetricians of the hospitals in the clinical juries for final medical examinations. It has voted to forbid a student to continue his course if he has failed four times on the same examination. The commission decided on the introduction in one of the yearly examinations of the subject of stomatology. As for the final clinical examination, the commission decided that only two or three patients should be examined at each examination, one of whom should be a patient with a special disease of the eyes, the ears, the nose, the larynx, the skin or a venereal disease. The candidate who fails will be obliged to spend four months at the hospital before presenting himself again for the same examination. As for the doctor's thesis, the commission believes that its suppression might place us at a disadvantage with relation to the foreign schools where the thesis still exists. The suggestion was made that only certain theses should be judged worthy of being printed, but this would be to create indirectly doctors of the first and second classes. Therefore, the thesis has been maintained *in statu quo*.

Cheap Dwellings

The constant and alarming increase of rents in recent years, especially among small apartments, is a subject of great interest in Paris. The population has increased from 2,660,559 inhabitants in 1901 to 2,846,986 inhabitants in 1911. The number of apartments at $100 (500 francs) and less has indeed increased by 45,252 during the period of from 1901 to 1911, but there are constantly fewer small apartments available. Thus in 1899 there were vacant in Paris 26,226 apartments for less than $100; to-day there are only about 3,600 to let. There is danger that the demand may exceed the supply and grounds for new buildings are growing rare.

M. Henri Rousselle in making the report for the Public Charities before the municipal council emphasized the urgent necessity of meeting this crisis with regard to small apartments. He mentioned that the law allowed the Public Charities to devote a large proportion of its funds to the building of cheap dwellings, on the ground that to assure to families of the working classes hygienic habitations is to contribute directly to the combating of tuberculosis, which makes such ravages among them. A considerable sum has already been and is being employed in the construction of economical dwellings, but, according to the report, more is demanded.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Feb. 23, 1912.

Phthisis in the French and German Armies

In the discussion of the French senate on the army budget, attention was called to the fact that in the French army 5.4 per cent. of the soldiers acquire tuberculosis, while in the German army only 1.8 per cent. are affected by the same disease. In 1907, 5,382 men were dismissed from the French army on account of tuberculosis. The critic sought to show that the reason for this regrettable difference lay in the inferior health of those who enlisted and in the greater care which Germany gives to the cure of the tuberculous. In Germany there are thirteen convalescent homes for tuberculous soldiers, while in France not a single one as yet has been established. On the other hand, the minister of war claimed that in France the statistics of sickness are more strictly kept than in Germany and other countries. A claim of this sort, which the minister of war indeed surely made on the spur of the moment, needs no statistical refutation, for with any unprejudiced person there cannot be the slightest doubt that in Germany the army statistics are kept with at least the same care as in France. It may be that the French minister of war was not provided with a sufficient knowledge of the facts to give a judgment on this entire matter.

Warning Against Methyl Alcohol in External Application

The circumstance that lately some cases have been ascertained in which injury to health has been occasioned by the external application of remedies in which methyl alcohol was present, e. g., French brandy and tincture of myrrh, has given the chief of police of Berlin occasion to warn against the use of methyl alcohol in cosmetic remedies and external medicinal applications. Those who violate this provision are liable in future to be prosecuted not only for fraud but, if occasion arises, for personal injury.

Improvement of Dwellings in Berlin

As in most large cities so also in Berlin the tenement question is a serious one. As has been shown there live in Berlin and its suburbs 600,000 people in dwellings in which each room is occupied by five or more persons. In order to secure improvement in this direction and to establish easily accessible parks and playgrounds, a society has been formed under the leadership of Dernburg, the former state secretary in the imperial colonial office. At the initial meeting a resolution was passed that the formation of commodious building plans for sanitary small dwellings, cheap transportation and easily accessible parks and playgrounds are indispensable for the future of the metropolis and the health of the rising generation.

Miscellany

Resemblances of Plant and Tree Cancer to Human Cancer

A plant affection known as crown-gall sometimes does serious injury to forest trees, fruit trees and shrubs, such as oaks, almonds, peaches, raspberries, grapes and roses. E. F. Smith (*Science*, Feb. 2, 1912) attempts to show a resemblance between this plant neoplasm and malignant human tumors. He has published several papers on this subject, and believes that we have in the study of these particular plant overgrowths a key to unlock the whole cancer situation. He says that when he first called the attention of the members of the American Association for Cancer Research to crown-gall as a true tumor, they maintained that it was evidently a granuloma. As evidence that this theory is not correct he shows that in the granulomas it is the parasite causing the disease which migrates and causes the metastases. In cancer it is the cancer cell itself which migrates; i. e., some of the body cells which under some unknown stimulation have been taken out of the physical control of the body and have become, as it were, parasites on their fellow cells. Secondary tumors are derived from primary cancer tumors in two ways. The primary tumor growing peripherally sends out roots or strands which bore their way through normal tissues sometimes for long distances, developing from these strands secondary tumors. In a second method of metastasis small groups of cancer cells are dislodged from the parent tumor and are carried in the blood-stream or lymphatics to develop secondary tumors where they lodge. Having found no parasite in the cancer cells, a majority of animal pathologists have given up the idea that cancer is of parasitic origin and have adopted the theory of Cohnheim of embryonal rests. But Smith says that research workers on cancer are now generally agreed that there are phenomena connected with cancer which cannot be explained by Cohnheim's theory that cancers are due to the later development of small fragments of tissue cut off from the parent layer during embryonal growth, to be enclosed in other tissues and lie dormant until stimulated into growth. The theory that the cancer cell is itself a parasite (a hypothesis recently restated by Butlin) it would seem must be abandoned in the light of the discovery of Peyton Rous (1911), that sarcoma of chickens may be produced by cancer fluid filtered free from all strains of living cancer cells. This evidence supports Smith's theory that the causative factor must be a living microorganism minute enough to pass through the walls of a Berkefeld filter.

Smith has not found the secondary method of the formation of crown-gall tumors in plants, probably owing to the fact that there is no rapid blood-stream, as in animals, to carry the foreign cells. The first method, however, by the growth of strands in the surrounding tissues, has been found by Smith in plants, and parallels, to his mind, strictly what occurs in malignant animal tumors. Smith has found this in the Paris daisy which had been inoculated with the crown-gall organism and which bore both primary and secondary galls. He found these strands macroscopically in the primary tumor of 20 per cent. of the plants examined. Subsequently, in experimentally inoculated plants examined microscopically, he was able to find the tumor strand in practically all specimens. A striking fact in confirmation of Smith's contention is that when the primary tumor occurs in the stem and the secondary tumor in the leaf, the structure of the secondary tumor is not that of the leaf in which it is growing but of the stem from which the strand was derived, which is exactly analogous to the finding in metastatic human cancer. Furthermore, experimental tumors produced in the leaves of the Paris daisy by needle-puncture inoculations from tumors in the leaves do not have a stem structure but an irregular epithelioma-like structure derived wholly from the leaves. Bacteriologic studies and experiments with these tumors have convinced Smith that the *Bacterium tumefaciens* is the activating organism in the production of these tumors and he has been able to isolate this organism. His experiments in attempting to produce tumors in animal life (fish) with this organism, while they have given some results which are highly interesting and suggestive, have not been conclusive.

Smith believes, therefore, that we have in crown-galls a striking analogy to what occurs in malignant animal tumors, namely, the cell itself a disturbing force; i. e., an enormous multiplication of certain cells without reference to physiologic needs and in opposition to the best interests of the organism; a non-capsulate tumor, with absence of abscess cavities and of plainly visible parasites; peripheral growth and a well-developed stroma consisting of vessels and fibers; from this primary tumor strands of tumor tissue on which secondary tumors develop, with a tendency to take on the structure of the organ in which the primary tumor develops; complete recovery if all the tumor tissue is extirpated, failure if it is not; in some cases spontaneous recovery. The chief difference is that the causative organism of cancer has not been discovered. The experience of Smith, however, as set forth in his article, in identifying, culturing and proving the causative relation of the *B. tumefaciens* to the cancer-like tumors of plants may furnish valuable suggestions in the search for the cause of human cancer.

The Addition of Physical Training in the New York Schools.—The Department of Education of the City of New York has established in the high schools physical training as one of the required subjects of the course. The department is under the charge of Dr. C. Ward Crampton as director of physical training. When any pupil applies for a modification of the gymnastic work, or an excuse from part of it, he is given a letter to his physician, which states that all the pupils are required to take physical training work. The letter informs the physician of the character of this work, which includes, besides heavy exercises, involving considerable vasodilatation and increased heart-rate, a large number of mild exercises which are intended to improve posture, and which do not accelerate the heart or materially affect the blood-pressure. The physician is requested to furnish on an attached blank such details of diagnosis of the condition of the pupil as he deems pertinent, and suggestions as to what class of the work he deems it necessary to modify or eliminate for this particular pupil, and what other precautions should be observed. The blank referred to contains a space for the statement of any physical or developmental defects of the pupil, and the particular ones which the exercises should seek to improve, such, for instance, as drooping head, flat chest, round shoulders, uneven shoulders, flat feet, etc. Certain features of physical training work are set forth in the blank and the physician is asked to specify which should be emphasized, such, for instance, as trunk, leg, back and shoulder exercises for local or general weakness; exercises increasing heart and lung work and development, for somatic undevelopment without organic heart lesion; exercises increasing neuromuscular control and coordination, for cases of motor ineptitude or dulness; recreative exercises, play, etc.; exercises to relieve splanchnic stasis, lowered vascular and enteric tone, in cases of chlorotic tendency, constipation, etc. A list of certain exercises which are contraindicated is also set forth, and they may be directed specifically to be omitted. Other recommendations may also be made by the physician. The system thus allows for its adaptation to the needs of each pupil.

Case of Cavernous Angioma of Face.—The history of a case reported by G. McCallum in the *Australian Medical Journal* Sept. 9, 1911, is interesting. A man, 29 years of age, when about 18, first felt a tingling sensation at left half of upper lip, extending to the ear at that side. Later, the cheek swelled slightly and the trouble was attributed to a decayed tooth in the left upper jaw. This tooth was removed. The swelling continuing to extend, in about a year an attempt was made to remove it. This was given up as hopeless, owing to the bleeding, and the patient was led to understand that there was no hope. The growth continued to extend until within the last two years. For some time after the operation severe bleedings occurred from the nose, with only a few days' interval, and later from the inside of the cheek. The patient had no notion how the condition began. He did not receive any injury. McCallum found a well-marked swelling of the whole left side of the face, from the lower jaw to the left temporal region, and from the left side of the nose to the left ear. Over the lower jaw there was seen the scar of the operation mentioned above. There was a well-marked projection forward of the eyeball, with total blindness. The tumor itself was diffuse and smooth. A puffiness at the root of the nose was evidently due to enlarged veins, and large veins passed down to the neck from the tumor. In the left temporal region there was a well-marked pulsation, with puffiness. Blue veins could be seen over the anterior portion of tumor. Pulsation was not so marked, and the skin was fairly natural in color. The tumor seemed to occupy all the region occupied by the maxillary bone, and bulged outward from it in all directions. The bones themselves were displaced. The treatment employed consisted in the introduction of magnesium metal in the form of arrows into the tissues. By such treatment chemical changes are produced, which effect the absorption of the metal. The watery constituents of the tissues are reduced to the original elements, oxygen and hydrogen. The gases evolved accumulate around the metal, the oxygen combines with it, and forms a soluble magnesium oxid. The hydrogen is absorbed. The arrows are absorbed in from two to three weeks. Gradual cicatrization follows in the area, with the consequent diminution in size. The treatment is said to be practically painless when done under local anesthesia, and seems to cause no ill effects, local or general. The patient can go about as usual. In McCallum's case the magnesium arrows were dissolved in a few days. He introduced about half a dozen through one opening into different portions of the tumor in a fan-shaped pattern. He was able thus to treat the whole of the tumor except the portions within the mouth and nose, which apparently receded of themselves without any treatment. The number of arrows used was about 100, using six at a time. Although it is five to six years since McCallum treated him, the patient still continues to improve.

Transmission of Typhus by Lice.—Through the work of Nicolle, Comte and Conseil and Anderson and Goldberger in 1909, and of Ricketts and Wilder, working in Mexico, in 1910, it was established that typhus fever was transmitted through the body louse. Goldberger and Anderson, *Public Health Reports,* March 1, 1910, recently conducted some experiments on monkeys which showed that the head louse (*Pediculus capitis*) may also become infected with typhus fever by feeding on patients with that disease and that the disease may be transmitted to monkeys by the injection of an emulsion of crushed lice. The experiments did not prove conclusively that the disease was transmitted by the bite of the head louse, but they believe that it may be so transmitted. This adds another to the list of insect carriers of disease.

Marriages

Frank Butler Clark, M.D., Red Boiling Springs, Tenn., to Miss Marie Elizabeth Smalling of Nashville, Tenn., February 8.

William H. Honor, M.D., Wyandotte, Mich., to Miss Henrietta E. Adams, Caseville, Mich., at Detroit, March 2.

James King Pollock, M.D., Madison, Ind., to Miss Mabel Morrison Chermside of Staunton, Va., January 29.

Thomas Smith Armstrong, M.D., McKeesport, Pa., to Miss Marion Greenwood of Gardner, Mass., March 9.

Henry Wellman Emile Walther, M.D., to Miss Lilian Helen Cornier, both of New Orleans, March 12.

William Auda Vee Cash, M.D., Abilene, Tex., to Mrs. Frances Wells of Sweetwater, Tex., March 8.

Gilbert Joshua Thomas, M.D., Rochester, Minn., to Miss Ethel E. Fuller, at Gardner, Ill., March 6.

Vernon Francis Kelly, M.D., Baltimore, to Miss Laura E. H. Spangler, at Baltimore, March 6.

Edwin C. Sharp, M.D., Aledo, Okla., to Mrs. Gertrude Parsons of Fort Scott, Kan., March 5.

Delphos B. Virtue, M.D., Iberia, O., to Miss Edith B. Sawhill of Mansfield, O., March 13.

James Givens, M.D., to Miss Grace Frances Wallis, both of Fort Worth, Tex., March 4.

Myron Metzenbaum, M.D., to Miss Elsa Fuldheim, both of Cleveland, O., March 19.

Deaths

George Edwin Hurst Harmon, M.D. University of Maryland, Baltimore, 1872; a member of the American Medical Association and Association of Military Surgeons of the United States; who entered the United States Navy, Dec. 20, 1873; served on various ships of the Navy for more than seventeen years, and for about the same length of time on shore duty, this service including the command of the Yokohama Naval Hospital and the Naval Medical School Hospital, Washington, and who was retired with the grade of medical director and rank of Rear Admiral, March 5, 1910, on attaining the age of 62 years; died at the home of relatives in Cambridge, Md., March 5, aged 64.

Henry D. Boyden, M.D. Louisville (Ky.) Medical College, 1894; University of Pennsylvania, Philadelphia, 1895; a member of the American Medical Association; formerly president of Hall County (Neb.) Medical Society; surgeon-in-charge of the eye, ear, nose and throat department of St. Francis Hospital, Grand Island; local surgeon of the Burlington System; formerly president of the Nebraska Pharmaceutical Association and a member of the board of examiners; mayor of Grand Island in 1892 and a member of the library board; died in Clarkson Memorial Hospital, Omaha, March 3, from nephritis, aged 59.

Francis J. Stevens, M.D. Albany (N. Y.) Medical College, 1852; formerly a practitioner of Hempstead, N. H., and later a resident of Haverhill, Mass.; at one time representative of the city in the General Court and state coroner; a member of the school committee of Haverhill and for a time editor of a daily paper in that city; died at his home, March 7, from senile debility, aged 88.

Daniel A. La Force, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1863; a member of the Iowa State Medical Society and formerly president of the Wapello County Medical Society; a veteran of the Civil War; formerly mayor of Ottumwa and senator from Wapello County; died at his home in Ottumwa, March 10, from rheumatic endocarditis, aged 74.

Charles Augustus Sheridan, M.D. Bellevue Hospital Medical College, 1885; a member of the American Medical Association and a specialist on diseases of the eye, ear, nose and throat; a member of the board of trustees of St. Francis Home, Oswego, N. Y.; died recently at his home, aged 55. At his funeral a delegation from the Oswego Academy of Medicine acted as escort of honor.

Alverd E. Winchell, M.D. College of Physicians and Surgeons, New York City, 1865; a member of the American Medical Association; the oldest member of the Connecticut State Medical Society; for fourteen years a member of the New Haven (Conn.) Board of Health and for several terms its president; died at his home, March 6, from pneumonia, aged 80.

Edward Henry Kelly, M.D. University of Michigan, Ann Arbor, 1869; a member of the American Medical Association; and formerly president of the Gogebic County (Mich.) Medical Society; local surgeon of the Wisconsin Central Railroad at Ironwood, Mich.; died at his home in that city, March 8, from heart disease, aged 68.

Walter Joel King, M.D. Denver (Colo.) Homeopathic Medical College, 1897; of Golden; professor of pediatrics in his alma mater; physician to the State Industrial School for Boys, and a member of the staff of the Denver Homeopathic Hospital; died in Park Avenue Hospital, Denver, February 23, from nephritis, aged 38.

Edwin Orlando Boardman, M.D. Rush Medical College, 1878; formerly a member of the American Medical Association; organizer and first president of the Dawson County (Neb.) Medical Society; for twenty years a practitioner of Overton; died at his home in Portland, March 11, from heart disease, aged 56.

Samuel A. Jones, M.D. Homeopathic Medical College of Pennsylvania, Philadelphia, 1860; Homeopathic Medical College of Missouri, St. Louis, 1860; formerly dean of the University of Michigan Homeopathic College, Ann Arbor; died at his home in that place, March 9, from senile debility, aged 78.

David Little, M.D. College of Physicians and Surgeons, New York City, 1858; a member of the Medical Society of the State of New York; for two years surgeon of the Thirteenth New York Volunteer Infantry during the Civil War; for nearly fifty years a surgeon of Rochester, N. Y.; surgeon and consulting surgeon on the staff of the Rochester City Hospital for more than half a century; health officer of Rochester in 1870 and 1871; died at his home, March 1, aged 78.

Arthur White Thomas, M.D. Syracuse (N. Y.) University, 1895; a member of the American Medical Association and the Rochester Academy of Medicine; died at his home in Rochester, February 29, aged 39. At a meeting of the Rochester Academy of Medicine, March 1, memorial resolutions were adopted.

John Mason Kash, M.D. Kentucky School of Medicine, Louisville, 1889; of Jackson, Ky.; president of the Breathitt County Medical Society and one of the oldest practitioners of Eastern Kentucky; died at the home of his daughter in Winchester, Ky., January 30, from chronic nephritis, aged 75.

Henry Bolivar Dwelle, M.D. New York University, New York City, 1856; surgeon at Benton Barracks, St. Louis, during the Civil War, and a practitioner of that city for fifty-five years; died at his home, March 2, from heart disease, following an attack of influenza, aged 84.

Samuel Martin Teel, M.D. University of Virginia, Charlottesville, 1876; a member of the American Medical Association and a practitioner of Cooper County, Missouri, since 1878; died at his home in Prairie Home, February 27, from pneumonia, following an attack of influenza, aged 61.

William Edward Gilliland, M.D. Washington University, St. Louis, 1870; a member of the Illinois State Medical Society and twice president of the Adams County Medical Society; a pioneer resident of Coatsburg; died at his home, February 28, from cerebral hemorrhage, aged 79.

Michael Lucas Shine, M.D. State University of Iowa, Iowa City, 1887; a member of the American Medical Association and a prominent practitioner of Buchanan County, Iowa; died at his home in Winthrop, March 4, from septicemia, due to an operation wound, aged 53.

Charles B. Converse, M.D. Bellevue Hospital Medical College, 1871; a member of the American Medical Association; a veteran of the Civil War; physician of Hudson County, N. J., since 1876; died in St. Francis Hospital, Jersey City, March 4, from myocarditis, aged 69.

William E. Holmes, M.D. Jefferson Medical College, 1879; a member of the Kentucky State Medical Association; formerly of Utica; died at his home in Owensboro, March 4, from the effects of carbolic acid, self-administered, it is believed, with suicidal intent, aged 55.

Arthur Lee MacKen, M.D. College of Physicians and Surgeons, New York City, 1894; formerly an eye, ear and throat specialist of New York City and a resident of New Brighton, Richmond; died suddenly in Brooklyn, March 7, from cerebral hemorrhage, aged 40.

Winfred Van Deren Blythe, M.D. Western Reserve University, Cleveland, 1910; house physician in the Youngstown (Ohio) City Hospital for a year and later a practitioner of East Youngstown; died in the City Hospital, March 8, from pneumonia, aged 28.

Ludwig Pauly, M.D. Chicago Homeopathic Medical College, 1879; for forty-eight years a practitioner of Milwaukee; of Milwaukee; who was overcome with gas at his home in that city, February 17, died in the Emergency Hospital, from pneumonia, aged 80.

Algernon Sidney Whitaker, M.D. Atlanta (Ga.) Medical College, 1857; surgeon in the Confederate Service during the Civil War; a regularly ordained clergyman of the Baptist Church; died at his home in Biltmore, N. C., February 27, aged 76.

William E. Warner, M.D. National Medical University, Chicago, 1902; clinical instructor in electro-therapeutics at Hahnemann Medical College, who underwent abdominal section last summer, died in Clearwater, Fla., March 3, aged 37.

Thomas A. Scherer, M.D. Jefferson Medical College, 1883; a member of the Medical Society of the State of Pennsylvania and a specialist on diseases of the stomach; died at his home in Catasauqua, March 9, from cardiac hypertrophy, aged 56.

James C. B. Dixon (license, Missouri, 1884); a member of the Missouri State Medical Association and formerly a member of the American Medical Association; died at his home in West Plains, February 22, from senile debility, aged 88.

Tipton Adams Gunn, M.D. Tulane University, New Orleans, 1909; a member of the Medical Society of Virginia and a practitioner of Lorraine; died in the Virginia Hospital, Richmond, March 3, after a surgical operation, aged 27.

Marcus M. Hale, M.D. Rush Medical College, 1870; for forty-one years a practitioner of Wabash County, Ind.; died at his home in Wabash, February 26, from organic heart disease, aged 65.

Thompson Llewellyn B. Brown, M.D. University of Nashville, Tenn., 1892; a member of the Tennessee State Medical Association; died at his home near White House, Tenn., March 2, aged 41.

John Alexander, M.D. Eclectic Medical Institute, Cincinnati, 1885; of Waverly, Ill.; who fell February 28, breaking one of his ribs; died February 29 from the effects of the fall, aged 84.

Arthur Hasley Coward, M.D. Medico-Chirurgical College of Philadelphia, 1905; died at his home in Bradley Beach, N. J., March 5, from accidental asphyxiation from smoke, aged 30.

George W. Moore, M.D. Bennett Medical College, Chicago, 1890; a member of the Kansas Medical Society; died at his home in Gas, March 8, from pneumonia, aged 51.

Edwin S. Ely, M.D. Hering Medical College, Chicago, 1900; a member of the Michigan State Medical Society; died at his home in Bay City, March 2, from nephritis, aged 44.

Joseph Atherton, M.D. University of Pennsylvania, Philadelphia, 1879; a pioneer practitioner of Dexter, N. Mex.; died at his home, February 24, from dropsy, aged 53.

Jay G. Rand, M.D. University and Bellevue Hospital Medical College, 1905; died at his home in Lake Placid, N. Y., February 26, from cerebral hemorrhage.

Alexander Hylan Johnson, M.D. Howard University, Washington, D. C., 1899; of Washington, D. C.; died in the Freedman's Hospital, Washington, March 7.

George Bannerman Maxwell, M.D. Chicago Homeopathic Medical College, 1894; of Attleboro, Mass.; died in Fort Worth, Tex., February 29, aged 51.

William C. Park, M.D. Western Reserve University, Cleveland, 1882; died at his home in New Millport, Pa., March 4, from cerebral hemorrhage, aged 55.

Dresser B. Vincent (license, Mich., 1900, 13 years of practice); died at his home in Coldwater, February 25, from senile debility, aged 85.

Hugh F. Gunn, M.D. Rush Medical College, 1883; a member of the American Medical Association; died at his home in Galena, Ill., March 5.

John P. F. Brunner, M.D. Bellevue Hospital Medical College, 1874; died at his home in Krumsville, Pa., February 23, from influenza, aged 60.

Wray Beattie, M.D. Washington University, St. Louis, 1875; died at his home in Newark, Ohio, February 29, from arteriosclerosis, aged 81.

Joseph Henry Scott, M.D. University of Louisville, Ky., 1853; died at his home in Louisville, February 6, from nephritis, aged 79.

Frank Adolphus Watkins, M.D. University of Minnesota, Minneapolis, 1889; died at his home in Ulster, Pa., February 14, aged 48.

James L. Mason, M.D. University of Tennessee, Nashville, 1900; of Beechgrove, Tenn.; died at his home, March 4, from tuberculosis.

Robert Astley Corbett, M.D. Victoria College, Coburg, Ont., 1860; of Port Hope, Ont.; died at Ocean Park, Cal., January 27, aged 74.

Welcome L. Filkins, M.D. Eclectic Medical College of the City of New York, 1875; died at his home in Albany, February 19.

Francis M. Winningham, M.D. Eclectic Medical Institute, 1875; died at his home in Blythedale, Mo., February 19, aged 65.

N. H. Ellis (license, Texas, 1907); died at his home in Midland, January 20, from epidemic cerebrospinal meningitis, aged 54.

Augusta S. Linderborg Kheiralla, M.D. Hahnemann Medical College, Chicago, 1892; died at her home in Chicago, March 10.

James A. Allen, M.D. Atlanta (Ga.) Medical College, 1882; died at his home in Pine Bluff, Ark., March 4, aged 71.

Alecia A. Flanders, M.D. Hahnemann Medical College, Chicago, 1886; died at her home in Glencoe, Ill., March 8.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

WILEY'S OWN STATEMENT ON RESIGNING

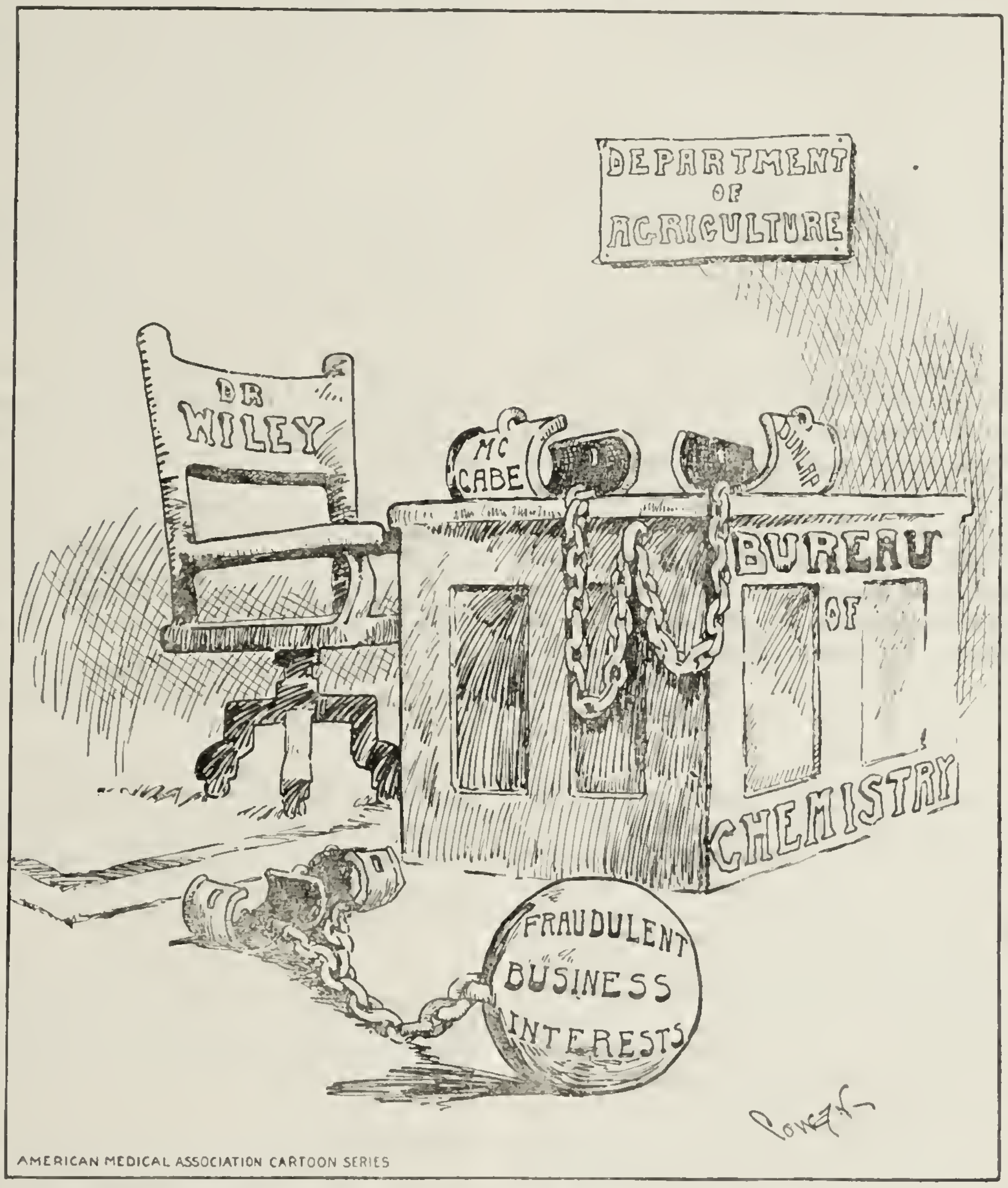
On April 9, 1883, I took the oath of office and entered on the discharge of my duties as Chief of the Bureau of Chemistry, in the Department of Agriculture.

For the past twenty-nine years I have endeavored to discharge these duties according to the dictates of my conscience, the knowledge at my command, and the obligations of my oath.

In retiring from this position after so many years of service it seems fitting that I should state briefly the causes which have led me to this step. Without going into detail respecting these causes, I desire to say that the fundamental one is that I believe I can find opportunity for better and more effective service to the work which is nearest my heart, namely, the pure food and drug propaganda, as a private citizen than I could any longer do in my late position.

In this action I do not intend in any way to reflect on the position which has been taken by my superior officers in regard to the same problems. I accord to them the same right to act in accordance with their convictions, which I claim for myself.

FREE FROM THE SHACKLES



AMERICAN MEDICAL ASSOCIATION CARTOON SERIES

CAN ANOTHER HONEST MAN BE FOUND TO WEAR THEM?

After a quarter of a century of constant discussion and effort the bill regulating interstate and foreign commerce in foods and drugs was enacted into law. Almost from the very beginning of the enforcement of this act I discovered that my point of view in regard to it was fundamentally different from that of my superiors in office. For nearly six years there has been a growing feeling in my mind that these differences were irreconcilable and I have been conscious of an official environment which has been essentially inhospitable. I saw the fundamental principles of the Food and Drugs Act, as they appeared to me, one by one paralyzed or discredited.

It was the plain provision of the act and was fully understood at the time of the enactment, as stated in the law itself, that the Bureau of Chemistry was to examine all samples of suspected foods and drugs to determine whether they were adulterated or misbranded and that if this examination disclosed such facts the matter was to be referred to the courts for decision. Interest after interest, engaged in what the Bureau of Chemistry found to be the manufacture of misbranded or adulterated foods and drugs, made an appeal to escape appearing in court to defend their practices. Various methods were employed to secure this end, many of which were successful. I found that one by one the activities pertaining to the Bureau of Chemistry were restricted and various forms of manipulated food products were withdrawn from its consideration and either referred to other bodies not contemplated by the law or directly relieved from further control. A few of the instances of this kind are well known. Among these may be mentioned the manufacture of so-called whisky from alcohol, colors, and flavors; the addition to food products of benzoic acid and its salts, of sulphurous acid and its salts, of sulphate of copper, of saccharin and of alum; the manufacture of so-called wines from pomace, chemicals, and colors; the floating of oysters often in polluted waters for the purpose of making them look fatter and larger than they really are for the purposes of sale; the selling of moldy, fermented, decomposed and misbranded grains; the offering to the people of glucose under the name of "corn sirup," thus taking a name which rightfully belongs to another product made directly from Indian corn-stalks.

The official toleration and validation of such practices have restricted the activities of the Bureau of Chemistry to a very narrow field. As a result of these restrictions I have been instructed to refrain from stating in any public way my own opinion regarding the effect of these substances on health and this restriction has interfered with my academic freedom of speech on matters relating directly to the public welfare.

These restrictions culminated in the summer of 1911 with false charges of misconduct made against me by colleagues in the Department of Agriculture, which, had it not been for the prompt interference on the part of the President of the United States, to whom I am profoundly grateful, would have led to my forcible separation from the public service. After the President of the United States and a committee of Congress, as a result of a searching investigation, had completely exonerated me from any wrong-doing in this matter, I naturally expected that those who had made these false charges against me would no longer be continued in a position which would make a repetition of such an action possible. The event, however, has not sustained my expectations in this matter. I was still left to come into daily contact with the men who secretly plotted my destruction.

I am now convinced that the freedom which belongs to every private American citizen can be used by me more fruitfully in rallying public opinion to the support of the cause of pure food and drugs than could the limited activity left to me in the position which I have just vacated. I propose to devote the remainder of my life, with such ability as I may have at my command and with such opportunities as may arise, to the promotion of the principles of civic righteousness and industrial integrity which underlie the Food and Drugs Act, in the hope that it may be administered in the interest of the people at large, instead of that of a comparatively few mercenary manufacturers and dealers. This hope is heightened by my belief that a great majority of manufacturers and dealers in foods and drugs are heartily in sympathy with the views I have held and that these views are endorsed by an overwhelming majority of the press and the citizens of the country.

H. W. Wiley.

"BOOST FOR REXALL"

Most of our readers still have fresh in their mind the series of exposés that appeared in The Journal,[1] dealing with a cooperative "patent-medicine" concern, known as the American Druggists Syndicate—"A.D.S." This organization, it will be remembered, consists chiefly of druggists who, not content with the profits to be derived from the *sale* of "patent medicines," must needs participate in the profits that come from their *manufacture*.

Very similar to the A.D.S. in scope and methods is another cooperative "patent-medicine" concern, the United Drug Co., whose "patent medicines" are sold under the general trade-marked name "Rexall." Like other "patent medicine" manufacturers, this company has awakened to the commercial possibilities that await the nostrum vender in Great Britain. More stringent state and federal laws governing the sale of "patent medicines" in the United States have caused many of the gentry engaged in this delectable business to seek fields where the "let us alone" policy is carried to a *reductio ad absurdum*. At present, Great Britain is the happy hunting-ground of the American quack or nostrum vender who has found that he is not without honor (and profit) save in his own country. This condition of affairs has been commented on not only in the British medical press but in London *Truth*, that implacable foe of humbug in whatever form it is exhibited. The following article under the title "Boost for Rexall" appeared in *Truth*, Feb. 14, 1912; it will prove, we believe, of more than ordinary interest to our readers:

"There are signs and portents that this country will shortly be in the throes of an invasion. Not the North Sea, but the Atlantic, is the point of danger, and the invader will be armed with a whole battery of powerful weapons forged by the biggest 'pharmaceutical plant' in the United States, which, as every one knows, is the land of big things in the drug line as in everything else. Yankee venders of pills and potions have descended on these islands before, but never in such an alarming array. With the exception of Dr. Munyon, of Munyon's remedies fame, they have mostly come with single articles. In the present instance, however, it is not a matter of the introduction of one or two new 'cures,' but of a hundred or more, and the lot are to be discharged at the public by methods of 'boosting' hitherto undreamt of in the philosophy of our native druggists.

"'Boost for Rexall' will be the inspiring battle-cry of the campaign, for which the plans are now being laid. There is in the United States and Canada an undertaking styled the United Drug Company, whose specialties are 'The Rexall Remedies.' Listen to this:

> "We claim to manufacture a remedy for the cure of every disease human flesh is heir to. Altogether we have about one hundred and fifteen of these remedies.

"That quotation from an interview with Mr. Lewis S. Wandell, the managing director of the company in England, recently published in the *Pharmaceutical Journal*, shows at once that there is no false modesty about Rexall. Rivals may profess to have cures for this, that, or the other disease, but Rexall covers the whole field of human ills. The managing director seems to have been under the mark, though, when he said there were about 115 remedies. The Rexall literature now before me puts the number at 300, but that is for America, and perhaps our ailments are less varied or our tastes simpler over here. One choice sample of this literature is worth quoting:

> "Rexall Orderlies contain a drug the medicinal value of which has not long been recognized. Convinced that this drug was a veritable gem, a treasure of really untold value, because of its beautiful action on the bowels, we decided to give the public the benefit of the splendid action of the newly discovered chemical by putting it on the market in the form of Rexall Orderlies. The result has been very gratifying. Great numbers feel warmly toward us for having put into their hands this reliever of their distress.

"It is noticeable that though Rexall professes to set its face against secret remedies, it does not disclose the ingredients of a number of its concoctions. See, for instance, how the name of this veritable gem, this treasure of untold value, is, like the birth of Mr. Yellowplush, 'wrop in mistry.' Yet it has been whispered to me that the miraculous drug with the beautiful action is one procurable in almost any chemist's shop in this country in the shape of tablets compounded of phenolphthalein! However, I have no desire to pry into secrets of this description. It is sufficient to mention now that, besides such specialties as Rexall Orderlies, Rexall Americanitis Elixir, Rexall Muco-Tone, and Rexall mixtures and lotions (ointments, pills, tablets, hair tonics, tooth powders, and other things too numerous to mention, the company are also manufacturers of confectionery, stationery, perfumery, etc., and dealers in such articles as playing cards and Rexall cheap watches, of which 50,000 are said to have been sold.

"More interesting than the range of the goods is the method in which they are purveyed. In the first place the public are assured that this business is conducted on the strictest moral principles. Rexall itself says so. Its system—again you have its own word for it—'was more than a revolution, it was a new earth' in the drug trade. One of the basic principles was that 'the printed stuff about these preparations should be so truthful as to lean backward rather than make a single exaggerated claim.' In proof of the company's meticulous veracity, the following incident is related:

> "A pretty pile of booklets was on the floor. As I picked up one, I was told the whole edition had been discarded. Why? Simply because in two preparations therein described the words used were too strong. The Cold Tablets were said 'to prevent' colds, whereas they only 'tend' to prevent colds. The Cream of Almonds was carelessly said to 'fill out hollow cheeks,' whereas it only 'tends' to fill them out.
>
> "All that costly edition thrown to the dump because these two claims were left unmodified. When men pay such heed to their words, lest they exaggerate . . .

"This edifying story of Rexall virtue is from a publication which the company has distributed broadcast. The appended extract is from a magazine called *Rexall Ad-Vantages*, which is issued only to employees and stockholders of the company. Dr. Barker was speaking at a meeting of the New York Rexall Club on business matters:

> Revised Literature—A Friendly Tip
>
> "Discussing the changes made in the United Drug Company's advertising literature *for the purpose of bringing it still more into harmony with state and national laws*, Dr. Barker . . . advised the stockholders to throw away any literature issued prior to the company's revision.

"It would seem from this that the company's conscience, sensitive though it may be, has not been the only stimulus to the throwing of Rexall literature 'on the dump.' Some part of the sacrifice has also been due to more stringent state and national laws. It may be added that the literature of these highly conscientious boosters includes a quotation of an advertisement of their own in *McClure's Magazine*, which is reprinted as though it were an editorial article, and that one of their leaflets states that a certain preparation is 'guaranteed to permanently cure 75 per cent. of all cases' of the disease for which it is offered—a claim which any physician would characterize as preposterous or something worse.

"Another character in which the company holds itself up to admiration is that of an object-lesson in 'exalted cooperation.' Apparently this is because a druggist desiring to retail the wonderful products of the 'pharmaceutical plant' at Boston must first of all buy shares in the company, the amount he is required to invest being calculated in some way on the basis of the population of the place in which he carries on business. Even if he is prepared to make the investment, however, not every druggist is eligible for the privilege of dealing in Rexall—so, at least, one gathers from its own publications. 'Only an apothecary who can stand an exhaustive inquiry as to his professional ethics' is allowed to handle Rexall remedies. Just think of that! Nor is the distinction

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1. The Journal A. M. A., Feb. 16, 1907; Jan. 8, Jan. 22, Feb. 19 and April 9, 1910. All this matter, reprinted in pamphlet form, will be sent on receipt of a stamped addressed envelope.

open to more than one druggist in one place, and the man on whom the choice falls becomes *ipso facto* 'the leading druggist' in that place—Rexall itself says so. 'When you see a sign on a druggist's shop reading "The Rexall Store" it indicates that the proprietor of that store is the leading, most progressive, and dependable druggist in his community.' This is, incessantly and stridently drummed into the heads of the community by means of booklets printed in millions and newspaper advertisements on the most lavish scale. It must be a pleasant experience for the other pharmacists in the same town, especially as they are blandly assured that Rexall has their interests at heart.

"The Rexall profession of friendship for the individual chemist as distinct from his company competitors is one of the queerest features of this American enterprise. To pave the way for its appearance here a party of British pharmacists went to Boston last autumn as the guests of the United Drug Company at the annual 'convention' of its stockholders and agents, of whom there are some 4,000. Mr. R. A. Robinson, ex-president of the Pharmaceutical Society of Great Britain, and four other gentlemen, presumably selected as representative of English pharmacy, were members of the party, and all are said to have been wonderfully impressed with the Rexall methods. Mr. Robinson gave his impressions in an interview, from which I take the following:

> "The Rexall business is run on cooperative lines—there is no cutting, each man's pharmacy becomes a Rexall store and everything is done on the best possible business lines. The point that attracted me most was the desire of the company to help the individual chemist. I found the greatest loyalty and enthusiasm among them. Not a single Rexall retailer thinks of undercutting his neighbor. There is nothing like it in England.

"It seems doubtful whether Mr. Robinson, after all, really grasped the true inwardness of Rexall methods of helping the individual chemist. I have shown already that these methods can hardly be helpful to those who do not come within the sacred circle of agents for the company's elixirs, etc.—that is to say, all but the one chosen retailer in each place. Secondly, individual druggists do not—as I understand—usually consider that their interests are advanced by what are known as 'chain stores' run by a company. Yet the United Drug Company has in the States about fifty of such retail stores, the majority of them having originally been started by Mr. Louis K. Liggett, the genius who founded the Rexall business, as a singular kind of auxiliary to his scheme of 'exalted cooperation.' Then there is the question of price-cutting, on which Mr. Robinson lays so much stress. In September last a Rexall store was opened in Toronto, under the name of Liggett's Store, and a flamboyant page advertisement in a daily paper was largely occupied with lists of drugs, etc., showing the difference between 'our price' and the 'regular price,' the difference being that 'our price' was for many things from 60 to upwards of 100 per cent. below the price charged by private retailers in the same city. Here are three items:

> "Epsom salts. Regular price 10 cents per lb. Our price 4 cents.
> "Boracic acid. Regular price 25 cents per lb. Our price 10 cents.
> "Soda bicarbonate. Regular price 10 cents per lb. Our price 4 cents.

"'Not a single Rexall retailer thinks of undercutting his neighbor.' Innocent Mr. Robinson! Mere undercutting, however, was only one of many devices of this Rexall store. There were free souvenirs for everybody and 25 cents' worth of stationery thrown in as a bonus on every purchase to the amount of $1, while $500 was distributed by means of the liberation of 1,000 toy balloons, each carrying a 'tag' entitling the person who captured it to a gift ranging in value from 25 cents to $10. 'The best possible business lines' is Mr. Robinson's verdict, but all the same imagination boggles at the idea of an ex-president of the Pharmaceutical Society seeking customers in the Brompton Road with the aid of a shower of balloons, each with a money tag attached. Another Rexall agent about the same time was thus advertising a sale of 1,000 jars of Rexall cold cream at 'the regular price of 50 cents.'

> "Every jar contains money—$10 gold piece in one, $5 in another, $1, 50c, 10c, 5c in others. You can't lose, no matter what you get—the cream is of the best; you pay only the regular price of 50c for it and you are bound to get some money in your jar, so that in any event it costs you less than the regular price—and you may get the $10 gold piece

"That at any rate is a Rexall dodge which will be found impracticable here owing to the provisions of the Lottery Acts. However, *Rexall Ad-Vantages* also furnishes particulars of a series of 'something for nothing' selling schemes which can be worked at an actual profit apart from the value of the advertisement.

"Mr. Robinson did not give any details of the proceedings at the annual convention which he attended. This is a pity, because, judging from a report in the *Chemist and Druggist* of September 23, a Rexall convention is not the least remarkable and instructive illustration of Rexall methods. Piety as well as philanthropy plays a part in them. 'The proceedings,' says the report, 'were opened with prayer. Then followed three days of business meetings, at which speakers told of new methods of drawing trade.' There were feasts and entertainments, too, and 'it is safe to say no songs were more popular than the following:'

"Tune of 'Yip-I-Addy-I-Aye.'

"Boost for Rexall to-day—to-day,
Boost for Rexall to-day!
Boost North and South, from Sea to Sea,
For the United Drug Company.
Boost for Rexall to-day—to-day,
Just stand up and holler Hurray! Hurray!
Boost here and at home,
Wherever you roam,
Boost for Rexall to-day.

"Individual chemists must, of course, decide for themselves whether it will be worth their while to attach themselves to the United Drug Company in the dual capacity of shareholders and boosters of Rexall remedies. It may be well for them, however, to bear in mind what Mr. Liggett, the president, said at the 'convention' at Boston in October:

> "We are preparing to open in England as a separate company, composed largely of English people, *but controlled, of course, by this company.*

"If the English business succeeds, the Yankee concern will control the profits; if it does not succeed, the English shareholders will lose their money. There can be little doubt as to the attitude of pharmacists generally toward this strange example of 'exalted cooperation' as it is practiced in America, nor is it by any means certain that the methods of trading described above will commend themselves to the British public. As Mr. Robinson observes, 'There is nothing like it in England,' and a good many people will be of opinion that it is something which we can very well do without."

THE BRANAMAN REMEDY COMPANY

Fraud Order Sustained

The Dr. Branaman Remedy Company, a mail-order medical fake of Kansas City, exploiting a "cure for deafness," against which a fraud order was issued by the Post-Office Department, has received a final knockout blow through a recent decision of the United States circuit court for the western district of Missouri. The company had applied for a preliminary injunction against the postmaster of Kansas City to restrain the enforcement of the fraud order. This was denied by the court. In THE JOURNAL, Nov. 26, 1910, p. 1908, the story of this concern, which is conducted by Dr. G. M. Branaman, its method of exploiting the public with a cure for deafness and the results of an investigation by the Post-Office Department was given at some length.[1] It was the old and familiar falsehood of the great specialist who promised his victims free treatment and special personal attention. The usual symptom-blank was required to be filled out, the stereotyped letters and the ready-made diagnosis were sent the victim, but instead of receiving free treatment, he was required to remit a neat sum for the apparatus and the whole outfit for the treatment of his case. Fraudulent testimonials were furnished and the whole rigmarole of the faker and the quack was gone through with. After investigation by the post-office employees, who took the rôle of patients of the quack concern, the Postmaster-General issued the fraud order. The court, in reviewing the case on the application for the preliminary injunction, taking into consideration the evidence accumulated by the Post-Office Department and such defensive matter as was submitted by the Branaman Remedy Company, held that the evidence not only warranted the making of the fraud order by the Post-Office Department, but amply sustained it. Where a fraud order is issued, in the opinion of the court, the presumption is in favor of the legality of the action of the Postmaster-General, and a strong showing is necessary to warrant the granting of an injunction. The court further says that the only cases in which courts will disturb a fraud order made by the Postmaster-General are when it is tainted with fraud, absolutely without authority of law, clearly outside of the statute, or, perhaps, clearly, palpably and obviously wrong. In the application for the injunction the complainant in his bill in equity claimed that his business and that of the Branaman Company "is and always had been a lawful one." The court said, "What might otherwise be a legal business or profession may be so conducted as to render it a vehicle of fraud and deception and bring it within the purview of the statutes authorizing the Postmaster-General to refuse the use of the mails in furtherance of schemes to defraud."

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[1] The matter has been reprinted in pamphlet form, price 4 cents.

An interesting feature of the complainant's bill of equity asking for the restraining order against the Kansas City postmaster was the allegation that the action of the Postmaster-General was the result of a conspiracy involving the American Medical Association, the Jackson County (Mo.) Medical Association and a number of doctors of Kansas City, as well as the attorneys for the government and the United States post-office inspector. This seems to be becoming the favorite defense of the quack, the faker and the nostrum-vender, when they are brought to book for their fraudulent methods—claiming conspiracy with others on the part of the American Medical Association, the great "medical trust," which seeks to destroy a lot of innocent but enterprising gentlemen who are only seeking to benefit the people and incidently to earn an honest dollar. It is gratifying to know that through this deep-laid conspiracy the Branaman Remedy Company has been put out of business for a time—at least, until Branaman turns up again with some similar scheme or with the same old fake under a new guise and name—and that the credulous public has thereby been saved probably thousands of dollars, much suffering and permanent injury.

THOREMEDIN

To the Editor:—A recent issue of The Journal (March 9, p. 716) contains a severe criticism concerning Thoremedin, which I consider unjust and misleading for many reasons. In this letter I will not go into particulars, but merely wish to correct some of the false impressions which may have been created by your publication among the many physicians all over the country, who have already used Thoremedin with remarkable results and others who might be deterred from using it by reason of the assertions of Dr. Pusey.

For over a year and a half, I have watched the effects from the employment of Thoremedin in the New York Skin and Cancer Hospital and in my private practice where there have been treated over two hundred patients with results which no one could misinterpret; these cases have been watched not only by myself and my own office assistants and the staff at the New York Skin and Cancer Hospital, but also by hundreds of graduate physicians who attended my lectures last year and this, and before whom we have treated these cases week after week. How the remedy acts I do not know, but I am sure that the sulphuric acid is not the most important active agent.

When Thoremedin paste is employed its therapeutic action continues for a considerable time, after any and all acid action has ceased; and where solutions of Thoremedin as weak as 5/100 of 1 per cent. acidity and ointments of 1.5 to 3 per cent. acidity were used, surely the acid cannot explain the therapeutic action of the remedy.

The results obtained with Thoremedin, also in cases of lupus vulgaris and erythematosus, cannot be questioned, as the hundreds of physicians will testify, who have followed the treatments throughout the past eighteen months.

I have not a word to retract of what I have said in my lectures or published in the *Medical Record* and elsewhere.

It is my invariable custom to ascertain the facts before I venture a statement regarding any method of treatment, which custom I have followed also in this case.

I am still using Thoremedin in its various forms with the greatest satisfaction, and expect to continue doing so.

Against Dr. Pusey's theories and statements, which rest on a few irrelevant experiments on metals, chamois leather and healthy skin, and not at all on clinical work, stand the published clinical reports on many actual cases treated by myself and others. I may leave the whole matter to the judgment of the profession at large. Kindly publish this in your next issue.

L. Duncan Bulkley, M.D., New York.

[The above letter was submitted to Dr. Pusey, who replies:]

To the Editor:—The chief burden of my criticism of Thoremedin Paste is that parading it as a "new Thorium remedy," containing "radio-active Thorium," and of secret composition, Squibb has introduced a sulphuric acid caustic paste. Dr. Bulkley makes no comment on its large free sulphuric acid content. In the presence of the fact of 15 per cent. to 35 per cent. free sulphuric acid, to say "How the remedy acts I do not know, but I am sure that the free sulphuric acid is not the most important active agent" is to my mind childish. It is to me a good deal like burning a hole in a man with a hot iron and then saying "What produced this effect on the tissues I do not know, but I am sure it was not the heat. It must have been due to some extraordinary dynamic property in the metal." If that is the sort of reasoning to account for the therapeutic action of remedies then therapeutics is surely on pretty weak ground.

I do not doubt that Dr. Bulkley has obtained clinical results, but I wish they had been published, so far as they were the results of the paste, as results from the application of a strong sulphuric acid paste. As to the character of these results I venture to believe that they have not impressed many other competent observers as favorably as they have Dr. Bulkley. I did not undertake to investigate the Thoremedin ointment or the liquor. If they are what they purport to be, they are dilutions of the paste, i. e., dilute mixtures essentially of sulphuric acid and sulphate of lead, and I am willing to let them go at that. Such preparations will be acid, antiseptic, astringent applications and of some use but of no wonderful potency. Dr. Bulkley says that in "solutions of Thoremedin as weak as 5/100 of 1 per cent. acidity, . . . surely the acid cannot explain the therapeutic action of the remedy." Well the other horn of the dilemma is worse: There is at least five to fifteen times as much sulphuric acid in Thoremedin as there is thorium, so that if the dilution contains only 5/100 per cent. sulphuric acid it contains only 5/500 per cent. to 5/1500 per cent. of thorium. And I take it that no sane man is going to attach much importance to a 1/100 or 1/300 of 1 per cent.—a 1/10000 or 1/30000—dilution of thorium in a local application.

Above I have spoken of Thoremedin as having 15 per cent. to 35 per cent. free sulphuric acid content. As a matter of fact, according to Semerak's admission to me, the stuff has not a fixed formula, although it is heralded as the result of years of painstaking research. For a few days before the publication of my paper, when I pressed Semerak with the fact that the paste contained 35 per cent. sulphuric acid, he confessed to 35 per cent. sulphuric acid in it as it was first put out, but hastened to claim only 14 per cent. free sulphuric acid lately. Of course it makes little real difference what per cent. of free sulphuric acid the paste contains so long as enough is used for the undiluted acid to get at the tissues, but the varying of the formula within four months indicates how uncertain even its originator is of what it should be and how unreliable are secret formulas.

If the experiments I made with the stuff are "irrelevant" I cannot but wonder what "relevant" experiments were made to determine the unknown powers of this sulphuric acid paste before it was applied to the disfigured and the diseased.

W. A. Pusey, Chicago.

[Comment: Dr. Pusey's letter makes it unnecessary for us to comment on the main issue in the correspondence. Our readers may be interested, however, in a matter incidentally referred to by Dr. Bulkley. He speaks of a paper printed in the *Medical Record.* This paper was submitted to The Journal a year ago, and was returned with the following communication from the editor:

> "I have read your article **on** 'The Treatment of Epithelioma, Lupus, etc., with Thorium Paste.' Had this come from any one but you we should probably have sent it back with a brief note to the effect that it was not available. Our reason for this would be that it seems to be advocating a nostrum. You do not state what the preparation is. Further, you say it is not yet on the market. If this is so, what is the use of publishing an article about it? If a doctor who has confidence in you reads your paper he will want to get some of this paste, and he would undoubtedly be vexed to find that it is not obtainable. Suppose it were obtainable, however, the next question is: What is it? Can anybody make it? If so, what are the exact ingredients, and how is it made?"

The letter bears the date of Feb. 28, 1911.—Editor.]

Correspondence

A Thirty-Day Rhythm in Apoplexy

To the Editor:—In The Journal for February 3, p. 330, there appears an article under the catchy title given above. The first paragraph of this article makes it clear that "that type of cerebral hemorrhage which we designate as apoplexy" is to be considered, and in several places further along in the article the fact that cerebral hemorrhage, not embolism or thrombosis (and not cerebral arteriosclerosis with arteriospasm), is the lesion the author is investigating.

From the notes of cases which Dr. Hurst offers, it appears very doubtful whether he was dealing with cases of cerebral hemorrhage at all. Before it becomes profitable to draw on the imagination for the evolution of a theory to explain a fact, the existence of the fact has to be established, and in this first requirement the author of the above article sadly fails. The case notes he offers in proof of his diagnosis are very inadequate to satisfy a reader of the correctness of such diagnosis.

For example, Case 1, a woman over 90 had an indefinite number of attacks of what are assumed to have been cerebral hemorrhage; in twenty-one months that she is under Dr. Hurst's care she has ten of them, some very severe, and yet lives to tell the tale. No symptoms were cited in proof of the nature of the "attacks." Must we accept this as a case of repeated cerebral hemorrhage? Patients 2, 3 and 5 make out no better cases for the diagnosis of cerebral hemorrhage than this first one. Patient 4 might have had a hemorrhage —probably did—and does not show any rhythmic periodicity of attacks, for he had only one. He is classed here, I suppose, because "the nurse notes that there have been periods recurring every month or every two months in which the patient was less well, was restless and irritable."

Of the five cases that we are asked to consider as cases of cerebral hemorrhage, four, or 80 per cent., had multiple attacks within two years, while Starr, among 200 cases of apoplexy including embolism and thrombosis, which show much more often repeated attacks than hemorrhage, had only twenty-two cases, or 11 per cent., with more than one attack.

Were it necessary to analyze this article further in order to show its misleading statements many more holes could be punched in it, but I do not think it necessary to occupy space with a consideration of "theories," "treatment," etc., for, the giant being shown to be a windmill, what need of the valiant knight?

M. Schulman, New York.

[The above was referred to Dr. Hurst, who replies:]

To the Editor:—Dr. Schulman's criticism of my article affords me the opportunity to explain the necessity for some omissions which have been, here and there, misunderstood. Space in The Journal is far too precious to be trespassed on lightly; for that reason my article, at the first writing some four times as long, was stripped to the barest essentials necessary to report the observations. These observations on apoplexy were limited by the title to the subdivisions of etiology and treatment. Dr. Schulman's letter deals mainly with the subdivision of diagnosis, a matter I designedly excluded. The criticism can probably be answered most satisfactorily to Dr. Schulman by naming some of the symptoms which were considered as justifying a diagnosis of apoplexy. In the case he cites at length (Case 1 in the article), the patient was unconscious, the face cyanosed, respiration stertorous, left arm and leg flaccid, pupils dilated and irresponsive to light, conjugate deviation of head and eyes to the right, cheek flapping with respiration, pulse slow and full, and twenty-four hours later she had but partially regained consciousness. There was not a word of this in my article, and in its absence it is entirely legitimate for my critic to satisfy himself as to the symptoms that would lead me to arrive at a diagnosis of apoplexy. The responsibilities imposed by the practice of medicine are far too grave to justify us in accepting anyone's unsupported word. In this spirit I welcome the criticism.

Dealing seriatim with some of his other points:

1. The "catchy title" was given by the manuscript editor in The Journal office. I am grateful for the selection of a title infinitely more suitable than my own choice.

2. The phrase "that type of cerebral hemorrhage which we designate apoplexy" was used to exclude matters not germane to the subject, such, for instance, as hemorrhage from traumatism.

3. "Embolism and thrombosis" (presuming that Dr. Schulman means by the latter "arterial thrombosis" and does not confuse it with sinus or venous thrombosis) are in many cases notoriously difficult of diagnosis from cerebral hemorrhage before the post-mortem. Even then, in many cases, they are found to coexist and to be so interwoven as to seem rather fortuitous differences of degree than of kind. Dr. Schulman will recall that cerebral hemorrhage is frequently the result of aneurysm, which itself may be due to embolism or to endarteritis; and that endarteritis is often the precursor of thrombosis.

4. "Cerebral arteriosclerosis with arteriospasm" by influencing blood-pressure may predispose to cerebral hemorrhage, and in such cases must, of course, coexist with it. I wish to make the point that while embolism, arterial thrombosis, or arteriosclerosis with arteriospasm may have existed in the cases I quote (only post-mortem examination can prove that they did not), such existence would not exclude or vitiate by one iota the diagnosis made.

5. For reasons given above "no proof of diagnosis" was offered; matters not offered at all are naturally "inadequately offered."

6. Case 4 was "classed here," not because "the nurse notes, etc.," but because (all available evidence sustaining the diagnosis made by the family physician), the series of blood-pressure readings taken during the period the patient was under my care showed, as stated in the article, the rhythmic variations which were being reported.

7. "Eighty per cent. had multiple attacks." My critic makes an error here. It has escaped his attention that seven cases are mentioned, not five. On second thought he will probably agree that it would be the height of folly to attempt to calculate a percentage rate from seven cases. In general, I may add that, given a certain diseased condition (such as we are considering here) all degrees, from the symptomless minute hemorrhage discovered post mortem, to the most severe, can and do exist; that with increasingly accurate methods of investigation (blood-pressure apparatus, for example) lesser grades which formerly escaped attention are now searched for and found.

It is the unwritten law of our profession that observations seeming to promise any aid in our battle with disease be promptly made common property, rough-hewn and incomplete though they be. If "holes can be punched in" the article, all the more reason for publishing it, so that men with more time, means and ability may weigh it, elaborate it, and correct it to the perfection of truth, which in medicine, as in other sciences, we often see but "dimly, as through a veil." As to the simile of the giant, the windmill and the valiant knight, may I remind the valiant knight who has deigned to couch a lance at my small windmill that on the plain of Monteil, also, it was the knight who was in error; the constructor of the windmill was never accused of mistaking it for a giant.

Julius Harold Hurst, Montecito, Cal.

Abnormal Treatment in Normal Labor

To the Editor:—I think no article has appeared in The Journal in a year that has done so much good as the one on "The Management of Normal Labor." When I first saw the article, I did not read it, believing it to be a well-selected cull from approved text-books, but when I noticed the subsequent criticisms, I did as thousands of other physicians have done—read it all—and was benefited. It is an article that provokes discussion and brings out clinical facts from personal experience. Perhaps the best way to manage normal labor is to let it alone, but you cannot hold down a job and do that; yet, meddling and continually doing something is as dangerous as a safety razor. Shaving genitals is on the border line of malpractice. I wonder if any physician ever did shave the genital organs and put them in even a relatively aseptic condition? How infrequently do we see even the pubes and vulva shaved without capillary oozing! If there is no oozing, examination with a glass shows sebaceous glands torn open, the epithelium scraped off and the papillary layer in the most favorable condition for infection. Then look at the bayonet bristles that result from cutting off the hair; they will set some patients wild and make all feel uncomfortable, while the constant prickling sets up an ideal dermatitis, favoring infection.

I can scarcely imagine a doctor or nurse shaving the hair from the folds and the anus of any nervous woman in labor with a congested vulva, especially if she is fat.

I would like to see a doctor go into a rural district, or into the factory wards in which there are five or six neighbor women and, perhaps, the mother of the patient—all mothers of large families of children—and watch the doctor strip his patient and go at her with soap and scrub-brush, lather and razor. I want him to be a doctor that has "done" me at some time, so that I do not feel too quick a call of professional duty in pulling him from under.

It is not the hairy or woolly animals, or women, that have puerperal fever. The majority of healthy mothers are those who would not know a vaginal syringe from an atomizer. I feel sure that shaving the genitals of women who are confined would raise the number of infected cases 50 per cent.

In twenty-three years' practice in one city of 8,000 inhabitants, with a thickly settled surrounding country, I have seen but three deaths from infection following normal labor.

J. H. Guinn, Arkansas City, Kan.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

BEEBE'S SERUM IN EXOPHTHALMIC GOITER

To the Editor:—1. Please inform me where I can obtain information concerning the serum used in the treatment of exophthalmic goiter, known, I believe, as the B. B. serum. 2. Is it to be considered as a substitute for operation in some cases? W. K. R.

Answer.—1. The serum concerning which our correspondent inquires is probably what is known as the Beebe serum, which can at present be obtained only from Dr. S. P. Beebe, Loomis Laboratory, 414 East 26th St., New York. Dr. Beebe states that several other men are now interested in making it, but that they have not progressed to a sufficient point to be able to furnish the serum except for their own use.

In applying for this serum it is necessary to give complete information in regard to the particular case under treatment. The use of the serum is being guarded in this way so that it shall be applied only in suitable cases. This point is discussed in the Department of Queries and Minor Notes in The Journal, July 9, 1910, p. 143, and Nov. 12, 1910, p. 1750. These items refer to original articles describing the serum, for example, Feb. 17 and Sept. 1, 1906, and Oct. 5, 1907. Later articles were in the *Archives of Internal Medicine*, November, 1908, and *Annals of Surgery*, December, 1909, and February, 1910.

2. On this point, Dr. Beebe says: "For some cases the serum may be considered a substitute for operation. It must be used in the right type of case and in the right way. More than two thousand patients have been treated with serum; and the results show that 50 per cent. of these patients can be restored to normal health without resorting to operation."

THE PROGNOSIS IN LOW HEMOGLOBIN CONTENT—TALLQVIST'S HEMOGLOBIN SCALE-BOOK

To the Editor:—To decide a controversy, please answer to the following: 1. Can recovery take place after the hemoglobin content of the blood falls to 10 per cent. or lower?

2. Is Tallqvist's hemoglobin scale-book of practical value? Two of us hold that recovery is not possible after the hemoglobin falls to 10 per cent. or below and that, in fact, 10 per cent. hemoglobin is practically a myth. Two of us hold the opposite. We are also divided regarding the scale, two holding it to be only a toy and two that it is of great benefit in diagnosis and to all practical purposes correct enough.

3. We cannot find anything in the literature we have at hand as to these matters and will greatly appreciate your assistance. Please also refer me to the literature on the subject.

W. P. Barron, Carmona, Tex.

Answer.—1. There are a number of reports on hemoglobin estimations in which the hemoglobin is recorded as being as low as 10 per cent. As these cases are not spoken of as being fatal, it seems quite possible that recovery may ensue in simple anemia (chlorosis) after a reduction of the hemoglobin to that percentage. A percentage of 16 appears to be not unusual. In pernicious anemia even, a remission with a return of the blood-picture to a practically normal condition may occur after the hemoglobin has reached a point as low as 25 per cent.

2. Tallqvist's hemoglobin scale-book is regarded as sufficiently accurate for ordinary clinical purposes.

3. We find no literature especially devoted to the subject but reference may be made to Hare's "Practice of Medicine," second edition, p. 775; also to Cabot's "Clinical Examination of the Blood," fifth edition, p. 150.

LITERATURE ON TYPHOID SERUM

To the Editor:—Oct. 21, 1911, you gave a list of references to the serum treatment of typhoid. Please favor me with a list of literature dealing with this subject from a strictly experimental and bacteriologic standpoint. A. J., Philadelphia.

Answer.—By reference to the issue of Oct. 21, 1911, p. 1387, it will be seen that twenty-five articles on this subject were published in 1910 and 1911. The experimental work on which this method of treatment is based was begun more than fifteen years ago, the first preventive inoculations having been made in 1896 and 1897, and it is evident that to give a full bibliography of this subject would require more space than The Journal can afford. We must ask our correspondent, therefore, to look up the matter in the *Guide to Current Medical Literature* or in the *Index Medicus.*

THE VACUUM BOTTLE AS AN INCUBATOR

To the Editor:—I read with pleasure the articles in The Journal of Dr. J. H. Schrup (Jan. 27, 1912, p. 273) and of Dr. H. S. Satterlee (March 2, 1912, p. 632), for their work merely corroborated some views that I had already published.

In *Ophthalmology*, July, 1911, I published an article entitled "Simple Bacteriologic Examination of the Conjunctival Sac," in which I said:

"For physicians who have no laboratory at their disposal, I can recommend the following as a substitute for the bacteriologic incubator: Fill a quart vacuum bottle with water at 40 C. and allow it to stand for several minutes. Then pour out half of the water and suspend the culture tube in the bottle with a wire attached to the under side of the cork. In twenty-four hours the temperature will not have fallen more than 4 C., and there is enough air above the water to supply the needs of the organism."

Harry S. Gradle, Chicago.

To the Editor:—In the January 27 and March 2 issues of The Journal, I read the articles, "A Practical, Easy and Cheap Method of Incubation," by J. H. Schrup, and "The Vacuum Bottle as an Incubator," by Henry S. Satterlee. I beg to state that the idea of using the vacuum principle in incubating cultures was not new to me. In fact, I have been experimenting with it for about two years and have succeeded in making a much more perfect apparatus than those described. I use an air-chamber for the culture tubes surrounded by a water-jacket, and this in turn inclosed within the vacuum container, thus doing away with immersion of the culture tubes in water; also preventing accidents to the cultures and eliminating excessive moisture.

John B. Donaldson, Lorain, Ohio.

[Comment: This use of the vacuum bottle seems so natural that it is not surprising that many have thought of it independently.—Ed.]

PERICOLITIS

To the Editor:—Please publish in your query column the literature bearing on pericolitis, more especially those authors who first pointed out this pathologic condition. J. E. K.

Answer.—The term "pericolitis" is applied to two conditions, one affecting the ascending colon and connected with perityphlitis and the other affecting the descending colon and the sigmoid. The latter was first discussed under the name of "sigmoiditis" but the term "pericolitis" appears as applied to it in the year 1905. There is a reference to an article on pericolitis in 1889. The following articles on this subject may be referred to:

Windscheid, F.: Drei Fälle von Pericolitis, *Deutsch. Arch. f. klin. Med.*, 1889, xlv, 233.
Tavel, E.: Péricolite cicatricielle postappendiculaire, *Rev. méd. de la Suisse Rom.*, 1904, xxiv, 5.
Rolleston, H. D.: Pericolitis Sinistra, Tr. Med. Soc., 1905, xxviii, 230; Pericolitis Sinistra, The Journal, May 27, 1905, p. 1689.
Buettner, O.: Un cas de péricolite; laparotomie; guérison, *Rev. méd. de la Suisse Rom.*, 1905, xxv, 132.
Potherat, E.: De la péricolite adhésive, sténosante, *Bull. et mém. Soc. de chir. de Paris*, 1906, New Series, xxxii, 609.
Sieur: Péricolite adhésive chronique; étranglement aigu de l'angle duodéno-jéjunal, *Bull. et mém. Soc. de chir. de Paris*, 1906, New Series, xxxii, 625.
Power, D'A.: The Causes, Sequelæ and Treatment of Pericolic Inflammation, *Brit. Med. Jour.*, 1906, ii, 1171.
Walker, H.: Neglected Constipation and Pericolic Inflammation, *Brit. Med. Jour.*, 1907, i, 198.
Kidd, F. S.: Hyperplastic Tuberculous Pericolitis, *Lancet*, Lond., Jan. 5, 1907; abstr. in The Journal, Feb. 2, 1907, p. 457.
Donaldson, R.: Pericolitis Sinistra with Abscess Formation; Recovery, *Brit. Med. Jour.*, Dec. 14, 1908; abstr. in The Journal, Jan. 11, 1908, p. 158.
Mantle, A.: Mucous Colitis and Its Relationship to Appendicitis and Pericolitis, *Brit. Med. Jour.*, July 11, 1908; abstr. in The Journal, Aug. 8, 1908, p. 535.
Jackson, J. N.: Pericolitis, The Journal, Jan. 30, 1909, p. 414.
Bittorf, A.: Pericolitis, *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, xx, No. 1, 1909; abstr. in The Journal, May 15, 1909, p. 1631.
Jackson, J. N.: Membranous Pericolitis, *Surg., Gynec. and Obst.*, September, 1909.
Duval, P.: Membranous Pericolitis, *Arch. d. mal. de l'App. Digestif*, May, 1910; abstr. in The Journal, July 23, 1910, p. 355.
Robitshek, E. C.: Membranous Pericolitis, *Jour. Minn. State Med. Assn. and Northwest. Lancet*, September, 1910.
Kennedy, J. P.: Membranous Pericolitis, *Dominion Med. Month.*, May, 1911.
Connell, G. F.: Ileocecal Adhesions, The Journal, July 22, 1911, p. 314.
Crossen, H. S.: Membranous Pericolitis, *Surg., Gynec. and Obst.*, July, 1911; abstr. in The Journal, Aug. 5, 1911, p. 512.
Gerster, A. G.: Chronic Colitis and Pericolitis, *Ann. Surg.*, September, 1911.
Andersen, K.: Pericolitis, *Norsk. Mag. f. Lægevidensk.*, December, 1911; abstr. in The Journal, Jan. 6, 1912, p. 74.
Pilcher, L. S.: Surgical Aspects of Membranous Pericolitis, *Ann. Surg.*, January, 1912; abstr in The Journal, Feb. 17, 1912, p. 513.
Cotte, G.: Membranous Pericolitis, *Lyon Chir.*, January, 1912.

VALUE OF THE COMPLEMENT-FIXATION TEST IN GONORRHEA

To the Editor:—Of what value, in general, is the complement-fixation test of the blood in gonorrhea? What is its value in a patient infected four years ago and at present supposedly cured? Is one justified in excluding gonorrhea if this test be negative? J. H. B.

Answer.—The complement-fixation test is, theoretically, applicable to any infectious disease. Practically, however, the results are not equally satisfactory in all infections, owing, probably, to variations in the different strains of antigen employed in any given test. The value of this test, as applied to gonorrheal infections, is almost the same as in syphilitic invasions. In other words, if every technical precaution is observed, a positive reaction indicates a focus of active gonorrheal infection somewhere in the system, while a negative result does not exclude this condition. The possibilities of variations in the strains of gonococci from which the antigens are prepared are so great that any given case, even though clinically gonorrheal, may not react positively to this test. It is, therefore, customary to employ polyvalent antigens. It is self-evident that cases of acute gonorrhea will not show a positive result until sufficient time has elapsed to permit of absorption of enough toxin to cause a systemic response to invasion, as shown by the presence of antibodies of various types in the serum. In the subacute or chronic cases the chances of positive results are greatly increased, the percentage of positive results being about as high as in syphilitic infections.

"In a patient infected four years ago and at present supposedly cured," a positive result would indicate the presence of a focus somewhere in the system of such active infection that transmission of specific infection would be more than probable, although it must be granted that the gonorrheal antibodies might persist for some time after the invading gonococci were dead.

With our present technic and knowledge, a negative complement-fixation test cannot justify, in any way, the exclusion of gonorrhea, as in many of our typical known gonorrheal cases the reaction is negative to this test. Further researches must be relied on to show why this is so and to formulate methods on which may be based more definite statements as to the presence or absence of gonorrheal infection in any given case.

MERCURIC CHLORID POISONING

To the Editor:—I am in attendance on a case in which a woman inserted a 7⅓ gr. bichlorid tablet in the vagina, causing mercurial poisoning. I reached the patient about ten hours after the accident and am of the opinion that most of the tablet was absorbed. This happened in June, 1911. I am anxious to learn what prognosis to make in this case for a complete recovery.

Adolph O. Aaker, Velva, N. D.

Answer.—It is impossible to advise as to what prognosis might be made in this case, for the reason that our correspondent has not even hinted at the present condition of the patient. The following articles on mercurial poisoning might be helpful:

Herzstein, M., and Baer, S.: Case of Acute Mercurial Poisoning Followed by General Necrosis of Maxillary Bones and Purulent Otitis Media, The Journal, this issue, p. 854.
Mabbott, J. M.: Mercuric Chlorid Poisoning Associated with Secondary Hemorrhage from Vaginal Douche Given Seven Days After Delivery, The Journal, Aug. 5, 1911, p. 448.
Lankford, Burnley: A Peculiar Case of Mercurial Poisoning, The Journal, April 9, 1910, p. 1203.
Sharp, W. H.: The Careless and Criminal Use of the Mercuric Chlorid Tablet, The Journal, April 30, 1910, p. 1459.
Patek, Arthur J.: Poisoning by Mercuric Chlorid Through Vaginal Douches, The Journal, June 4, 1910, p. 1867.
Poisoning by Sublimate Tablets (Editorial), The Journal, June 4, 1910, p. 1877.
Kurtz, A. D.: Another Case of Poisoning with Mercuric Bichlorid, The Journal, June 18, 1910, p. 2056.

The Public Service

Medical Department, U. S. Army

Changes during the week ended March 16, 1912.

Harmon, Daniel W., lieut., March 2, granted thirty days' leave.

Humphreys, Harry G., captain, March 9, relieved from treatment, Army and Navy General Hospital, Hot Springs, Ark., and will return to station.

Phalen, James M., captain, March 12, is detailed to attend the annual meeting, Medical Society of New York, to be held at Albany, April 16 to 18, 1912, and to present a paper on "Tropical Medicine."

Waring, John B. H., lieut., March 13, ordered to report to Lieut. Col. James D. Glennan, Medical Corps, president examining board, Lettermann General Hospital, San Francisco, for examination to determine his fitness for promotion.

Bailey, Howard H., captain, March 9, granted thirty days' leave.

Jackson, Thomas W., M.R.C., March 13, ordered to Walter Reed General Hospital, Takoma Park, D. C., for observation and treatment.

Stallman, George E., dental surgeon, March 10, returned to Fort Sam Houston, Tex., from duty at Fort Logan H. Roots, Ark.

Leary, Thomas J., lieut., March 11, resignation accepted, to take effect March 15, 1912.

Wright, Frederick S., lieut., March 11, on arrival at San Francisco will proceed to Fort Sam Houston, Tex., instead of Fort Adams, R. I., as heretofore ordered.

Wheate, J. Marchal, M.R.C., March 1, granted thirty days' leave.

Medical Corps, U. S. Navy

Changes for the week ended March 16, 1912.

Cuthbertson, Roy, asst. surgeon, detached from the *West Virginia* and ordered to the *St. Louis*.

Bogert, E. S., surgeon, detached from command of the naval hospital, Yokohama, Japan, and ordered home to await orders.

Shipp, E. M., surgeon, detached from the naval hospital, Washington, D. C., and ordered to command the naval hospital, Yokohama, Japan.

Dodge, A. H., P. A. surgeon, commissioned passed assistant surgeon from Oct. 3, 1911.

Hoen, W. S., P. A. surgeon, detached from the *Idaho* and ordered home to await orders.

Murphy, J. F., P. A. surgeon, ordered to the *Idaho*.

U. S. Public Health and Marine-Hospital Service

Changes for the two weeks ended March 13, 1912.

Cofer, L. E., asst. surgeon general, directed to proceed to Cape Charles quarantine to make an inspection of the service and for conference relative to disposition of the hulk *Jamestown*.

White, J. H., surgeon, directed to proceed to Salina Cruz and Manzanillo, Mexico, and other ports on the Mexican and Central American coasts to make inspection of sanitary conditions, with reference to special precautions to prevent the introduction of yellow fever into the United States.

Eager, J. M., surgeon, granted one month's leave of absence from March 23, 1912.

Goldberger, Joseph, P. A. surgeon, detailed to address the New York Academy of Medicine, in New York, on typhus

Bahrenburg, L. P. H., P. A. surgeon, relieved from duty at Ellis Island, N. Y., and directed to proceed to Galveston, Tex., for duty in connection with the examination of arriving aliens.

Warren, B. S., P. A. surgeon, relieved from duty at the Marine Hospital, St. Louis.

Ebersole, R. E., P. A. surgeon, relieved from temporary duty at Pensacola quarantine station and directed to proceed to Ellis Island, N. Y., and report to the chief medical officer for duty.

Salmon, Thomas W., P. A. surgeon, granted leave of absence, without pay, for the period April 18, 1912, to Dec. 31, 1913.

Krulish, E., P. A. surgeon, relieved from duty at Galveston, Tex., and directed to proceed to Washington, D. C., and report at bureau for conference with reference to duty in Alaska.

Warner, Harry J., asst. surgeon, directed to report at the bureau on Tuesday, March 26, 1912, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

Fauntleroy, C. M., asst. surgeon, directed to report to the bureau on Tuesday, March 26, 1912, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

Hough, J. S., A. A. surgeon, granted thirty days' leave of absence during the calendar year at times to be approved by Surgeon Brown.

Moncure, J. A., A. A. surgeon, granted thirty days' leave of absence from March 2, 1912.

Walker, T. D., A. A. surgeon, granted thirty days' leave of absence from Feb. 21, 1912, and seven days' leave of absence, without pay, from March 22, 1912.

Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

RECENT EDITORIAL VIEWS ON PUBLIC HEALTH QUESTIONS

The discussion of public health questions in the daily press goes merrily on, thanks in part to the opposition, but largely owing to a real interest on public health matters. Probably never before have such questions occupied so large a place in the public interest as to-day. The editorial comments are especially interesting as reflecting public opinion and showing the point of view of the layman. The Kansas City (Mo.) *Star* introduces an editorial discussion of hospitals with these general observations on physicians:

> "Doctors are constantly working to deprive themselves of jobs. Medical investigators in Cuba risked their lives to learn how to prevent yellow fever from developing. It is due to the researches of doctors that small-pox has been nearly stamped out in enlightened communities, that typhoid fever can now be prevented and that a successful war is being waged against tuberculosis.
>
> "The public spirit of the profession is illustrated strikingly in another way. The discovery of every doctor or medical investigator is given to the world. A man who invents a patent hairpin may get rich out of his invention. But if a doctor, after a lifetime of work, should devise a cure for tuberculosis he would not receive a penny for his discovery.
>
> "The high standard set by the medical profession suggests the possibility for progress in other lines of human endeavor. Suppose, for instance, that the legal profession should devote itself as single mindedly and earnestly to getting rid of litigation as the doctors have to banishing disease!"

The New York *World*, discussing the often-used reason for federal legislation, is not convinced thereby. It says:

> "It is an argument that never fails to startle when first heard. 'Why,' gasps the astonished listener, 'should a paternal government be more careful of pigs than of people'?
>
> "To those, indeed, that believe in governmental regulation of every movement of man from the cradle to the grave, the argument is a good one, for under such ceaseless supervision and domination there would soon be little difference between the brute and the human. Most men, however, prefer that there should be a difference. It is beneficial to mankind that each should have a large degree of liberty in looking after his own welfare."

Just how preventing the use of impure water, adulterated milk and poisonous food articles involves placing children on the level of the brute creation, the *World* does not explain. It continues:

> "Moreover, it should not be overlooked in the controversy that while administration experts are needed to guard the health of hogs that are being fed and fatted for slaughter, none is needed to look after a hog in the woods that is not to be slaughtered. While, therefore, supervision makes the most pork, freedom makes the healthier hog. In that one respect pigs and people are alike."

We are not informed where the *World* secured its figures on the morbidity and mortality rates among wild hogs or on what authority it assumes that the wild hog is healthier than the domestic animal. Apparently, it concludes that good health would in some way involve limited freedom, yet generally it is the sick and the crippled whose freedom is impaired, and the well who are free.

A cheerfully optimistic paper is the Atchison (Kan.) *Globe*. Its editor positively refuses to become panic stricken over the awful dangers of "a doctor's trust." He says:

> "Someone somewhere is worrying about a measure before Congress which is pointed out as an effort to create a doctors' trust. Come from time to time pamphlets and periodicals setting forth the danger therein to our bulwarks and palladiums, and urging that the editorial shirt be torn in the interests of a free nation and independent colic cures and other helpful dope. . . .
>
> "Still, we belong to the Don't Worry Club, even unto the thirty-third degree, and this mighty menace of medical men excites us not at all . . . after reading the measure perfunctorily, we fail to see it that way. Also, another cause for complacency is the fact that this alleged trust is said to be forming by government assistance. . . . Since the government frowns on trusts, except those of its own, such as the postage stamp industry, that is another occasion for relief.
>
> "Also, this matter of drug regulation may need to be a bit more stringent. Most of the doctors we know are honorable men, even if their pills and powders fail to give the desired results occasionally or oftener. And they are pretty apt to know more of their business than the rank outsider; they might even be more reliable in regulating the manufacture and sale of dope of one kind and another than one whose favorite remedies are bag-punching, back rubbing or holding the thought. And there isn't going to be any law that we can see from this distance which will prevent people going after health in the manner which seems to them most desirable and likely to get results. If there is any such intention in the amendment aforementioned, it should get both barrels from Congress, and probably will; even if passed it would be repealed, for there are plenty of people who fail to agree with the doctors, who don't even agree very well among themselves.
>
> "About all we are sure of is that the pamphleteers engaged by the opposition haven't made their case clear, and that their articles are too long and uninteresting, and that the place to bust the trusts, if trusts there be, is in the realm of reason known as the supreme court."

This line of argument is commended to our excited sectarian friends. If there is a doctor's trust, why not hale it into court and "bust it"? If the Owen bill interferes with personal liberty, isn't the United States supreme court a pretty good place to prove this? Certainly it won't last long if it is everything it is charged with being.

In the New York *Sun* for February 8 appeared an excellent editorial on a federal department of health. To this a reader took exception, asserting that the proposition for such a department was inspired by "political doctors." To which the *Sun* replies:

> "To the boards of health that are 'political' appointees the people owe their education; these men issue bulletins to teach the people how to maintain their health, and they do it with the connivance of the honorable doctors whom they seem to dupe into acquiescence in measures which actually 'take the bread out of their own mouths,' that people like our correspondent may keep out of their clutches. Witness the edifying spectacle now before the public of the New York Board of Health begging the Tammany representatives of the educated people three times for a paltry appropriation to prevent the spread of small-pox, which if unrestrained would bring to the doctors, honorable and dishonorable, more fees than would all the splitting of fees for a century. No wonder this cor-

respondent characterizes the honorable doctors as innocent and confiding (synonym: simple, idiotic), for such examples of altruism do not exist among any other class of citizens."

Just one more quotation, this time from the Cynthiana (Ky.) *Log Cabin.* After discussing the recent attack in the state legislature on the Kentucky State Board of Health, the editor proceeds to formulate his creed in no uncertain terms:

"In our opinion, any physician opposed to vaccination is fifty years behind the times. In our opinion every physician who presumes to treat diseases should be able to meet the requirements of the State Board of Health. There are so many medical colleges in the country that a diploma has a very indefinite meaning. Even lawyers and school teachers, no matter what diplomas they hold, must undergo an examination to determine their qualifications before they can practice or teach. And it is very much more important that the people have some slight protection against the medical incompetents and the fakers. The physician who is qualified will not object to the reasonable requirements of the State Board of Health, and those who cannot meet those requirements are a menace and ought not to be allowed to attempt to practice medicine. In our opinion there is no class of men who do more unselfish labor, without reward, than the medical profession. . . . Many people will doubtless be misled by the insinuating and indefinite harangues of the 'League for Medical Freedom,' but we are very sure that every legislator and every citizen is doing his state a splendid service when he upholds the state board in every effort to secure pure foods, pure milk, healthy cattle, and to keep the quacks and the incompetents out of the medical profession."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

General Subject for the Month: Gastro-Enteric Diseases of Infancy and Childhood

Eighth Month—First Weekly Meeting

DIGESTION IN INFANCY AND CHILDHOOD

STOMACH, ANATOMY AND PHYSIOLOGY[1]

Shape, size position, musculature, at birth, at one year. Capacity, by months, up to one year. Gastric juice; constituents, reaction. Changes occurring in human milk, in cow's milk, duration of gastric digestion. Bactericidal action of gastric juice. Elements absorbed from stomach.

INTESTINE, ANATOMY AND PHYSIOLOGY

Size, length, position (a) of small intestine, (b) of large intestine.

INTESTINAL DIGESTION: Changes in proteids,[2] active agent. Carbohydrates at birth, six and twelve months. Changes in fats. Action of bile, of succus entericus. Elements, proportion of each, absorbed from small intestine. Absorption from large intestine.

INTESTINAL BACTERIA: *Bacterium lactis aerogenes, Bacillus coli communis:* effect of each.

FECES:[3] Color, consistency, odor, reaction, composition (a) of meconium, (b) milk feces.

ACUTE GASTRIC INDIGESTION

CAUSES: Improper diet in quality and quantity, changes in diet, weaning. Depressing conditions, heat, cold, dentition, onset of acute infections.

SYMPTOMS: Food stagnation, vomiting, pain, depression, stupor, temperature, weak, rapid pulse, diarrhea. Usual course. Prognosis.

TREATMENT: (a) Empty stomach, (b) secure rest to it. Stomach washing. Dietetics. Medicinal treatment.

REFERENCE BOOKS FOR THE EIGHTH MONTH

Holt: Diseases of Infancy and Childhood.
Rotch: Pediatrics.
Koplik: Diseases of Infancy and Childhood.
Starr: American Text book of Diseases of Children.
Chapin and Pisek: Diseases of Children.
Taylor and Wells: Diseases of Children.
Pfaundler and Schlossman: Diseases of Children.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, April 1-2. Sec., Dr. Ancil Martin.

CALIFORNIA: San Francisco, April 2. Sec., Dr. Charles L. Tisdale, 929 Butler Building.

COLORADO: State Capitol, Denver, April 2. Sec., Dr. David A. Strickler, 612 Empire Building.

IDAHO: Boise, April 2-3. Sec., Dr. O. J. Allen, Bellevue.

ILLINOIS: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

MINNESOTA: State University, Minneapolis, April 2. Sec., Dr. W. S. Fullerton, 248 Lowry Building, St. Paul.

MONTANA: The Capitol, Helena, April 3. Sec., Dr. W. C. Riddell.

NEW MEXICO: Santa Fé, April 8-9. Sec., Dr. J. A. Massie.

OKLAHOMA: Oklahoma City, April 9-11. Sec., Dr. John W. Duke, Guthrie.

RHODE ISLAND: Room 315, State House, Providence, April 4-5. Sec., Dr. Gardner T. Swarts, State House.

UTAH: County Building, Salt Lake City, April 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.

WEST VIRGINIA: Parkersburg, W. Va., April 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

Nebraska and South Dakota Reciprocate

Dr. C. P. Fall, secretary of the Nebraska State Board of Health, states that reciprocal relations have been established between Nebraska and South Dakota on the basis of an examination only.

Missouri September Report

Dr. Frank B. Hiller, secretary of the Missouri State Board of Health, reports the written examination held at Kansas City, September 25-27, 1911. The number of subjects examined in was 14; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 53, of whom 36 passed and 17 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Northwestern University Medical School	(1911)	89.7
Rush Medical College	(1911)	83.3, 86.4
Illinois Medical College	(1910)	80
University of Kansas	(1911)	89.3
Kansas Medical College	(1911)	82.9
University of Louisville	(1910) 75.4; (1911)	75.7
Johns Hopkins University	(1904) 89.4; (1910)	87.8
Barnes Medical College	(1898) 77.2; (1909) 75.6; (1911)	75.6, 79.8, 82.5.
St. Louis University	(1907)	75.6
St. Louis Coll. of P. and S.	(1910) 76.1, (1911)	75
Kansas City Hahnemann Medical College	(1910) 80.8; (1911)	75.8, 75.8, 76.1.
Ensworth Medical College	(1903) 81; (1910)	75.3
University Medical College, Kansas City	((1908) 76.1; (1910) 75.9; (1911)	75.5, 76.1, 78.5, 81.8, 82.5.
Washington University, St. Louis	(1911)	80.4
American Medical College	(1910) 76.8; (1911)	82.2
University of Pennsylvania	(1911)	88.1
Meharry Medical College	(1911)	76.1
FAILED		
University of Louisville	(1909) 67.4; (1910)	66.8
Kentucky School of Medicine	(1907)	46.3
Barnes Medical College	(1908) 53.3; (1910) 67.1; (1911)	67.6, 68.4, 70.1.
St. Louis College of Physicians and Surgeons	(1911)	50.3, 63.7, 65.3, 66.3, 67.3.
Ensworth Medical College	(1909) 45.3; (1911)	67.6
University Medical College, Kansas City	(1911)	54.4
Creighton Medical College	(1911)	67.3

Texas November Report

Dr. J. D. Mitchell, secretary of the Texas State Board of Medical Examiners, reports the written examination held at Fort Worth, Nov. 14-16, 1911. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 27, of whom 23 passed, including one osteopath, and 4 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Atlanta College of Physicians and Surgeons	(1905)	84
Chicago College of Medicine and Surgery	(1911)	84, 85
Hospital College of Medicine, Louisville	(1901) 79; (1905)	75
University of Louisville	(1911)	75, 76
Tulane University of Louisiana	(1910)	82
Tufts College Medical School	(1910)	87
St. Louis Medical College	(1875)	75
Columbia University, College of Phys. and Surgs.	(1909)	84

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[1] Progressive Medicine, March, 1907.

[2] Alexander and Bullowa: Archives of Pediatrics, January, 1910. Alexander and Bullowa: THE JOURNAL A. M. A., Oct. 1, 1910.

[3] Morse: New Orleans Med. and Surgical Jour., August, 1910. Talbot: Boston Medical and Surgical Journal, Feb. 3, 1910.

University of Pennsylvania	(1908)	89
University of Nashville	(1911)	75
Vanderbilt University	(1911)	79
Fort Worth University	(1910) 83; (1911)	80
University of Texas	(1910) 86; (1911)	86
Southwestern University Med. College	(1910) 82; (1911)	80
Baylor University	(1911)	78
National Medical School, Mexico City	(1901)	75
FAILED		
University of Louisville	(1910)	69
Memphis Hospital Medical College	(1907) 63.2; (1911)	74.7
University of Nashville	(1908)	75.5

Colorado January Report

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written and oral examination held at Denver, Jan. 2, 1912. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 8, all of whom passed. Twenty-one candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Colorado	(1911)	79.9, 84, 84.7, 85.9, 89.4.
Chicago College of Medicine and Surgery	(1910)	91.2
Medico-Chirurgical College of Kansas City	(1904)	79
Syrian Protestant College	(1911)	83

LICENSED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	State Licenses
University of Colorado	(1909) (1911)	Idaho
Northwestern University Medical School	(1910)	Illinois
Yale University	(1897)	Connecticut
American Medical Missionary College	(1901)	Illinois
Hering Medical College	(1899)	Kansas
Rush Medical College	(1886)	Illinois
Keokuk Medical College, Coll. of Phys. and Surgs.	(1905)	Iowa
Kentucky University	(1906)	Penna.
Hospital College of Medicine, Louisville	(1903)	Indiana
Tulane University of Louisiana	(1908)	Louisiana
Tufts College Medical School	(1897)	New York
University of Michigan, Dept. of Med. and Surg.	(1899)	Illinois
University of Minnesota, College of Medicine	(1902)	Minnesota
University Medical College, Kansas City	(1910)	Missouri
Creighton Medical College	(1909)	Nebraska
Dartmouth Medical School	(1909)	New York
New York Med. College and Hospital for Women	(1899)	New York
Jefferson Medical College	(1906)	Wisconsin
University of Pennsylvania	(1905)	Penna.
University of Tennessee	(1907)	Tennessee

Washington January Report

Dr. F. P. Witter, secretary of the Washington State Board of Medical Examiners, reports the written examination held at Spokane, January 6, 1912. The number of subjects examined in was 11; total number of questions asked 110; percentage required to pass, 75, and not less than 60 in any one subject. The total number of candidates examined was 49, of whom 35 passed, including one osteopath, and 14 failed, including one osteopath. The following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined.
Denver and Gross College of Medicine	(1910)	1
George Washington University	(1909)	1
College of P. and S., Chicago	(1908) (1910) 1911)	3
Hering Medical College	(1911)	1
Rush Medical College	(1901)	1
Hahnemann Med. Coll. and Hospital, Chicago	(1905)	1
Northwestern University Medical School	(1910)	1
Keokuk Med. Coll., Coll. of P. and S.	(1904)	1
University of Louisville	(1900) (1910)	2
Johns Hopkins University	(1911)	2
College of P. and S., Baltimore	(1909)	1
University of Michigan, Homeopathic College	(1909)	1
University of Minnesota, College of Medicine and Surgery	(1898) (1899) (1900) (1911)	4
St. Louis University	(1910)	1
Washington University, St. Louis	(1898)	1
Cornell University Medical College	(1908)	1
University of Buffalo	(1897) (1910)	2
Columbia University, Coll. of P. and S.	(1894) (1905)	2
Ohio-Miami Medical College	(1910)	2
Cincinnati College of Medicine and Surgery	(1901)	1
University of Oregon	(1909)	1
Willamette University	(1911)	1
Woman's Medical College of Pennsylvania	(1909)	1
Trinity Medical College, Toronto, Ontario	(1903)	1
FAILED		
College of Physicians and Surgeons, Chicago	(1902)	1
Physio-Medical College of Indiana	(1898)	1
University of Louisville	(1908) (1911)	2
Kentucky School of Medicine	(1906)	1
Baltimore Medical College	(1910)	1
Univ. of Michigan, Dept. of Med. and Surg.	(1883)	1
Missouri Medical College	(1895)	1
Barnes Medical College	(1907)	1
Washington University	(1911)	1
Eclectic Medical College, Cincinnati	(1911)	1
University of Oregon	(1911)	1
University of Siena, Italy	(1909)	1

The following questions were asked:

ANATOMY

Answer 10: 1. Name the bones of the cranium. Give the anatomy of the inguinal region and the perineum. 2. Give the contents of the nine regions of the abdomen. 3. Give origin, course and distribution of sciatic nerve. 4. Name the branches of the aorta—ascending, arch and descending. Give course and distribution of the carotid. Give and describe the blood supply of the stomach and bowels. Describe the pulmonary artery. 5. Name the muscles of the abdomen and give origin and insertion. 6. Name and give relation of the important organs, vessels, nerves, muscles and structures of the neck. 7. Give origins and insertions of muscles of the shoulder. 8. Give muscular and tendinous attachments of patella. 9. Give the course of the external and internal saphenous veins. 10. Describe the portal circulation. 11. Describe the sympathetic nervous system. 12. Give anatomy of ear and mastoid and their relations.

HISTOLOGY

Answer 10: 1. Name and describe the membranes of the brain. 2. Describe the red blood-corpuscle and tell source of origin. 3. Give structure of human skin. 4. Describe the appearance of healthy adult liver as seen by the microscope. 5. Locate and give structure of Peyer's patches. 6. Name, describe and locate two types of epithelium. 7. Where are the nerve cells found? 8. Locate the thyroid gland and describe its structure. 9. Name the layers of the retina. 10. Name the varieties of muscle and state difference between them. 11. Describe non-medullated fibers and where occur. 12. Give histologic difference between the pyloric and cardiac end of stomach.

PHYSIOLOGY

Answer 10: 1. Name the principal groups of the normal constituents of the body and give illustrations of each. 2. What are carbohydrates, and what part do they take in the general metabolism? 3. What is the distinguishing element of (a) albuminous substances; (b) hydrocarbonaceous substances? 4. Why is an exclusive diet of (a) animal food not suited to man's needs? (b) vegetable substances? 5. Name the fluids secreted by the digestive apparatus. Where secreted, and reactions of each? 6. Describe the gastric juice, its action and the product of gastric digestion. 7. Describe the chyle, and how does it enter the general circulation? 8. Describe briefly the phenomena of the coagulation of the blood. 9. What are the solitary glandules? Where found? Their function? 10. Describe the iris and give its function. 11. Describe the composition of the blood and the functions of its component parts. 12. What is the physiologic significance of diabetes or sugar in the urine?

BACTERIOLOGY

Answer 10: 1. Define bacteria and classify them according to form, habitat and oxygen requirements, describing each classification and giving examples. 2. Discuss microbic association. Give examples. 3. What is the chemical nature or composition of bacteria? What is a pathogenic germ? Toxicogenic? 4. Tell what you can of lactic-acid fermentation—in the mouth, the stomach, in milk. Give its cause and the material acted on. 5. What is necessary to demonstrate the causal relation of a microorganism to a given disease? Give the four rules of Koch. 6. What are the water-borne diseases? How would you determine the presence of pathogenic bacteria in water? Distinguish between typhoid and colon bacilli. 7. A sample of sputum is brought to you. How would you determine the presence or absence of the tubercle bacillus? What is tuberculin? 8. What are toxins? Antitoxins? Distinguish between active and passive immunity. For what diseases are antitoxins known and used? 9. Tell all you can about diphtheria antitoxin. How is it made? How standardized? 10. Tell all you can about bubonic plague. 11. Describe Widal's reaction. 12. Give the principle for the Pasteur treatment for rabies.

CHEMISTRY

Answer 10: 1. What is urea? How would you determine the amount? 2. What degree Fahrenheit is 95 C.? 3. Write the formula of (a) baking soda, (b) lunar caustic, (c) cream of tartar, (d) chlorid of lime, (e) fire damp. 4. Give the chemical difference between calomel and corrosive sublimate. What is (a) water of crystallization, (b) efflorescence, (c) deliquescence? 6. What are proteids? (b) From what are they derived? (c) Name the chief proteids. 7. Describe H_2O; (b) its properties; (c) what is the purest natural H_2O? 8. Name the halogens. Give their symbols and atomic weights. 9. Describe the various allotropic forms of carbon. 10. What is meant by a volatile liquid? Name one and give its formula; (b) same question relative to a fixed liquid. 11. Define (a) calorie, (b) synthesis, (c) molecule, (d) fusing point, (e) osmosis. 12. Complete the following equations and write the name of each resulting compound under its formula:

$HgSO_4 + Hg + 2\,NaCl.$
$NaC_2H_3O_2 + NaOH.$
$As_2O_3 + 3\,H_2S.$

PATHOLOGY

Answer 10: 1. What are the characteristics of a growth which make one pronounce it malignant? What are the principal subdivisions of malignant growths and how do you distinguish them? 2. Give the pathologic appearance (macroscopic and microscopic) of the kidney of chronic interstitial nephritis and give the urinary findings. 3. Describe carefully the condition of the arteries in arteriosclerosis and describe how the heart is affected by it. 4. What is the pathologic condition in diabetes mellitus? 5. Describe carefully the appearance of the lung (macroscopic and microscopic) in acute lobar pneumonia. 6. Describe carefully the various steps in the formation of a tuberculous cavity in the lung. 7. What tissues are affected and in what manner are they affected in diphtheritic paralysis of the legs? 8. Describe the gross and minute appearance of the typical alcoholic liver. 9. Describe the lesions in acute cerebrospinal meningitis (epidemic form). 10.

Describe the pathologic conditions present in exophthalmic goiter. 11. Describe the tissues affected and give the microscopic appearance of the blood in pernicious anemia. 12. What tissues are affected in rheumatoid arthritis? Describe the joint lesion.

OBSTETRICS

Answer 10: 1. Name in order the things to be determined on visiting a patient supposed to be in labor. 2. Define the first, second and third stage of labor, and give the mechanism of breech presentation. 3. Give the definition of pseudocyesis and name other conditions from which to distinguish it, and give the differential diagnosis 4. What is eclampsia, its frequency, time of occurrence, and effect on mother and child? 5. Define premature labor and abortion, naming the most constant causes of each in order of importance and frequency. 6. Describe fully the obstetric forceps and cranioclast and name the indications for their use. 7. What do you understand by accidental concealed hemorrhage? Give the causes, symptoms and prognosis. 8. Define version, name the kinds and tell when indicated. 9. What is puerperal infection? Give a clinical picture of a case, including causes, symptoms and pathology. 10. Define hydatidiform mole and give symptoms, frequency, pathology and prognosis. 11. Name and describe four of the most common abnormalities of the female pelvis. 12. Name conditions occurring during labor which jeopardize the life of the child.

TOXICOLOGY

Answer 10: 1. Define a poison. Give methods in which they may be introduced into the organism. 2. Give classification of poisons. 3. Give effects, local and remote, of poisons in general and indicate the particular poisons that affect particular organs or structures. 4. What are ptomains? 5. Give symptoms of mushroom poisoning. 6. Name the poisonous gases most commonly met with and give their symptoms. 7. Give symptoms of poisoning by arsenic. Give symptoms of poisoning by phosphorus. 8. What diseases may follow from eating pork? Describe them. 9. Describe idiosyncrasy and tolerance and state what effect they may have on poisoning. 10. Does the habitual taking of poisonous drugs diminish the risk of the latent or insidious remote effects? 11. What is wood alcohol? How may it be recognized from grain alcohol? Describe symptoms of poisoning by same. 12. What is denatured alcohol? Is it a poison? In what kind of poisoning may a scarlatina-like rash appear?

GYNECOLOGY

Answer 10: 1. Give differential diagnosis between appendicitis and right-sided adnexal inflammation. 2. Name varieties of fibroids, most frequent location of each and diagnose from an unruptured ectopic gestation. 3. At what age does carcinoma of the cervix most frequently develop? Give prognosis, method of dissemination and differential diagnosis from cervical erosion. 4. Name varieties of menstrual abnormalities. Describe and give etiology of each. 5. How is the uterus normally protected from infection by pathogenic bacteria? 6. What is pelvic hematocele? For what is it most likely to be mistaken? Give etiology and symptomatology. 7. What is vaginismus? Bartholinitis? Pyosalpinx? Coccygodynia? Hematometra? 8. Give distinguishing symptoms between a four months' pregnancy, an uterine fibroid and an ovarian cyst. 9. Describe normal menstruation and the changes that take place in the endometrium at that time. 10. What is subinvolution? And what are its chief etiologic factors? 11. How would you distinguish between a case of amenorrhea, the menopause or a three and one-half months' pregnancy? 12. Give symptoms and diagnosis of gonorrhea in the female. Why is it so serious in the female? And what are its sequelæ?

GENERAL DIAGNOSIS

Answer 10: 1. Differential diagnosis of intracapsular fracture and dorsal dislocation of head of femur. 2. Give in detail tests to determine the cause of coma in a patient whose history is unobtainable. 3. Give the symptoms and physical signs of aortic insufficiency in the stage of failing compensation. 4. Give the association of physical signs—percussion, auscultation of respiration, vocal fremitus—in (a) solidification of pulmonary structure; (b) large cavity with elastic walls; (c) effusion into pleural sac. 5. Give and define four pathognomic symptoms of locomotor ataxia; how distinguish multiple neuritis from locomotor ataxia? 6. Define pemphigus; sycosis vulgaris; herpes zoster. A description of the eruption in each case is especially desired. 7. Causes and symptoms of decubital gangrene; how prevent? 8. Diagnose between tetanus, hysterical tetanus and strychnin poisoning. 9. In what lobe is almost always situated a cerebral abscess due to ear disease? 10. Give symptoms of cerebral abscess following empyema of the mastoid. 11. In abdominal operations it is frequently necessary that the large intestine be recognized with certainty or the small bowel be positively identified. Give differences. 12. How many forms of non-malignant stricture of the rectum? How far above the anus is a simple stricture usually situated?

HYGIENE

Answer 10: 1. Name the food principles and state in what proportion they form a balanced ration. Is there any one food which contains all the principles in the proper proportion? What is the effect of living on a single article of food? 2. What is the chief cause of high infantile mortality? Give directions for the proper care of milk at the time of milking and until it is fed to the child. Are preservatives in milk ever justifiable? Why? 3. Why are "patent medicines" dangerous? What is the effect of alcohol taken in large amounts (a) on the stomach; (b) on the liver; (c) on the susceptibility to disease; (d) on the capacity for work; (e) on the intellectual capacity? 4. What constitutes a safe and suitable drinking-water? What are the best methods of purifying a water-supply? 5. What are the best methods for the disposal of sewage? Garbage? 6. Give fully the hygienic measures for tuberculosis, both for the care of the patient and for the protection of others. 7. What are the best means for the disinfection of rooms? Clothing? Hands? Sputum? Excreta? Dishes? 8. What constitutes air suitable for breathing. What are the chief impurities of bad air and what are their effects? How much air space does the individual need? 9. Of the clothing fibers, which is best protection against sunlight? Against cold? Which is best for underclothing? For foot wear? Give reasons. 10. Discuss ventilation and heating of homes from standpoint of hygiene. 11. What are the requirements of a physician and others to prevent the spread of disease? 12. If you were a meat and food inspector, what requirements would you make of the dealers in these things? Give reasons.

Book Notices

DIE EXPERIMENTELLE BAKTERIOLOGIE UND DIE INFEKTIONSKRANKHEITEN MIT BESONDERER BERÜCKSICHTIGUNG DER IMMUNITÄTSLEHRE Von Dr. W. Kolle, Professor der Hygiene und Bakteriologie an der Universität und Dr. Hetsch, Medizinalabteilung des Kriegsministeriums in Berlin. Third Edition. Volumes I and II. Paper. Price, $8.50. Pp. 968, with 180 illustrations. New York: Rebman Co., 1911.

This book has reached its third edition since 1906, showing a substantial and merited popularity. Its scope is somewhat different from that of an ordinary text-book of the type familiar in this country, in that it is written in the form of lectures, of which there are fifty-nine, and the relation of bacteria to disease receives far more consideration than the properties, characteristics and biology of the bacteria themselves. It is eminently the sort of book which should be in the library of the progressive physician who reads German, and who wishes to have at hand an authoritative, reasonably extensive, yet readable account of the infectious diseases and the organisms which cause them. For the American physician, however, this publication is extremely defective because of its almost absolute neglect of all the work done in this country on the infectious diseases, which is neither inconsiderable nor unimportant. We had thought at first to list the serious omissions in this respect, until we found that it would be practically equivalent to a list of the entire American work on bacteriology, infectious diseases, and allied subjects. To be sure, there are a few casual references to Americans, Englishmen, and other non-Teutonic investigators, but for all practical purposes this book is a series of interesting, well-written lectures on German bacteriology. To mention glaring omissions: The discussion of the relation of bovine to human tuberculosis contains no mention of the extensive and fundamental observations of Theobald Smith; the leprosy bacillus is not known (by Kolle) to have been isolated in pure culture; blastomycetic infections are practically limited to the few comparatively insignificant reports by European observers; Flexner's masterly studies of meningococcus infections and anterior poliomyelitis are dismissed with a word; the plague studies in California are unknown—and so on to the end of the chapter. It is doubly unfortunate that this condition exists; on the German side, the advance of medical science is seriously delayed by chauvinistic ignorance, and for our part we must suffer because we have to rely for the best scientific literature on the superior enterprise of German publishing houses. We should like to have that literature include the good work of all nations and not merely that of German-speaking countries, however much this may surpass in amount the product of other lands.

MOVABLE KIDNEY, ITS ETIOLOGY, PATHOLOGY, DIAGNOSIS, SYMPTOMS AND TREATMENT. By William Billington, M.S. (Lond.), F.R.C.S., Senior Surgeon to Out-Patients, Queen's Hospital, Birmingham. Cloth. Price, 7 shillings 6 pence net. Pp. 167, with illustrations. New York: Cassel & Co., 1910.

The rôle played by the ordinary movable kidney in symptomatology has been variously regarded during the past few years, some writers attributing to it great importance, others asserting that it usually has little to do with the symptoms in the ordinary cases. The author of this little monograph has certainly "gone the limit" in assigning to movable kidney a causative influence in the production of all kinds of conditions. In fact, if there are any which escaped being included among the results of movable kidney, it would be hard to find them. The author says: "The symptoms of movable kidney are so diverse that their mere enumeration is of little practical value. So far as possible they will be grouped in such a way that those referable to a particular organ or system are considered together. Arranged in this way they can be described under six headings, according as they relate to: (1) the kidney and urine; (2) the sexual organs; (3) the digestive system; (4) the circulatory system; (5) the cerebrospinal nervous system; (6) the mind." Under these six headings are described almost every conceivable symptom, including pain of all kinds and varieties. Eight distinct points on the anterior surface of the body and nine on the posterior surface are mapped out as characteristic locations of kidney pain. Albumin and casts, it is said, are frequently found in the urine and may lead to an erroneous diagnosis of Bright's disease. Blood in the urine and pyuria may occur, the author believes, as a result of movable kidney and be cured by fixation of the kidney. Under female sexual disorders are found mentioned dysmenorrhea, profuse leukorrhea, endometritis, ovaritis, menorrhagia and metrorrhagia and even prolapse of the uterus. Under male sexual disorders are found the following: "aching pains in the testicles, frequent nocturnal emissions and delusions relating to the sexual organs may be caused by movable kidney." Under disorders of the digestive system are mentioned capricious appetite, flatulency, nausea and vomiting, constipation and diarrhea, dilatation of the stomach, gastric ulcer, mucous colitis, and affections of the appendix. Under disorders of the nervous system are found neurasthenia, headache, epilepsy, tachycardia and Raynaud's disease. Of disorders of the mind we find the following: loss of memory, mental confusion, mental depression, melancholia, suicidal tendencies, homicidal impulses, morbid fears and emotional disturbances.

It will thus be seen that almost any condition may be the result of movable kidneys (for the author believes that both kidneys are movable very commonly) and may be cured by fixing the kidneys. The author seems to have almost unlimited faith in the value of nephropexy in pelvic disorders. In this connection we find the following: "The writer has known of a case where at one sitting ventrofixation of the uterus, excision of the right ovary, appendectomy and right-sided nephropexy were performed! Such procedures savor of gross empiricism and are out of place in scientific surgery." But suppose a patient has a badly displaced uterus with adhesions of the appendix to the right ovary or tube; is it to be expected that fixing the kidney is going to cure all of these conditions? Or should these various operations be done one at a time, thus subjecting the patient to several operations instead of only one? It is a great deal more unscientific to think that fixing a movable kidney is going to cure all of these conditions than it is to do all that is necessary at one operation provided the patient is in condition to permit the work being done.

The author assigns to trauma the first place among the causes of movable kidney, yet he does not cite a single case in which movable kidney was proved to be the result of trauma. The author's method of fixing the kidney is not new, as he states. It is a combination of the ideas of Edebohls, Fullerton, Goelet and Brödel.

Those who believe that movable kidneys are harmless and give rise to no symptoms may read the book with benefit, for there is no doubt that movable kidneys may cause considerable disturbance in some patients, but one should not take too seriously all that is said concerning symptomatology, for some of it is certainly overdrawn.

Handbook to Medical Europe. A Ready Reference Book to the Universities, Hospitals, Clinics, Laboratories and General Medical Work of the Principal Cities of Europe. By James Henry Honan, M.D. Cloth. Price, $1.50. Pp. 261, with Maps of Berlin, Edinburgh, London and Paris. Philadelphia: P. Blakiston's Son & Co., 1912.

The object of this handbook is, in the author's words, "to give a concise, comprehensive outline of the medical work of Europe, as a guide to English-speaking physicians who go abroad for post-graduate work and as a book of reference for all who are interested in medical work in other lands." Since the author regards Germany as "the most attractive country in the world for medical men," he has devoted over a third of the book (ninety pages) to the various medical centers of Germany. His sixteen years' residence in that country has enabled him to give a full and interesting account, for Berlin especially, not only of university courses, but also of various institutions of medical interest, such as the state institute for the examination of foodstuffs, the open-air schools, the convalescent camps and works of public sanitation. To the prospective visitor to Germany at least, the book would seem to offer much assistance. About eighty pages are devoted to Great Britain, twenty-eight to Austria-Hungary, twelve to France, and twenty-five to the rest of Europe. A somewhat perfunctory treatment of Europe outside of Germany might seem to be indicated by the fact that the address given for the American Medical Association of Vienna is one which has been superseded for nearly a year and a half. Apparently neither the author nor any other competent person has read the proof of the book, for it abounds in typographic errors, such as "praktesch" for "praktisch," "Verien" for "Ferien," "Piti" for "Pitié," "Brabont" for "Brabant" and "Uttrecht" for "Utrecht." With the improvements that a second edition will probably include, this handbook will be of much service.

Arbeiten aus dem Pharmazeutischen Institut der Universität Berlin. Herausgegeben von Dr. H. Thoms, Professor und Direktor des Pharmazeutischen Institutes der Universität Berlin. Eighth Volume. Cloth. Pp. 280. Berlin: Urban & Schwarzenberg, 1911.

The eighth volume of these "Arbeiten" reports the work for 1910 on the same plan as the previous volumes. The department is still under the able direction of Professor Thoms, whose name is now well known to those interested in the campaign for integrity in the exploitation of proprietary remedies. The reports of work on secret remedies, etc. is perhaps of less interest to American physicians because none of the remedies investigated is exploited in the United States—at least to any considerable extent. Such investigations are valuable, however, because there is no knowing when a nostrum which has exhausted the soil in Europe may be transplanted to America in the hope of securing a more profitable crop. Some of the analyses illustrate the identity in the action of the nostrum-maker's mind in all countries and climes. A substitute for alcohol, in spite of the affirmation of the makers that it contains no methyl, ethyl or amyl alcohol, turns out to consist chiefly of the first-named. A "bladder-nerve bonbon" is found to consist of milk sugar, starch and iron-containing bolus alba.

Most of the work is of a scientific character including investigation of methods of extracting drugs, adulteration of African sandalwood, and similar topics. An interesting article by Professor Thoms deals with attempts to cultivate Japanese peppermint in Germany, by which it is hoped that Germany will become independent of Japan in the supply of oil of peppermint and menthol.

Another important article deals with the structure and chemical properties of epinephrin. A large section of the book is devoted to the investigation of foodstuffs and technical products from the colonies. Like previous volumes the reports in this work contain much of interest to physicians as well as to pharmacists.

The British Pharmaceutical Codex, 1911. An Imperial Dispensatory for the Use of Medical Practitioners and Pharmacists. Published by Direction of the Council of the Pharmaceutical Society of Great Britain. Cloth. Pp. 1568. London: Pharmaceutical Press, 72 Great Russell Street, W. C., 1911.

The preface states that "the chief aim of the work is the provision of accurate information for prescribers and dispensers . . ." The first edition appeared in 1907. The present edition is divided into two parts; the first, or dispensatory portion, comprising 1,100 pages, is devoted to monographs on drugs of vegetable and animal origin, and others dealing with chemical substances used in medicine. In the case of crude drugs the botanic or zoologic, geographic and commercial sources are stated. For all drugs the methods of collecting, preparing or manufacturing, their physical properties, actions and therapeutic uses, modes of administration, antidotal treatment (if poisonous), incompatibilities, etc., are tersely given. The principal preparations of the important drugs are described and attention is frequently called to the reputed composition of medicines sold under trade names. The second, or formulary portion, comprising 337 pages, is made up of formulas for a large number of medicinal preparations and is therefore similar, in a general way, to the National Formulary in this country. The quantities in the formulary are given both in centesimal and in imperial values. The book contains many tables and, besides the general subject index, also a therapeutic index such as is found in most dispensatories—a feature which, unfortunately, seems to appeal to many physicians. While the formulas given are many and excellent, and their intelligent use by physicians in place of proprietary remedies represents a step forward in therapeutics, the physician who uses the codex should not accede to the evident intent of its compilers to favor the employment of such formulas in place of critical prescribing. While bibliographic references have been omitted in the interest of space, the work bears evidence of having been critically written and of having been revised to include recent pharmaceutical investigations. In these respects the work is much superior to the dispensatories published in this country and it should, therefore, be of correspondingly greater value to physicians.

Case Histories in Neurology. A Selection of Histories Setting Forth the Diagnosis, Treatment and Post-Mortem Findings in Nervous Disease. By E. W. Taylor, A.M., M.D., Instructor in Neurology, Harvard Medical School, Boston. Cloth. Price, $3. Pp. 305. Boston: W. M Leonard, 1911.

The object of this book, the third volume of the Case History Series is to set forth in practical form the fundamental facts regarding the symptomatology, diagnosis, treatment and pathologic findings in the more frequent disorders of the nervous system.

A perusal of the case histories leads one to the conclusion that they are actual reproductions of clinic and private cases. One might say that they are more photographic than artistic pictures and consequently are accurate and instructive, but not entertaining. Of course, a Charcot is born only once in a century, but the book would not lose an *iota* by an attempt to imitate that master of medicine, who was also a master of style. The most logical use for this book would be, we believe, as a companion to the student of medicine who begins the study of clinical neurology. Two defects will always stand in the way of making these case histories popular with the general practitioner—the unpardonable brevity of treatment and the utter neglect of etiologic pathology.

Die Erkennung der psychopathischen Konstitutionen (krankhaften seelischen Veranlagungen) und die öffentliche Fürsorge für psychopathisch veranlagte Kinder. Von Th. Ziehen, Geh. Med.- Rat. Direktor der Psychiatrischen und Nervenklinik der Kgl. Charité in Berlin. Paper. Price, 0.80 marks. Pp. 34. Berlin: S. Karger, 1912.

In this small brochure Professor Ziehen cites a number of interesting cases of psychopathically predisposed children who came under his observation. They cannot be educated in the schools for the feeble-minded, for they are intelligent; they must not be sent to an institution for juvenile criminals, for they are not criminals. From this class are drawn a large number of vagrants and prostitutes. The author makes an earnest plea for the erection of special schools in Germany for such children and believes that economy if not humanity should prompt such action. A similar need, no doubt, exists in this country.

Text-Book of Embryology. By Frederick Randolph Bailey, A.M., M.D., Formerly Adjunct Professor of Histology and Embryology, College of Physicians and Surgeons (Medical Department of Columbia University), and Adam Marion Miller, A.M., Instructor in Anatomy, College of Physicians and Surgeons (Medical Department of Columbia University). Second Edition. Cloth. Price, $4.50 net. Pp. 672, with 515 illustrations. New York: William Wood & Co., 1911.

The principal criticism made on the first edition still holds good, viz., that the book is too pretentious for the student and too incomplete for the embryologist. The entire subject is presented in a most admirable manner, clearly and concisely. The plan of adding brief "practical suggestions" at the end of each chapter is commendable.

Anomale Kinder. Von L. Scholz, Direktor der Provinzial-Irren- und Idiotenanstalt in Kosten. Paper. Price, 8.60 marks. Pp. 442. Berlin: S. Karger, 1912.

The author, director of an asylum for the insane and idiots, has written a splendid book for educated persons of all classes. He addresses himself particularly to the parents and educators of abnormal children. The book contains little of interest to the neurologist, but general practitioners will find it entertaining and instructive. One need not hesitate to place this volume in the hands of any one having the care of children in masses. An English translation would be welcome.

Medicolegal

Physician Privileged in Diagnosing Pregnancy in Consultation Room With Sister of Patient Present

(Brice vs. Curtis (D. C.), 40 Wash. Law R. 103)

The Court of Appeals of the District of Columbia affirms, with costs, a judgment on a verdict directed for the defendant, a physician, who was sued for slander. The court says that, according to the plaintiff's testimony, she contracted a severe cold in March, 1909, from the effects of which she continued to suffer until about the 27th of May, when, accompanied by her sister, she went to the office of the defendant, to obtain treatment. The defendant gave her a prescription and directed her what to do in addition to taking the medicine. He also instructed her to return later if not relieved. Becoming no better, she returned on the 3rd of June, accompanied by her sister, "for medical advice as to the reason she did not have her usual sickness and for treatment in respect thereof." The defendant, on being informed by the plaintiff that she was no better, suggested that it would be necessary to examine her. After the examination he said: "You are in a delicate state and you are about three months gone." The plaintiff denied that such was her condition, whereupon the defendant, in support of his diagnosis, alluded to certain alleged differences between the plaintiff's physical development and that of her sister. The sister then suggested: "Doctor, probably she is at the changing point," whereupon the defendant asked the plaintiff's age and, on being informed that it was 38 years, said, in effect, that her condition was not attributable to that. After more argument the defendant asked: "Do you dispute my twenty-seven years of practice?" and, on being answered in the affirmative, said: "Well, come and stand before the *x*-ray to-morrow and I will prove that it is so, and, if I do not, I will give you $200." The plaintiff did not accede to the defendant's suggestion. She consulted another physician, whose medicine relieved her, but did not change her condition. She, of course, denied that she was pregnant.

The testimony of the sister did not differ materially from that of the plaintiff. She stated that the defendant, on the occasion of the second visit, invited the plaintiff into his private office, and that she, the witness, accompanied her sister, "at her request." The physician whom the plaintiff subsequently consulted testified that, in his opinion, she was suffering from change of life. The lady by whom the plaintiff had been employed as maid testified as to the plaintiff's reputation for chastity and, when another witness was offered on that point, counsel for the defendant announced that they were willing to concede that the plaintiff's reputation in that respect was good.

At the close of the evidence for the plaintiff the court, on motion of the defendant, ruled that the statements made were "privileged communications, and that there had been no sufficient publication shown to sustain a verdict for the plaintiff," and a verdict was accordingly directed for the defendant.

Under section 818 of the Code, the court goes on to say, it is made an offense wrongfully to accuse any woman of unchastity and the offender is declared to be liable to a civil action in damages by the party injured. But, generally speaking, where both the party making and the party receiving a communication have an interest in the subject-matter of the communication, the occasion is privileged and the question then remains whether there has been an abuse of the privilege; in other words, whether actual malice has been shown. The burden is of course on the defendant to establish an occasion of privilege, to prove that the circumstances were such as to warrant the statement of facts honestly believed to be true. When this burden is sustained, or when, on the admitted facts, it is plain that a duty rested on the party making the statements, the burden shifts and the plaintiff must then show actual malice.

Admittedly, the relation which the defendant sustained to the plaintiff on the occasion in question was of a most confidential character. She appeared at his office with her sister and sought his advice as to her condition and treatment for the same. Each party was interested, and it was the defendant's duty honestly to express an opinion as to the plaintiff's condition. The occasion was therefore clearly privileged. The only remaining question was whether there was anything in the plaintiff's evidence which would warrant a finding that the defendant was not acting in good faith or was actuated by malice.

In this case the statements of the defendant were made in the natural course of his business and in response to the express and implied request of the plaintiff that she be informed as to the nature of her ailment. The sister, the only third party present, was there by the procurement of the plaintiff and the defendant was in no way responsible for her presence. She accompanied the plaintiff on each of the two occasions and, by request of the plaintiff, was present when the defendant made the examination. The defendant, therefore, had a right to assume that he could speak freely and frankly. Certain it was that unless he took advantage of the occasion for the purpose of vilifying the plaintiff and of making statements so far beyond the demands of the occasion as to indicate malice or lack of good faith, the presence of this witness, in the circumstances disclosed, in no way affected the situation.

There was no evidence whatever tending to show malice. On the occasion of the first visit the defendant expressed no opinion as to the condition of the plaintiff. On the occasion of the second visit he expressed no opinion until he had made an examination. While it must be assumed that the defendant was mistaken in his diagnosis, there was no evidence that the conditions on which he based that diagnosis did not reasonably admit of the conclusion reached. There was no evidence that the defendant bore the plaintiff any ill will. On the contrary, the fact that she consulted him indicated that their relations were friendly or, at least, not unfriendly. Having, after an examination, expressed his opinion as to the plaintiff's condition, it was but natural that the defendant should have sought to sustain that opinion. The conversation following the first expression of opinion was inspired by the plaintiff and her sister, and there was nothing in that conversation indicating a lack of good faith on the part of the defendant. His suggestion that the plaintiff submit to an x-ray examination clearly indicated his conviction that his diagnosis was correct.

Proper to Consider Injury to Nervous System

(Thompson & Starrett Co. vs. Warren (D. C.), 40 Wash. Law R. 117)

The Court of Appeals of the District of Columbia, in affirming a judgment in favor of Warren, the plaintiff, who was injured in a fall from a scaffold five or six feet from the ground, holds that it was not error to permit one of the medical witnesses to testify regarding the injury to the plaintiff's nervous system. The court says that the witness, after describing the appearance and condition of the plaintiff, including a hernia and the condition of his bowels and hemorrhages therefrom, proceeded to say that he was in a highly nervous state, and completely unstrung. The defendant objected to any evidence of nervous condition existing as a result of the accident. But the witness was permitted to say that the plaintiff was tremulous; easily moved to tears, could not concentrate his thoughts; could not touch his fingers in front with his eyes shut; had vertigo and pain in the back of his head; could not sleep; was forgetful; had lost weight; could not bend over to work; could not go on a scaffold, or to any height; would fall off; that these were results of his injuries. Cross-examined by the defendant, he said that the shock to the nervous system was caused by the fall. His brain was affected to a certain extent, and probably his spinal column was jarred. The nervous condition was the direct result of the fall. The court is of the opinion that no error was committed in admitting the evidence. In assessing damages for pain and suffering, mental and physical weakness, and the probable permanent continuation of the plaintiff's incapacity to labor, as the direct consequence of physical injuries received, the jury were entitled to hear and weigh all of the evidence relating thereto. This was quite different from charging them to assess damages for impairment of the nervous system as a result of the nervous shock, in addition to the damages for pain and suffering and permanent incapacity.

Society Proceedings

COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
Amer. Assn. of Pathologists and Bacteriologists, Philadelphia, Apr. 5-6.
American Urological Association, New York City, April 2-4.
Arizona Medical Association, Bisbee, May 7.
California State Medical Society, Del Monte, April 16-18.
Georgia Medical Association, Augusta, April 17-19.
Louisiana State Medical Society, New Orleans, April 23-25.
Maryland Medical and Chirurgical Faculty, Baltimore, April 23-25.
Mississippi State Medical Association, Jackson, April 9-11.
New York State Medical Society, Albany, April 16-18.
South Carolina Medical Association, Columbia, April 16-18.
Tennessee State Medical Association, Chattanooga, April 9-11.

THE AMERICAN MEDICAL ASSOCIATION'S CONFERENCES ON MEDICAL EDUCATION, MEDICAL LEGISLATION AND PUBLIC HEALTH

Held in Chicago, Feb. 26-27, 1912

(Continued from page 813)

Federal Inspection of Dairy Products

Dr. H. M. Bracken, St. Paul, Minn.: Meat, milk and butter are sources of danger, and, it seems to me, we should have federal inspection of these products because, as they are now sold, they are not confined to any state. It is an interstate question both as to the sale of the milk and butter, more so as to butter. Why should we have federal inspection of meat, and not federal inspection of dairy products? There is far more danger from the dairy products than from the meat. The dairy products are used in a raw state. Meat is used in cooked form. It would be easy to carry out proper federal inspection of dairy products because the federal government can cooperate with the various states.

Dr. F. Park Lewis, Buffalo, discussed the campaign for conservation of vision.

Resolutions Adopted

The Committee on Resolutions, through its chairman, Dr. B. M. Caples, Wisconsin, recommended the passage of the following resolution and the conference concurred unanimously:

1. The resolution offered by Dr. W. A. Evans:

Whereas, The American Medical Association has gone on record for an active support of health legislation: therefore be it

Resolved, That this meeting endorse the position taken by the American Medical Association in its unanimous vote at Los Angeles to support pending national health legislation; that it endorse the action of the House of Delegates in instructing the Council on Health and Public Instruction, the Editor of The Journal and the Board of Trustees to use every endeavor to secure the passage of such national legislation.

2. The resolution offered by Dr. Cressy L. Wilbur:

Whereas, The public health is essential to the public welfare and the Government of the United States, by a formal invitation extended by the Secretary of State in pursuance of a resolution of Congress, has pledged itself to the success of the International Congress of Hygiene and Demography, to be held in Washington, September, 1912; and

Whereas, Immediate favorable action by Congress in the way of granting an adequate appropriation for the congress and providing for a suitable government exhibit is necessary in order to secure its success; therefore be it

Resolved, That the Council on Public Health and Instruction of the American Medical Association at once cause the importance of the congress for the promotion of the public health of the United States and the need for a prompt appropriation to insure its success to be brought to the attention of the Congress of the United States.

3. Dr. Moline's resolution in modified form:

WHEREAS, At present the Council on Health and Public Instruction has a large amount of material which can be used in drafting a model practice act, this conference requests the Council on Health and Public Instruction to prepare a model medical practice act as soon as possible.

4. Regarding Dr. Woodward's amendment to Dr. Moline's motion, that the Board of Trustees be requested to make such appropriations as may be necessary for the work of any committee that may be appointed, the Committee on Resolutions recommends that this be referred to the Council on Health and Public Instruction with the endorsement of the conference.

5. Regarding the resolution of Dr. E. J. Goodwin, the Committee on Resolutions recommends that the Council on Health and Public Instruction be asked to appoint a committee to investigate the present status of vaccination and smallpox statistics, and that this committee also be instructed to prepare or have prepared a model bill on vaccination for such states as may desire to adopt it.

6. *Resolved*, That this conference request the Council on Health and Public Instruction of the American Medical Association to take steps for the organization of a Committee on Vital Statistic Legislation to consist of representatives from the American Medical Association, American Public Health Association, the American Bar Association, Conference of Commissioners on uniform state laws and the Bureau of the Census, for the purpose of considering any changes or modifications which may be necessary in the present model law for the registration of vital statistics.

7. Regarding the recommendation of the secretary for the establishment of a Council on Public Health, the Committee on Resolutions recommends that this suggestion be endorsed and that the Committee on Health and Public Instruction be requested to create a Council on Public Health to be made up of representatives of state boards of health and such municipal departments of health as may send representatives.

A Program for Local and State Organizations for the Suppression of Tuberculosis

DR. J. W. PETTIT, Ottawa, Ill.: An effective program against tuberculosis demands a clear conception of the vast extent of the campaign, concentration of effort, through organization, and harmonious coordination of measures.' To this end there must be a systematic campaign of education along scientific and economic lines. The means for prevention are to destroy the sputum of the victim of the disease, disinfect all places inhabited by tuberculous patients, avoid contaminated foods, educate the controllable, and segregate the uncontrollable patients, and make public provision for the care and treatment of the indigent, more particularly those in the advanced stage of the disease. This can only be accomplished by a systematic and comprehensive campaign of education which will lead to the notification and registration of all cases. The first step in this program is the organization of a local society which shall give direction to and have full charge of the work for the territory for which it is organized. This may be a city or county according to population and other local conditions. Care should be taken not to make the unit of representation too large, as the small unit is usually more efficient. The work of this society should be confined in the beginning at least to purely educational work.

Of the educational methods employed exhibits easily take first rank. These may precede or follow the organization of local societies, depending on the extent of local interest. Tuberculosis exhibits as a means of popular education is one of the most active now known. These exhibits while of professional interest to physicians are intended more for the education of the public. Properly arranged, they should be made to show very graphically the extent and nature of the disease; conditions under which the disease germs spread; how it spreads; how the disease is cured and prevented; and also tuberculosis in animals.

The segregation of every consumptive removes a center of infection, and if treatment is begun in time, 75 per cent. of those afflicted are restored to health and usefulness. Thus, by a process of eliminating centers of infection in all cases, and restoration to usefulness in a majority, the burden will become less and less each year until the disease is practically eliminated. The treatment consists in living out of doors, a carefully selected diet, regulation of exercise, and medication for the improvement of nutrition. The patient must have nourishing food, properly selected; tender care and nursing; pleasant surroundings, and everything that will tend to take his mind from himself and his terrible affliction. Climate alone does not cure.

Another serious obstacle is the assumption that the treatment can be carried out successfully in the home. All the reasons usually adduced are so very plausible that any attempt to combat them by argument is useless. The facts of experience, however, are all against this method, and is the only reply that can be made when this phase of the subject is under discussion.

The work of the sanatorium is not only curative, but educational. The daily sanatorium life is an education in itself. In addition to the requirements of the treatment proper, patients are instructed in personal hygiene, home sanitation, and prevention of tuberculosis, and rules laid down for their guidance after leaving the institution.

DR. WILLIAM C. WOODWARD offered the following, which was carried:

Resolved, That the Council on Health and Public Instruction be instructed or requested to use its best endeavors toward bringing about consolidation of the numerous health organizations, and in the event of a failure to effect such consolidation, that it use its influence to bring about intelligent, economic and efficient coordination of their efforts and the efforts of the American Medical Association.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Twenty-Second Annual Meeting, held in Chicago, Feb. 28, 1912

The President, DR. WILLIAM P. HARLOW, Boulder, Colo., in the Chair

Officers Elected

The following officers were elected: president, Dr. Egbert LeFevre, University and Bellevue Hospital Medical College, New York City; vice-president, Dr. F. C. Waite, Western Reserve University, Cleveland; secretary-treasurer, Dr. Fred. C. Zapffe, University of Illinois, Chicago; Executive Council, Dr. William J. Means, Starling-Ohio Medical College, Columbus, Ohio; Dr. Randolph Winslow, University of Maryland, Baltimore; Dr. Charles R. Bardeen, University of Wisconsin, Madison; Dr. J. A. Witherspoon, Vanderbilt University; Dr. W. P. Harlow, University of Colorado; the president, and the secretary.

The Function of the Association

DR. WILLIAM P. HARLOW, University of Colorado: Of greatest importance at this time is the establishment of unity between the three great bodies now working with a common purpose—the Council on Medical Education of the American Medical Association, the Federation of State Medical Boards and this association. Each of these associations has a precedence in some one respect. The state boards can enforce certain preliminary requirements and a certain minimum of ability among practitioners. This association will confine its activities more and more to matters of pedagogy and getting medical schools to conform to ideal conditions. The Council on Medical Education will, as time goes on, confine itself more generally to the correlation of the other departments with regard to the general practitioner. The entire scheme of education needs to be revised so that primary work will be given from the ages of 6 to 12; secondary work from 12 to 18; college preliminary work from 18 to 20, and then professional study. This can be accomplished by Americanizing the German educational system. Preliminary college requirements for the student who will study medicine should include English, Latin, physics, biology, including comparative anatomy, inorganic chemistry and enough German to read the language fluently. The college preparatory work is simply premedical.

As for specialization in medicine, the one function of the medical school is to turn out doctors, general practitioners, who are capable of doing all sorts of work with credit. The undergraduate curriculum should supply the necessary knowledge and training. Specialization should come after graduation and not before. The movement to include a fifth or hospital year in the medical curriculum raises questions with regard to the relations of the medical school to the hospitals in which such time should be spent. What should be demanded to make such positions desirable to the students? The question should be considered carefully by a committee. It should not be a special training, because that must be taken care of by a postgraduate training and should be recognized by a special degree. Such courses should be pursued for two years, and on presentation of a thesis based on original work done in the department the applicant becomes a candidate for his special degree. Courses may be arranged during the summer and admission must be based on previous education.

The advance made in experimental medicine, particularly serology, makes it necessary for the medical school to add a department of experimental medicine. The college must be prepared to take over the state departments of bacteriology, pathology, water analysis and hygiene to the best interests of the student as well as to the state. Extension work is also deserving of more attention than has been given to it. Popular lectures should be held under the supervision of the medical school. Instruction should be given to physicians in laboratory diagnosis, serotherapy and serodiagnosis, and such clinical work as can be done under state supervision by the medical school might well be placed under the charge of the department of extension work. Such work cannot fail to prove effective and valuable to all concerned.

General Examinations in a Medical School

Dr. Henry A. Christian, Harvard Medical School, Boston: Medical schools have tended toward too great rigidity of curriculum with too many separate examinations, resulting in leaving too little to the initiative of the student, and in producing students too crammed with facts, too little able to think and to apply their knowledge. Our new plan of examination is as follows: Written tests are done away with. In their place practical examinations are conducted by the individual departments. The student chooses whether he will take the practical examination at the end of each course or near the time of the general examination. Practical examinations must be completed satisfactorily before the general examination can be taken. The marks made in the practical examinations make up 40 per cent. of the grade of the general examination. General examinations, partly written, partly oral, are held at the end of the second and fourth years. The subjects comprised in the first examination are anatomy, histology and embryology, physiology, biologic chemistry, pathology and bacteriology. An elementary knowledge of physics, inorganic and organic chemistry and biology is assumed. The subjects comprised in the second examination are preventive medicine and hygiene, materia medica and therapeutics, medicine, surgery, pediatrics, obstetrics, gynecology, dermatology, syphilis, neurology, psychiatry, ophthalmology, otology and laryngology. No student who fails to pass a general examination may repeat it within the calendar year in which he failed. No student is permitted to begin the work of the third year until the first general examination has been passed.

The written part of each general examination consists of questions selected by the examination committee (appointed by the president) from a list of questions submitted by the department concerned. The time is divided into periods of three hours each. The answers to the questions are graded by the committee on examinations. This grade will make up 40 per cent. of the final mark for the general examination.

The oral part is conducted by boards of five members appointed by the committee on examinations, on each of which for the first general examination there must be at least one representative of the clinical branches, and for the second general examination at least one representative of the laboratory branches. The grade given on the oral part of the examination will make up 20 per cent. of the final grade on the general examination. Both general examinations are required of all candidates whether they have taken all their work at Harvard or not. By this plan the written examinations for the entire course are reduced to two, to which are added two oral examinations, both planned to determine the student's power of comprehension, judgment and power rather than his detailed information.

DISCUSSION

Dr. Egbert LeFevre: Does the head of the departments hold any examinations?

Dr. Christian: The practical examination is under the head of the department, but the committee has a right to change, or determine, its character if they do not deem it satisfactory. The head of the department has to submit his plan of examination to the committee for approval.

Dr. J. R. Guthrie: Is there any provision in this system for determining what work the student has done, or any record kept of attendance, or any written report of his work; for example: the number of surgical, medical, or obstetrical cases he has seen? Does that enter in at all?

Dr. Christian: There has been no change made in that regard at Harvard. No attendance is ever taken in any course in the medical department at the present time. Whether men take given courses or not is determined by the practical examinations, but they are not required to have a certain number of obstetric cases, or to have participated in a certain specified amount of work in a particular department. There are several requirements in the degree, and these requirements are in no way changed by this plan, which is that followed by the University of Chicago to have examinations at the end of a certain specified period.

Dr. John M. Dodson: I am much interested in the plan which Dr. Christian has outlined. It seems to me an excellent one to have tried out, and I hope that Harvard University will not run up against any state board that states definitely what kind of an examination the student shall have. This will do away with the multiplicity of examinations which are not now so prevalent in many of our schools. Some years ago a friend happened into a class room where a teacher who is very fond of having examinations was holding one, and he said: "There he is, still at it, pulling them up by the roots to see if they are growing," and I have come to the conclusion that these examinations are just about as harmful to the students as it would be to pull plants up by the roots to see if they are growing. We have no stated examinations. We have hit on a plan that leads us to a very close supervision of the students' work, particularly that of the poor students. We have a committee on promotion which meets as soon after the new quarter begins as the records are received from the registrar. All students conditioned, or nearly up to the passing line, are gone over.

The most difficult point I foresee is the extreme difficulty of getting some instructors, particularly those not giving full time to the work, to keep accurate records. They should be able to tell, without an examination, what kind of work the student has done. At the end of a period the instructor should be able to say: John Smith is entitled to grade A, or Bill Jones is entitled to grade B without the harrowing process of a written examination.

Dr. J. A. Witherspoon: I know of one or two instances in which the whole faculty have combined to make up the examinations. I know of another in which five professors taught surgery in a college and each man held an individual examination. It is simply cruelty to animals. I do hope that some plan can be formulated by which we can get rid of a great many of these examinations. They do not really demonstrate much about the boy. It is the man who teaches him daily who can evaluate his work, and he ought to be able to grade him.

Dr. Egbert LeFevre: One of the reasons why our methods have been as they are has been our pernicious and ever-present method of examinations. Practically, when a student enters college his first object is to pass the examinations. The multiplicity of examinations has been the one thing that has demanded that the medical education assume the definite form that it has. We have, therefore, before us, as teachers, this handicap in pedagogy, and as long as this method prevails, our pedagogy must depend on these examinations. Our teachers can do no better work than to study the curricula of other schools, as well as that of their own school, to see how the powers of observation of the student can be improved.

I have for three years made a study of the curriculum of our school, and I have found that whenever new schemes have been presented the students do not take kindly to them. The student body becomes restless. They say, "Is this preparing us for examinations?" and we find that their whole thought is centered on the examinations and the best teacher is the one who can give them the greatest number of facts that they can memorize and have ready at hand. So I believe that the faults that have crept into our teaching methods have been due to the multiplicity of examinations and the method of conducting them.

The Improvement of Medical Teaching

Dr. C. M. Jackson, University of Missouri: Efficient teaching requires a clear view of the ultimate aim, which in medicine is to train efficient practitioners. To accomplish this aim rational methods of teaching should develop in the student self-activity in observation, reasoning and action. Great improvement would result if medical teachers would study more carefully their educational methods. The younger teachers might take work in the schools of education connected with the various universities. Those unable to do this should, at least, study the principles of pedagogy. They are the same for elementary, advanced and professional education. The adoption of more efficient methods of teaching would probably enable us to gain the equivalent of a whole year within the time now devoted to the four years' curriculum. Uniform methods of teaching are neither necessary nor desirable; but all efficient methods of teaching must be based on established principles of pedagogy.

Efficient teaching requires three essential conditions: (1) Complete mastery of the subject-matter by the teacher; (2) clear notion of the aim of teaching; (3) well-chosen methods of accomplishing this aim. The second and third are those most often overlooked.

The primary aim of medical education should be to train efficient practitioners, one who is able to observe accurately, think clearly and act wisely. Therefore, the instruction must be adapted to the student's nature and learning capacity. All education really worth while is based on self-activity. In developing this self-activity, the student's interest and attention must be aroused. He must be made to realize the bearing of this work on his activities later in life. Because of limited time only the practical facts, those that are of utility in medicine should be taught, combined with a theoretical because the latter contribute to the coherence of the various practical facts. Both are necessary. The best methods of teaching utilize both. Each subject should be taught from the theoretical, scientific point of view, but at the same time its practical application should be kept constantly in mind. For instance, anatomy should be taught as a special branch of biologic science. The facts in anatomy that are of direct intrinsic value in physiology, pathology and clinical medicine should be chosen. A working knowledge should be given the student.

Each teacher must understand the curriculum as a whole. The laboratory man must be familiar with clinical work and the clinician must be familiar with laboratory work. There must be understanding and cooperation between the teachers of the various subjects of the course. The student must be made to feel that each subject contributes an essential part in training him for the desired end. He must observe, think and act for himself. Fundamental data should be acquired by observation and not by listening to lectures. For instance, give the clinics first and the lectures later. Let the student observe first, see for himself. It facilitates comprehension and teaches self-activity. The ideal plan is for the student to work out everything for himself by discovery. Never tell him anything that he can observe for himself; never draw a conclusion or solve a problem which he can be led to reason out for himself; never do anything for him that he can do for himself.

So far as practicable the ideal method should be applied for the purpose of training the student to self-activity, in developing his ability in observation, reasoning and action. The application of the generalizations reaches by observation, plus reasoning, while essential in every subject, is especially characteristic of clinical work. The student should learn by doing.

DISCUSSION

Dr. Edward Jackson, Denver: The greatest obstacle to self-activity of students is to have their mental energies and mental mechanism monopolized by something thrust on them from without.

The first mistake of medical educators is their insistence, that, as the first requirement, the teacher shall know his subject. I would place as the first qualification his ability to know what is in the mind of the student, what has been taking place there during his previous education and what is actually taking place there at the time. To know that is an enormous help to the student.

Dr. Paul G. Woolley: Dr. Jackson of Denver calls attention to one of the most fundamental points of the remarks of Dr. Jackson of Missouri, that is, coordination of knowledge. Anatomy, for instance, has been taught from the standpoint of anatomy, not from the standpoint of surgery or pathology. To be sure, we have had surgical anatomy, and pathologic anatomy, but they have come after the course in general anatomy itself. The course in anatomy could be helped by coordination of the professors in surgery and medicine. In finding the optic disk, students could be taught why they are finding the optic disk, what its relation is to other parts of the eye, etc. In teaching orthopedic surgery, it would not be out of place to have an orthopedic surgeon come around during the class and speak of the importance of learning the anatomy of the joints.

It seems to me that we could raise the efficiency by coordination of the courses. Not only should we have better observation on the part of the students to start with, but we should bring the departments closer together, and in this way a great waste of time could be obviated. Much time could be saved to gynecology and to pathology, and to anatomy and surgery, and to many other branches by coordination of the studies and a good deal of the material that now goes into these studies could be weeded out.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Philippine Journal of Science, Manila

November, VI, No. 5, pp. 345-421

1 *Addison's Disease and Adrenal Tuberculosis. B. C. Crowell, Manila.
2 Rice as Food: Investigation of Nitrogen and Phosphorus Metabolism on Diet Consisting Principally of Rice and Other Vegetable Foodstuffs. H. Aron and F. Hoeson, Manila.
3 *Effect of Ultraviolet Rays on Amebæ; Use of These Radiations in Sterilization of Water. W. P. Chamberlain and E. B. Vedder, U. S. Army.
4 *Etiology of Beriberi. W. P. Chamberlain and E. B. Vedder, U. S. Army.
5 Study of Arneth's Nuclear Classification of Neutrophils in Healthy Adult Males, and Influence Thereon of Race, Complexion and Tropical Residence. W. P. Chamberlain and E. B. Vedder, U. S. Army.
6 So-Called X-Bodies as Artefacts in Glass Slides. W. P. Chamberlain and E. B. Vedder, U. S. Army.

1. **Addison's Disease and Adrenal Tuberculosis.**—The two cases of tuberculosis of the adrenals which Crowell has had the opportunity of studying in Manila were accidental autopsy findings in which the clinical diagnosis was generalized tuberculosis. Both of these occurred in Filipinos, thus raising the question as to the possibility of making the clinical diagnosis of Addison's disease in dark races. In these cases no excessive pigmentation of the mucous membranes or of the skin could be observed on very close examination on the autopsy

table, aside from two isolated dark spots on the tip of the tongue of one of the cases. It was considered at the time that these might have occurred from extraneous sources, such as the teeth, and microscopic examination was of little assistance, since the pigment involved not only the epithelium but the corium as well, and might have reached the part from either direction. In both cases the adrenals were destroyed by tuberculosis and the semilunar ganglia contained chromaffin. In both of these, other endosecretory glands were the seat of pathologic processes. In one, hyperplasia of the islands of Langerhans was associated with adrenal and thyroid tuberculosis; in the other, one parathyroid was cirrhotic.

3. **Effect of Ultraviolet Rays on Amebæ.**—The authors' experiments taken as a whole demonstrate that in a water-supply the amebas, whether motile or encysted, may be killed by a comparatively short exposure to ultraviolet rays. Balantidia, also, appear to be destroyed by the same agency. These facts afford a very potent argument in favor of the use of these radiations in the practical sterilization of water in the tropics.

4. **Etiology of Beriberi.**—Progress is reported by Chamberlain and Vedder in the identification of the neuritis-preventing substance contained in the extract of rice polishings. Of 1.34 per cent. total solids contained in this extract, 0.03 per cent. was ash. This they believe to be negligible since it consists entirely of inorganic constituents, chiefly of lime, magnesia and potassium carbonate. They have tried salts of calcium, magnesium and potassium and found them wanting. Nitrogenous matter comprises 0.04 per cent. of the total solids. Of this only 0.02 per cent. was present in the diffusate, which has been shown to contain the neuritis-preventing principle, and the remaining 0.02 per cent. can be eliminated because it remained in the dialysate which failed to prevent neuritis. The 0.88 per cent. sucrose is of no importance. Combining these unimportant substances and subtracting them from the 1.34 per cent. of total solids, they find that there is only 0.4 per cent. remaining. The neuritis-preventing principle must, therefore, be sought for in this 0.4 per cent. of solid matter and must be a substance that is dialyzable, that is soluble in water, in 95 per cent. alcohol, and in 0.3 per cent. hydrochloric acid, which is easily decomposed by heat and which possesses a strong affinity for bone black. The same substance or a similar substance is also contained in a decoction of ordinary white beans. Bodies corresponding to this description are found among the decomposition products of the proteins.

Annals of Otology, Rhinology and Laryngology, St. Louis

December, XX, No. 4, pp. 751-1020

7 Spread of Bacterial Infections from Nasal and Nasopharyngeal Cavities by Way of Lymph Channels. A. L. Turner, Edinburgh.
8 Ear and Social Hygiene. P. Fridenberg, New York.
9 Relation of Age to Tonsillar Infection. H. A. Barnes, Boston.
10 Cartilaginous Tumors of Larynx. J. J. Carroll, Baltimore.
11 Case of Multiple Foreign Bodies in Smaller Bronchi. F. E. Hopkins, Springfield.
12 Contribution to Passive Immunization in Diphtheria of Upper Respiratory Organs. H. L. Wagner, San Francisco.
13 Circulatory and Respiratory Reflexes and Neuroses from Upper Air Tract. W. S. Bryant, New York.
14 Pneumococcus Infections of Throat. H. Hays, New York.
15 Methods of Giving Anesthesia in Operations on Upper Respiratory Tract. J. T. Gwathmey, New York.
16 Nasal Accessory Sinuses; Different Methods of Treatment. L. M. Hurd, New York.
17 Treatment of Mastoid Wound Following Operation. H. B. Brown, New York.
18 Insertion and Seat of Rhinopharyngeal Fibromata. D. Jaeques, France.
19 Conservative Radical Operation on Middle Ear. Staeke, Erfurt, Germany.
20 Summary of Annual Reports of Tuberculosis Sanatoria in United States of America and Canada. J. W. Gleitsmann, New York.

American Journal of Diseases of Children, Chicago

March, III, No. 3, pp. 133-208

21 *Use of a Simple Duodenal Catheter in Diagnosis and Treatment of Certain Cases of Vomiting in Infants. A. F. Hess, New York.
22 *Study of Cerebrospinal Fluid and Blood in Acute Poliomyelitis. G. Draper and F. W. Peabody, New York.
23 Atrophy of Infants. A. Czerny, Strassburg.

21. **Vomiting in Infants.**—During the past few months Hess has made use of an infant duodenal catheter (Nelaton soft rubber, 8 F.) on more than 200 infants of various ages, suffering from a great variety of disorders. In order to demonstrate beyond all doubt that the catheter gains access to the duodenum, he resorted to radiographic pictures. They showed the tube to be well within the intestine; in fact, in one instance it semed to have passed even beyond the confines of the duodenum. The catheter is passed in the same way as the ordinary stomach tube. By means of the catheter one can readily diagnose pylorospasm, and differentiate it from vomiting due to other causes. In the case of spasm one meets with a persistent resistance encountered at the same point whenever it is attempted to advance the catheter; this is frequently accompanied by irritability of the pylorus. The spasm may be felt to relax suddenly and enable us to enter the intestine. Marked pyloric stenosis can be diagnosed from the failure to transgress the pylorus after repeated attempts. A mild degree of stenosis, so slight as to allow of the passage of the catheter, cannot be differentiated from simple spasm. Cardiospasm frequently accompanies pylorospasm. This sign has been frequently overlooked, due to the too forcible insertion of the stomach tube. If a soft rubber tube is introduced into the esophagus, it may be found even impossible to enter the stomach. Frequently as the result of this spasm the food does not enter the stomach, being checked at the cardia. The catheter is of value in the therapy of pylorospasm. Its passage through the pylorus seems to relax the ring and in this way to diminish the vomiting. It would seem of advantage to test this method of dilating the pylorus, and to pass the catheter frequently in such cases. Another form of therapy consists of duodenal feeding. Radiographs show that this is feasible. It should be reserved for such cases as do not retain food given by gavage, and the food should be given slowly and in not too large amounts. In cases of this kind it has been found of great value.

22. **Cerebrospinal Fluid and Blood in Acute Poliomyelitis.**—To sum up, Draper and Peabody found in the blood of patients with poliomyelitis a constant and marked leukocytosis. In several instances the count has been as high as 30,000. In only one case has there been a definite leukopenia. Besides the increase in total cells, there has been an equally constant increase of polymorphonuclears of 10 to 15 per cent. above the normal, and a diminution of lymphocytes of 15 to 20 per cent. The other forms of leukocytes have shown no abnormalities.

American Journal of Public Health, New York

January, II, No. 1, pp. 1-66

24 Importance of Municipal Sanitary Inspection for Abatement of Nuisances. E. C. Levy, Richmond, Va.
25 Extermination of House-Fly in Cities; Its Necessity and Possibility. C. E. Terry, Jacksonville, Fla.
26 How Confederate Army Was Vaccinated. C. W. P. Broek, Richmond, Va.
27 Seasonal Variation in Bacterial Count of Oysters. F. P. Gorham.
28 International Classification of Causes of Sickness and Deaths. J. Le-Roy y Cassa, Havana, Cuba.

California State Journal of Medicine, San Francisco

March, X, No. 3, pp. 85-130

29 *Recent Advances in Regional (Local) Anesthesia. L. Floesser, San Francisco.
30 *Management and Treatment of Pulmonary Tuberculosis. R. A. Peers, Colfax.
31 *Chemistry of Preparing Salvarsan for Injection and Simple, Rapid Method for Its Preparation. G. Gillman, San Francisco.
32 Variations in Tonicity of Abdominal Musculature and Their Significance. J. L. Lohse, Oakland.
33 Treatment of Vascular Nevi with Carbon-Dioxid Snow. G. H. Mize, San Francisco.
34 Medical Laws of California. C. F. Lea, Santa Rosa.
35 Case of Partial Tremulous Scrivner's Palsy. T. A. Williams, Washington, D. C.
36 Very Large Calculus. M. Krotoszyner, San Francisco.
37 Rabies and Pasteur Treatment. F. I. Lackenbach, San Francisco.
38 Anesthetics; Methods and Indications. F. D. Bullard, Los Angeles.

29. **Regional Anesthesia.**—Eloesser contends that extensive operations involving the mouth, the tongue, the jaws and the lips in mentally normal adult patients should be performed under regional anesthesia. The hand and foot may be easily and simply anesthetized; operations on these members should be performed under regional anesthesia. Skin is easily and

simply grafted under regional anesthesia, which is the anesthesia of choice. Many extensive operations on the chest, abdomen and extremities may be performed under regional anesthesia. Injection of the intercostal nerves with osmic acid or similar substances may be of use in certain cases of inoperable cancer of the breast. The trial of local anesthesia in reducing deformity is urged in certain cases of fracture; this may prove especially valuable to the general practitioner. Local anesthesia should not be forced on unwilling patients; its use should not be tried in unsuitable cases; its limitations should be strictly observed.

30. **Tuberculin in Pulmonary Tuberculosis.**—In summing up his remarks on the use of tuberculin Peers says: Tuberculin is of undoubted value. The principal proof of this is that those who use it the most are satisfied of its value. On the other hand, tuberculin does not cure tuberculosis. It probably does not make so much difference what particular make of tuberculin you use, providing you get a product manufactured by a reputable firm. The principal thing is how it is used. In other words, it is not the preparation but the manner of using. Tuberculin should not be used by the inexperienced, who have only a text-book knowledge of the drug, any more than a capital operation should be performed by anyone who has merely a text-book knowledge of surgery. Tuberculin should not be used in febrile cases, in which the temperature exceeds 100, except in extremely minute doses. The ordinary stock dilutions 1, 2, 3, 4, 5, should be supplemented by much weaker dilutions. No. 1, which contains .01 mg. per c.c., is too potent for commencement. Tuberculin should not be measured as so many minims of a given dilution; it should be given with a special syringe graduated to 1-100 of a c.c., and the dose calculated in fractions of a mg. Patients should not be given tuberculin who do not keep an accurate daily record of their symptoms and where they cannot be given careful personal supervision, preferably daily. Patients should not be given tuberculin where they have to come miles by train to receive the dosage, or where they are engaged in laborious undertakings. Much of the benefit from tuberculin administration lies in the fact that such patients are under daily supervision over a correspondingly extended period. It is not fair to lay at the door of tuberculin all the accidents that occur while the patient is under treatment, or to ascribe all the benefits during its use to other factors. Nor is it fair to ascribe all the benefit to tuberculin and to blame the reactions to other causes. It is best in giving tuberculin to avoid even moderate reactions. These will undoubtedly sometimes occur even under most careful treatment. If disregarded, disaster will follow. On the other hand, patients will sometimes make more rapid recovery after a pronounced reaction than at any previous time. In giving tuberculin, if in doubt as to the advisability of increasing the dose, don't increase.

31. **Chemistry of Preparing Salvarsan for Injection.**—The detailed technic of the method, which in Gillman's hands has given very satisfactory results in the preparation of a large number of doses, is as follows: A glass-stoppered, wide-mouth, 30 c.c. flask is employed, of a depth that should the preparation be administered intramuscularly, will permit the hypodermic needle used to reach its bottom. A wide mouth prevents any "606" adhering to the sides of the neck when emptying the contents of the ampule into the flask. It is convenient to have a flask of such depth that it should permit the needle of the syringe used to take up the last portions of the preparation directly from the flask. Boil about 10 c.c. of distilled water in a test tube and pour the boiling water into the flask. The salvarsan is next dusted on the water and dissolved by vigorous agitation for a few seconds. To this aqueous solution of the salvarsan is added the required quantity of the standard solution of NaOH (3.6 per cent.), i. e., 1 c.c. for each .1 gm. of salvarsan employed, if the neutral suspension of the precipitated base is desired. The flask is again well shaken after the addition of the NaOH and the preparation is next made up to the proper quantity with normal salt solution, usually 20 c.c. if to be injected intramuscularly and 100 to 250 c.c. if intravenously.

Bulletin of Manila Medical Society, P. I.

January, IV, No. 1, pp. 1-23

39 Medical Conditions in American Samoa. G. F. Cottle, U. S. Navy.
40 Medical Conditions in Guam. H. E. Odell, U. S. Navy.

Journal of Ophthalmology and Oto-Laryngology, Chicago

February, VI, No. 2, pp. 35-69

41 Detection of Alleged Visual Defects. A. H. Andrews, Chicago.
42 Trachoma Treated by Jequirity. C. W. Hawley, Chicago.
43 Surgical Treatment of Exophthalmic Goiter. A. J. Ochsner, Chicago.

Cleveland Medical Journal

February, XI, No. 2, pp. 81-160

44 Analysis of 500 Consecutive Unselected Invasions of Peritoneal Cavity. R. E. Skeel, Cleveland.
45 Purification of Water by Filtration; Mechanical Considerations. R. W. Pratt, Cleveland.
46 Water Filtration from Sanitary Standpoint. R. G. Perkins, Cleveland.
47 *Case of Phlebitis Migrans. J. Phillips, Cleveland.
48 Privileged Communications Between Physician and Patient. B. A. Gage, Cleveland.

47. **Phlebitis Migrans.**—The point of interest in Phillips' case was the occurrence of phlebitis in so many different veins in a patient of rheumatic or possibly gouty tendency without much constitutional disturbance, and the subsiding of the phlebitis after the administration of the vaccine. Phillips does not say whether this was a coincidence or not, and yet he thinks it is very significant that the herpetic eruption in his mouth, from which he had never been entirely free for a period of fourteen years, disappeared after the first injection of vaccine and has not since returned. The vaccine was made from cultures from the unbroken vesicles in the mouth.

Canadian Medical Association Journal, Toronto

February, II, No. 2, pp. 89-172

49 Chemical Basis of Life. D. F. Harris.
50 Luetic Cirrhosis of Liver. E. J. Mullally, Montreal.
51 Ammonia Coefficient in Case of Severe Vomiting in Pregnancy. A. W. M. Ellis, Toronto.
52 Angioma of Larynx. G. S. Ryerson, Toronto.
53 Chronic Myocarditis. J. Third, Kingston, Ont.

New Orleans Medical and Surgical Journal, La.

March, LXIV, No. 9, pp. 641-724

54 *Extra-Uterine Abdominal Pregnancy. I. M. Calloway, Shreveport, La.
55 Toxemia of Pregnancy; Its Cause, Nature and Treatment. O. W. Cosby and R. H. Blackman, Monroe, La.
56 Various Anesthetics as Applied to Obstetrical Work. A. C. King, New Orleans.
57 Injuries to Parturient Canal During Labor. C. N. Chavigny, New Orleans.
58 Perineal Ureterolithotomy in Male. M. Sonchon, New Orleans.
59 Nutrition in Infancy. A. P. Crain, Shreveport, La.
60 Epidemic Cerebrospinal Meningitis. E. M. Dupaqnier, New Orleans.

54. **Extrauterine Abdominal Pregnancy.**—At the time of the hemorrhage Calloway's patient was one and a half or two months pregnant. As the fetus was alive, and the woman in good condition, he delayed as long as possible abdominal section, hoping to let the child go to viable age. He opened the abdomen. The abdominal wall was very thin; he found a very friable placental sac, which ruptured on handling, and a fully developed child was delivered; the sac was almost empty of amniotic fluid, and child as well as the walls of the sac were pasted with meconium. The placenta was attached to back of both broad ligaments and posterior surface of uterus. There were no adhesions to any abdominal viscera. On examination the tubes and ovaries showed no evidence of previous rupture. The uterus was very much enlarged and so great were the attachments of the placenta, that he lifted the entire mass out of the abdomen and removed uterus, tubes and ovaries below the attachments. The abdominal wound was closed in the usual way and patient had an uninterrupted recovery.

Southern California Practitioner, Los Angeles

February, XXVII, No. 2, pp. 45-92

61 Treatment of Fractures. W. W. Richardson, Los Angeles.
62 Small-Pox Epidemic. E. D. Ward, Los Angeles.
63 Strongyloides Intestinalis; Amebic Dysentery. R. D. Kennedy, Globe, Ariz.
64 Intussusception. J. C. King, Banning, Cal.
65 European Observations. G. L. Cole, Los Angeles.
66 History of Medicine in Sixteenth Century. E. Wing, Los Angeles.
67 Illegal Practice of Medicine in Los Angeles. H. T. Morrow, Los Angeles.

Laryngoscope, St. Louis

February, XXII, No. 2, pp. 81-164

68 Vestibular Apparatus and Central Nervous System. R. Barany, Vienna.
69 Early Development of Ear. L. K. Guggenheim, St. Louis.
70 Eighty-One Cases of Inflammation of Frontal Sinus; Comparative Study. G. L. Richards, Fall River, Mass.
71 Latent Sinusitis; Symptoms and Results, Immediate and Remote. G. F. Cott, Buffalo.
72 *Epiglottidectomy: Rational Treatment of Epiglottidean Tuberculosis. L. B. Lockard, Denver.
73 New Instruments. A. Braun, New York.

72. **Epiglottidectomy.**—As a purely palliative procedure, in advanced cases, Lockard says the worth of epiglottidectomy has been repeatedly proved. Of 151 cases capable of exact analysis and accurately observed, the pain was relieved in 127, or 84.10 per cent. There were sixteen cases that would have been classed as favorable if the epiglottis had not been involved, and of these, 100 per cent. were completely relieved; ninety-five would have been considered hopeless even without the epiglottidean disease, and eighty-eight of these were benefited to such an extent that both liquid and solid food could be swallowed with comfort. Of forty additional cases, which could not be exactly classified, twenty-five were permanently relieved of pain. The injection of alcohol is infinitely more painful than the complete removal of the diseased organ and while the former simply subdues the pain for a short period, the latter does it more effectively and permanently, at least that part due to the epiglottidean involvement, and at the same time exercises a distinctly curative effect, not on this one focus alone, but on the complicating laryngeal lesions as well. Of forty-seven personal cases the stump healed perfectly in forty; in seven there was delayed healing and in only three was there recurrence. In forty-four additional cases, collected from various sources, local healing occurred in all but two.

In not one of the author's forty-seven cases was there any recognizable unfavorable effect exerted either on the lungs or the larynx, and of 213 cases reported to him in personal communications, there was not a single instance of metastasis. The claim is not made that the removal of this focus exerts a direct curative influence on the larynx as a whole, but the assertion is warranted that a distinctly favorable effect is indirectly produced.

Journal of Missouri State Medical Association, St. Louis

February, VIII, No. 8, pp. 301-336

74 Adequate Treatment of Syphilis. W. T. Wootton, Hot Springs, Ark.
75 Prognosis in Goiter. E. G. Blair, Kansas City.
76 Typhoid in Children. F. C. Neff, Kansas City.
77 Preparatory Operative and Postoperative Treatment of Acute Intestinal Obstruction. J. Y. Brown, St. Louis.
78 Woody Phlegmon of Abdominal Wall. L. A. Todd, St. Joseph.
79 Acute Perforation of Ileum, with Operation and Recovery. W. T. Reynolds, Kansas City, Mo.
80 Joint Tuberculosis, with Special Reference to Use of Formalin-Glycerin Injection. R. Hill, St. Louis.
81 Early Care of Acute Abdominal Conditions. W. T Coughlin, St. Louis.
82 Ascending Colon. J. M. Bell, St. Joseph.
83 Cornelius Treatment for Peripheral Nerve Diseases. E. Bentele, St. Louis.

Archives of Pediatrics, New York

February, XXIX, No. 2, pp. 81-159

84 *Use of Intestinal Antiseptics in Childhood. A. Hand, Philadelphia.
85 *Venous Hums in Children. H. R. M. Landis and I. Kaufman, Philadelphia.
86 Diphtheroid Bacilli of Penis; Report of Two Cases of Diphtheria Following Circumcision. J. A. Kolmer, Philadelphia.
87 Atypical Case of Acute Epiphysitis in Infant, with Roentgenograms. J. F. Sinclair and H. K. Pancoast, Philadelphia.
88 Comparative Calorie Value of Various Foods Used in Infancy and Early Childhood. C. B. Farr, Philadelphia.
89 Rapid and Simple Method for Calculating Calorie Value of Percentage Mixtures. F. Fraley, Philadelphia.
90 Program for Sex Instruction. I. S. Wile, New York.

84. **Intestinal Antiseptics in Childhood.**—Some of the intestinal antiseptics Hand regards as being theoretically powerful, but are too irritating to the mucosa to be used in a dose large enough to have any value. He looks on thymol, the naphthol derivatives and phenyl salicylate, or salol, as in this class. Bismuth salicylate he has found unobjectionable from this point of view, and a comparison of two series of cases, one treated solely by the starvation-plan and one treated with bismuth salicylate showed such a decided difference in favor of the drug that it seemed to have undoubted disinfectant properties. Besides the direct disinfectant action of the salicylic radical there is also obtained the sedative action of bismuth itself, which may also be enhanced by giving the subnitrate or the subcarbonate at the same time. This sedative property may also be said to have an indirect disinfectant action, such as may be attributed to decoctions of the carbohydrates, like barley water or rice water. These favor fermentation by the saccharolytic germs, which seem clinically to aid in shortening the inflammatory period so positively as to possess antagonistic action on the pathogenic germs. Hand sounds one word of warning as to the use of calomel in these cases. He uses it rarely because of its possibilities for harm. In small doses, one-twenty-fourth of a grain every three hours for four or five doses, it may be of service, but it is a much slower evacuant than oil, rhubarb or magnesia (the citrate or sulphate). And if its antiseptic action depends on its conversion into the bichlorid, then, to have any value it must be present in such amount as would seem to be irritant if not positively toxic.

85. **Venous Hums in Children.**—The authors' observations are based on a study of ninety-nine children under 15 years of age and twenty-six adults; the adult group consisting of individuals with moderate or far advanced tuberculosis. In regard to the question of the presence or absence of tuberculosis in these children, eighty-one were classed as being clinically non-tuberculous; forty-one were given the von Pirquet test; eighteen were positive; twenty were negative and three doubtful. Fourteen showed clinical evidence of tuberculosis, in seven the von Pirquet test was positive, in four it was negative and in three there was no record. Four were considered as being probably tuberculous; the von Pirquet test was positive in two, negative in one, and in one there was no record. Hemoglobin estimations were made in fourteen only, the hemoglobin ranging from 90 to 60 per cent. The estimate of the degree of the anemia formed by inspection of the skin and mucous membranes coincided fairly accurately with the hemoglobin readings.

The hum was associated with other murmurs in four instances. In one child there was a systolic murmur at the apex of the heart; in three there was a systolic murmur in the carotids, in two it was heard on the right side and in one on the left side. In two instances the murmur in the carotid artery was heard only when the child assumed the recumbent posture. The children with both venous and arterial murmurs were classed as being not anemic. So far as children are concerned the question of whether they are anemic or not seems to have very little relation to the production of the murmur, the difference between the anemic and nonanemic being very slight. Of the eighty-four children in which the hum occurred it was loudest on the right side in forty-two (50 per cent.), on the left in seventeen (20.2 per cent.), and in twenty-five (29.8 per cent.) it was heard equally well on both sides. Eustace Smith's sign was not obtained in a single instance of some thirty cases in which it was looked

In regard to the question of altering the position on the production of the murmur, it was noted that in those with anemia the murmur was heard with the head held straight in thirteen instances and in twenty-six everting the head brought the murmur out. In the non-anemic children the murmur occurred in thirteen instances with the head held straight, while in thirty-two turning the head produced a murmur. Changing the position of the child from an upright to a recumbent posture caused the murmur to disappear in sixty-eight (81 per cent.) instances, and in sixteen (19 per cent.) the murmur persisted, but usually much diminished in intensity. It is to be noted that the presence of anemia seemed to have some influence in the persistence of the murmur when the recumbent posture was assumed, thus the murmur disappeared in 93.3 per cent. (forty-two out of forty-five) of the nonanemic children, while in the anemic it disappeared in only 66.7 per cent. (twenty-six out of thirty-nine). In a few instances, when the murmur occurred on both sides, the recumbent posture would cause a disappearance of the murmur on one side only. The authors were unable to establish any relationship between tuberculosis and the murmur; as a matter of fact 85.7 per cent. of the murmurs occurred in children classed as nontuberculous. In the twenty-six cases over 16 years of age a venous hum was noted in three when the head was turned. These three cases were moderately advanced cases of tuberculosis, two being noted as anemic and one not so.

Bulletin of American Academy of Medicine, Easton, Pa.

February, XIII, No. 1, pp. 1-54

91 Should We Expect More Than Mediocrity from Medical Profession? F. M. Pottenger, Monrovia, Cal.
92 Dr. Leartus Connor. J. E. Emerson, Detroit.
93 *Report of Committee to Investigate Teaching of Hygiene in Public Schools. H. C. Putnam, Providence, R. I.
94 *Report of Committee for Teaching Preventive Medicine in Universities and Normal Schools. H. B. Hemenway, Evanston, Ill.
95 Report of Seventh Annual Conference of Council on Medical Education of American Medical Association. J. L. Heffron, Syracuse, N. Y.
96 Report of Delegate to Meeting of Association of American Medical Colleges. F. H. Gerrish, Portland, Me.

93 and 94. Abstracted in The Journal, July 22, 1911, pp. 312 and 313.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

February, XV, No. 2, pp. 65-128

97 *Some European Spas; Peep Behind the Scenes. H. Stern, New York.
98 *Constipation with Diarrhea. A. Bernheim, Philadelphia.
99 Treatment of Parasyphilitic Conditions with Salvarsan. E. D. Holland, Hot Springs, Ark.
100 Hay Asthma; Its Symptoms, Treatment and Etiology. L. Kolipinski, Washington, D. C.
101 Treatment of Chronic Disease. J. M. Taylor, Philadelphia.

97. **European Spas.**—Stern derides European spas as being purely commercial propositions. He says that many go to Nauheim who never return alive. They are buried or shipped to the railroad station in the dark of the night. Day funerals are prohibited; they cast a gloom over the remaining cure guests and one involuntary deserter of the ranks may undoubtedly make many a voluntary one. Health resorts, he says, may serve a good purpose. They remove the patient from his usual surroundings to a salubrious environment; they form an oasis in this life of drudgery and suffering. Their mineral springs, even, may be of some use to some patients, but they are not essential. In fact, many a patient recovers at a spa in spite of its waters. Fake promises and fake practices must be suppressed as we suppress fake medicines. The fake sanatorium with its eccentric dietary and pseudoreligious atmosphere has no place whatsoever in the honest practice of medicine. It is these and the railroad companies, exploiting every spring of tepid water along its lines as a cure-all, that are preventing a natural development of spas like our own Saratoga.

98. **Constipation With Diarrhea.**—In many of the cases of diarrhea which came under Bernheim's observation, he found all the usual symptoms of habitual constipation, symptoms partly such as those attributed to autointoxication and vasomotor ataxia, viz., headaches, dizziness, drowsiness; indefinite pains more or less all over the body; loss of ambition; frequently chronic catarrhal conditions of the nose and pharynx; tachycardia; in other cases heavy and slow pulse; in some cases frequent micturition. In a number of young girls and women there existed pronounced symptoms of chlorosis; these were not relieved in spite of the administration of iron, the diarrhea continuing. The diarrhea manifested itself in various ways: Sometimes there was one evacuation, sometimes as many as ten or twelve, during the twenty-four hours; evacuations occurred but seldom during sleep. Usually the volume of each stool was small; the consistency of the feces varied from watery to a soft, mushy and curd-like state. The treatment of these cases is the treatment of constipation.

New Mexico Medical Journal, Las Cruces

February, VII, No. 5, pp. 143-186

102 Epidemic Meningitis. B. F. Stevens, El Paso, Tex.
103 How to Choose a Doctor. S. D. Swope, Deming.
104 Surgery from Standpoint of Patient. W. W. Roblee, Riverside, Cal.
105 Foreign Bodies in Eye. J. B. Gray, El Paso, Tex.
106 Importation of Uncinariasis. J. W. Colbert, Albuquerque.

Boston Medical and Surgical Journal

March 7, CLXVI, No. 10, pp. 359-398

107 John Hunter. F. L. Burnett, Boston.
108 *Value of Intra-Uterine Douches, Packing and Antiseptics in Treatment of Miscarriage; Study of 2,000 Cases. E. B. Young and J. T. Williams, Boston.
109 Methods of Favoring Proteid Digestion. R. B. Hunt, Boston.
110 Amaurotic Family Idiocy. R. M. Smith, Boston.
111 Card for Rapid Calculation of Milk Modifications. J. H. Young, Newton, Mass.
112 European and American Orthopedic Apparatus. W. H. Kraus, Boston.
113 Sarcoma of Tonsil. G. Berry, Worcester, Mass.

108. **Treatment of Miscarriage.**—The number of cases studied by Young and Williams does not total quite 2,000, as those admitted with advanced sepsis and those in which no operative procedure was undertaken have been excluded, in order that conditions in all instances might be as nearly identical as possible. Obviously neither cases with advanced sepsis nor those in whom operative treatment was unnecessary have any bearing on the subject under consideration. Among the cultures taken from the uterine cavity in ninety-seven infected cases of miscarriage, twenty-eight different organisms or combinations of organisms were recovered. The largest number showed the streptococcus, which was present as a pure culture in only twenty-two instances, but it is interesting to note that, in these few cases, the findings were essentially the same as in the entire series. There were distinctly more instances of salpingitis following intrauterine douches, especially among the infected cases, where organisms were present in increased numbers. No great advantage is obtained by irrigation over simple wiping of the cavity in clean cases; while in the infected, the percentage of morbidity is nearly twice as great after irrigation as after wiping with sterile gauze. Plain sterile salt solution gave better results than any of the antiseptic solutions tried.

In the clean cases, the morbidity after the corrosive intrauterine irrigations is nearly twice that of either alcohol or salt solution, while even the small difference between the results after alcohol and salt solution should lead us to select the latter. The outcome in the infected cases shows that salt solution is again by all means to be preferred for an intrauterine douche, since the morbidity is much less after its use.

Iodin has been used in two forms, iodoform (10 per cent.) and tincture of iodin. These have been applied by swabbing the uterine cavity with gauze saturated with the preparation. In many instances the uterus has also been packed with iodoform gauze for twenty-four hours. Where the tincture has been used, a strip of sterile gauze saturated with the solution has been left in the cavity from one to three hours in some cases. The actual value of this has not been determined. One case among thirty-eight in which an iodin strip was left in the uterus, and one case in twenty-eight which were simply swabbed out with iodin and the cavity left empty, had a morbid convalescence. Tincture of iodin has given the best results of any antiseptic used in the uterus.

Antiseptic packing has been employed as a prophylactic in "clean" and as a therapeutic measure in infected cases. In the apparently clean cases the use of gauze treated with an antiseptic seems superior to the plain sterile gauze, although in infected cases exactly the reverse is true. Iodin saturated gauze, being irritating, has not been used to pack the uterus for hemorrhage, nor when used for its antiseptic effect has it been allowed to remain in the uterus more than three hours.

Of those antiseptics which have been used to saturate gauze packing at the Boston City Hospital, alcohol has given the best results, but in infected cases plain sterile gauze is superior to any antiseptic gauze which has been employed.

Wisconsin Medical Journal, Milwaukee

February, X, No. 9, pp. 491-554

114 Arteriosclerosis in Young. D. Hopkinson, Milwaukee.
115 Impaling Injuries of Pelvis. C. J. Habhegger, Watertown.

Journal of South Carolina Medical Association, Seneca

February, VIII, No. 2, pp. 31-59

116 Infantile Scorbutus. W. Weston, Columbia, S. C.
117 Plea for Early Diagnosis and Treatment in Acute Appendicitis. S. E. Harmon, Columbia, S. C.
118 Surgical Anesthesia and Shock. S. C. Baker, Sumter, S. C.
119 Manifestations of Chronic Appendicitis. R. S. Cathcart, Charleston, S. C.

New York Medical Journal

March 2, XCV, No. 9, pp. 417-468

120 Functional Disorders and Neuroses of Stomach. J. Kaufmann, New York.
121 Diagnosis of Intra-Abdominal Conditions Presenting Acute Manifestations. N. Jacobson, Syracuse, N. Y.
122 Relation of Specialist to General Practitioner. W. S. Gottheil, New York.
123 *Sodium Cacodylate in Syphilis. L. J. Spivak, Philadelphia.
124 Seventeenth Century Surgeon and His Fee. W. R. Riddell, Toronto, Ont.
125 Vaccine Therapy of Colds. G. H. Sherman, Detroit.
126 Postoperative Gastric Dilatation. T. C. Witherspoon, Butte.
127 Chronic Excessive Intestinal Putrefaction as Factor in Production of Disturbances of Nasal Mucous Membrane. S. Floersheim, New York.
128 Sarcoma of Testicle, with Report of Case. A. C. Stokes, Omaha.
129 *Iodin Fumigation. C. J. Koenig, Paris, France.

March 9, XCV, No. 10, pp. 469-520

130 *Bone Transplantation and Osteoplasty in Treatment of Pott's Disease of Spine. F. H. Albee, New York.
131 Moderately Contracted Pelvis and Induction of Labor. E. McDonald, New York.
132 Neglected Cold. J. B. Huber, New York.
133 Moral Problems of College Life. S. Egbert, Philadelphia.
134 What a Father Should Tell His Son. I. S. Wile, New York.
135 What a Mother Should Tell Her Child. M. S. Macy, New York.
136 *Bacteria of Conjunctiva. K. M. Lynch, Philadelphia.
137 Trace of Urinary Albumin. B. G. R. Williams, Paris, Ill.
138 Strangulation of Intestine Beneath Persistent Inguinal Genital Ligament. C. H. Wallace, St. Joseph, Mo.

123. **Sodium Cacodylate in Syphilis.**—Arsenic in the form of sodium cacodylate has been found useful in syphilis by Spival. He says that while its action is not as rapid as that of salvarsan, it accomplishes results not unlike those of salvarsan. It is very reasonable that it should, because the arsenic content of "606" is 34 per cent. while the arsenic content of sodium cacodylate is 48 per cent. Being sure that the salt is pure, and making a solution of it fresh every day, it is nonpoisonous to the human system, even in doses as high as five or six grains injected daily for three weeks, even for a month; in other words, the human system can take in 100 grains of sodium cacodylate in three weeks with no signs of arsenical poisoning. There is no albuminuria, no sign of ocular disturbance; the only untoward effects ever noticed were slight shooting pains in the muscles, particularly those of the shoulder, and sometimes this reached to a muscular spasm. There is no reaction at the site of injection.

The drug should be used for effect, beginning with three grains daily and increasing as results are noted. The drug is cumulative in action, as improvement continues for a week or so after the injections cease. The best results are seen in early syphilis. It has a marvelous effect on the initial lesion and on the maculoroseolar eruptions. The action on the papular syphiloderm is somewhat slower, but in large doses is effective. The drug has practically no effect on the adenopathies. Enlarged cervical, epitrochlear and inguinal glands persist in spite of massive doses. Mucous patches and condylomata clear up readily without any other treatment. The drug has a splendid alterative effect and can be used for that alone in the course of syphilitic treatment. All patients, whether their lesions were benefited or not, speak of a sense of well being, of added strength, of a better appetite and even of an increase in weight. On the rupia and tertiary lesions, sodium cacodylate has practically no effect.

Immediately after the patient has had his course of injections, he should be placed on mercury, otherwise the external manifestations recur. It would even be well to alternate a course of mercurial treatment with a course of cacodylate injections. The two drugs seem to be synergistic; one has a stronger effect in the presence of the other. The effect of the drug on the Wassermann reaction is practically *nil*. Spival holds that the drug should prove to be a useful adjunct in the treatment of syphilis, especially where salvarsan cannot be used, either for financial reasons or through some physical condition of the patient. Sodium cacodylate is cheap, easily prepared, and very easy to administer.

129. **Iodin Fumigation.**—Koenig calls attention to the method he has used for six or seven years in the treatment of divers affections of the middle ear (chronic suppurative otitis, sclerous otitis, etc.), and which gives an iodin fumigation in a very simple manner by using pure iodin, the vapors being obtained and carried along by a current of warm air, which adds its effect to the therapeutic action of the iodin.

To that effect he employs: (1) A small metallic capsule made of two hemispheres, which can be screwed together and which are surmounted each by a tip, one conical for introduction into the funnel-shaped end of the Eustachian catheter, the other cylindrical for adaptation to the tube of a hot air generator; (2) the hot air generator of Lermoyez and Mahu; (3) the following preparation:

℞	Gm. or c.c.		
Menthol	1|0		gr.xv
Powdered camphor Iodin in crystals... ....āā	2|0	or	āā gr.xxx
Powdered talc....................	30|0		℥j

This mixture, finely pulverized, gives a dry powder, resembling powdered cacao. If less talcum powder is incorporated, a moist mass is obtained which cannot be used. A small quantity of this powder is placed between two layers of absorbent cotton, with which Koenig lines the interior of the hemispheres of the capsule. By allowing a current of warm air to pass through the latter thus prepared, after a short time varying with the temperature and the force of the current, there remains between the two layers of cotton the white talcum powder alone. In this capsule one may also employ in the manner described all sorts of volatile substances, including iodoform powder. But to obtain a decomposition of the latter, a temperature of at least 90 C. (194 F.) is required with the formation of nascent iodin vapors and also of hydriodic acid. In chronic suppuration and in certain forms of sclerosis of the middle ear, the results are quite appreciable. This method can naturally be applied in many other affections of the nose, throat, and ear, as well as in other conditions (cutaneous and uterine diseases), and in general medicine and surgery.

130. **Osteoplasty in Pott's Disease.**—Twenty patients have been operated on by Albee. In four of the cases, three or four spinous processes were split with a chisel or bone forceps for one to one and one-third inch from their tips, into halves, either through a plane approximately parallel with the long axis of the trunk or at right angles to it. The tip of the lower half of the superior vertebra was then brought into approximation with the tip of the superior half of the next lower vertebra, after green stick fractures of each, and fastened with heavy kangaroo tendon. Chips of bone from the spinous processes were then placed between so as to insure further bony union between these vertebræ. Union has been satisfactory so far as can be ascertained, but on account of its uncertainty, due to constant respiratory motion in the dorsal region, and the large amount of cartilage in the vertebræ of small children, with its slowness of union and early lack of support, and the extreme atrophy and rarefaction of the spinous processes of tuberculous vertebræ, it has seemed best to Albee to devise a procedure which would be, possibly, more reliable and also give support from the beginning. Therefore, in the last sixteen cases bone grafting has been resorted to with the most gratifying results. The crest of the tibia was selected as being by far the most desirable and accessible from which to obtain the graft.

136. **Bacteria of Conjunctiva.**—A summary of Lynch's study shows 57.6 per cent. of normal conjunctivæ to harbor the xerosis bacillus, 20 per cent. the pneumococcus, 3.8 per cent. the diplobacillus of Morax-Axenfeld, 3.8 per cent. staphylococci, 9.2 per cent. Friedländer's bacillus, 3 per cent. yeast fungi, a few contained unrecognized bacteria, while in only 40 per cent. could no bacteria be found. In the acute cases it was demonstrated that practically always the conjunctival sac contained the xerosis bacillus immediately after a gonococcic infection, while the pneumococcus, pneumobacillus and staphylococcus were each present in a few in pure culture. In the chronic cases the xerosis bacillus was demonstrated in nearly 100 per cent., while mixed with it in a few cases were the diplobacillus of Morax-Axenfeld, the pneumobacillus, and staphylococci.

Chicago Medical Recorder

February, XXXIV, No. 2, pp. 55-114

139 The Child that Is to Be. C. B. Reed, Chicago.
140 Importance of Early Diagnosis of Pathologic Conditions of Adenoids and Tonsils, and Treatment. C. J. Whalen, Chicago.
141 Treatment of Tuberculous Joint Disease with Carl Spengler's "I. K." Serum; Report of Six Cases. J. L. Porter and C. Quinn, Chicago.
142 Allies of Health Department. G. B. Young, Chicago.
143 Care of Sick Poor in Japan. W. W. Peter.

Medical Record, New York

March 9, LXXXI, No. 10, pp. 451-500

144 Occupational Neuroses. C. L. Dana, New York.
145 Hysteria and Psychotherapy. E. D. Bondurant, Mobile, Ala.
146 Experiences with Duodenal Alimentation. M. Einhorn, New York.
147 Some Experiments on Serous Sac Distention. A. A. Smith, New York.
148 Plight of Consumptive Wage Earner. J. F. Russell, New York.
149 Action of Lactic Acid Bacilli on Percentage of Glucose in Urine in Diabetics. P. Horowitz, New York.
150 Environment in Treatment of Nervous Disorders. H. Crenshaw, Atlanta, Ga.
151 Cases of Imperforate Anus and Malformed Rectum. C. P. Farnsworth, Chamberlain, S. Dak.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 24, I, No. 2669, pp. 409-468

1 *Immunity Problem and Organic Evolution. C. J. Bond.
2 *Analysis of Five Hundred Consecutive Operations for Acute Appendicitis. A. H. Burgess.
3 Inguinal Operation for Radical Cure of Femoral Hernia. C. A. Morton.
4 Case of Adder Bite. E. F. Clowes.
5 Case of Ruptured Spleen; Splenectomy; Recovery. H. J. Clarke.
6 Anesthesia for Submucous Resection of Septum. B. S. Jones.
7 Atropin and Open Ether Administration. H. B. Gardner.
8 *Left-Sided Subphrenic Abscess Due to Perforated Duodenal Ulcer. H. D. Rolleston.
9 *Transmission of Leprosy to Animals by Direct Inoculation. H. Bayou.
10 *Intestinal Obstruction from Unusual Cause. J. T. Thomas.

1. **Immunity Problem and Organic Evolution.**—Bond maintains that if we may regard the great immunity reaction as a type of evolution and adaptation in other fields, if we may regard natural immunity through natural selection as a type of the earlier methods, and artificial immunity through the exercise of individual capacity to profit by experience and through environmental control as a type of the methods of the future, then, bearing in mind the success that has been achieved by these latter methods in the struggle against disease, we may look confidently to an extension of use acquirement and environmental control in other fields, rather than to a return to innate preadaptation and natural selection, remembering always that both methods depend on innate capacity of some kind or other, capacity of being already adapted before experience, on the one hand, or capacity to become adapted and to learn by experience on the other. Since innate capacity of recovery in the immunity reaction, like capacity to learn or educability in all adaptive responses are matters of heredity and breeding, it is essential in discarding the older method of natural selection that we take steps to safeguard the transmission and production of innate capacity by some measures of eugenic control.

2. **Operations for Acute Appendicitis.**—Burgess' series comprised 285 males and 215 females. He believes, however, that many slight attacks pass unrecognized in the female, in whom, owing to the menstrual function, slight abdominal pain is not held of so much account as in the male, where all abdominal pain is abnormal. Moreover, many attacks of appendicitis coincide in their onset with that of menstruation, and are, therefore, all the more likely to be overlooked. The average age was 26.3 years. The oldest patient was 77, the youngest 3. One hundred and forty-two patients gave a history of one or more definite previous attacks, that is, 28.4 per cent. The most instructive feature of this analysis is the progressive increase of mortality with each successive day of the disease up to the sixth day. Of the five deaths occurring in those patients operated on within forty-eight hours the two on the first day and one of those on the second were due to the interesting but very fatal condition known as "delayed chloroform poisoning" or "fatty acid intoxication." One other patient in this series died from the same cause, and as in all four chloroform was the anesthetic administered, Burgess believes it better to avoid this agent in these acute abdominal infections, especially in children. Though it is not impossible for the condition to follow on the administration of ether, yet the recorded cases show this to be much less probable, and he believes that with "open ether" as the routine anesthetic the mortality in these "early" operations can be materially reduced. The two remaining deaths in these patients operated on within forty-eight hours were, one from continued spread of the infection leading to general peritonitis, and one from acute pneumonia, developed on the eighth day, after complete subsidence of the abdominal symptoms.

Of the thirty-five deaths among the patients operated on after forty-eight hours the causes were: Shock, collapse or toxemia twenty-six, acute pneumonia four, pulmonary embolism one, sudden heart failure one, acute nephritis with uremia one, and intestinal obstruction two. It is interesting to note that of 213 cases of circumscribed abscess with a total mortality of 4.64 per cent., the appendix was removed in addition to opening the abscess in 107, with a mortality of 1.86 per cent., whereas in 106 cases in which it was left the mortality was 7.54 per cent.

Fruit seeds were found in the appendix in a few instances, and in several, small thread worms were present. Fecal concretions occurred in 21 per cent. of the cases. Their presence is interesting in relation to the site of perforation or gangrene. Perforation of an appendix which does not contain a concretion usually occurs near to the tip and on the free border, just distal to the termination of the attachment of the appendix-mesentery. Perforation of one containing a concretion is more probable opposite the concretion. The practical application of this is that if a perforation be found elsewhere than near the tip of an appendix in which no concretion can be felt careful search should be made for one which may have escaped through the perforation, and which, if overlooked, may lead to a persistent sinus.

8. **Subphrenic Abscess.**—In this case the signs pointed to a right-sided gaseous subphrenic abscess, whereas the abscess was really on the left side. In explanation of this want of accord between the physical signs and the real condition, Rolleston says it is highly probable that there was free gas on the right side of the falciform ligament, though the abscess was on the left side. For at the operation air but no pus came out when the peritoneum was opened by the incision to the right of the right rectus muscle. The main interest of the case is the occurrence of a left-sided subphrenic abscess due to a perforated duodenal ulcer. In this instance the history of past attacks of a similar, though less severe, nature and the presence of adhesions make it highly probable that there had been attacks of local peritonitis in connection with the duodenal ulcer, and that the adhesions thus produced were responsible for the abscess being on the left side of the abdomen.

9. **Transmission of Leprosy to Animals.**—It is claimed by Bayou that leprosy can under certain circumstances be transmitted to animals, the main difficulties being the high percentage of failures and the long incubation. The most suitable animals appear to be the rabbit, rat or mouse. In the rabbit the intra-ocular method is preferable. The resulting lesions are often not visible to the naked eye, and are similar to those caused by certain strains of human tubercle. In the rat the incubation is also very long, the resulting lesions comparable to those occurring in spontaneous leprosy of the rat. Not all leprous patients are equally "infective" for animals. In some cases the lepra "bacilli" appear to be absolutely incapable of multiplication, for reasons not known at present. According to Stanziale's experiments, the "Wassermann reaction" is positive in rabbits which have been inoculated successfully.

10. **Intestinal Obstruction.**—On opening the abdomen and introducing his hand into the abdominal cavity Telfer felt a hard mass like a stone in the pelvis. This mass was found to

be blocking the ileum about 6 inches from the ileocecal junction. Telfer removed the lump through a longitudinal incision in the ileum, and on examination found it to consist of small bits of gutta-percha matted together. The patient was employed in a safety-fuse factory, and her duty was to supervise the coating of the fuse with melted gutta-percha from a container; this is done by means of a large spatula. Some of the gutta-percha naturally adheres to the spatula, and the girl had been in the habit of cleaning the spatula with her fingers, and then removing the gutta-percha adhering to her fingers with the teeth, and chewing and swallowing it.

Lancet, London

February 24, I, No. 8, pp. 483-556

11 Glycosuria. A. E. Garrod.
12 *Principles of Treatment in Exophthalmic Goiter. G. R. Murray.
13 Cystitis: Its Causes and Treatment. D. Newman.
14 *Intestinal Flora. A. Distaso.
15 The Ileocecal Valve. O. Krans.
16 *Pyemia Treated with Specific Antistreptococcus Serum. C. W. G. Bryan.
17 Case of Pernicious Malarial Fever Simulating Uremia. B. N. Varma.
18 Unusual Case of Inguinal Hernia. H. M. Anderson.
19 Examination of Medical Provisions of National Insurance Act. W. A. Brend.

12. **Treatment of Exophthalmic Goiter.**—Murray advocates operation in all cases in which there is distinct stridor from compression of the trachea or persistent pain in the goiter. In cases of a mild type he does not consider an operation necessary. In very severe cases with marked cardiac failure the risk is too great. In a certain number of cases of moderate severity, in which no adequate improvement has resulted from medical treatment fully tried for 12 months, a partial thyroidectomy or ligation of the superior thyroid arteries may be advised.

14. **Intestinal Flora.**—Constipation and the resulting intoxication Distaso believes are caused by the intestinal flora; and that the large intestine is the seat of this process. Doubtless the products of the intestinal bacteria, by increasing secretions inhibiting the submucous plexuses, give rise to stasis. The accumulation of feces in the colon causes the viscera to fall downward, dragging on the organs which are attached to it. The ileum especially is affected, so that it may be almost occluded, or the ileocecal valve may become inflamed, and thus the passage of feces be further impeded.

16. **Treatment of Pyemia.**—In Bryan's case the pyemia occurred as a complication of the Lorenz operation for congenital dislocation of the hip.

Clinical Journal, London

February 7, XXXIX, No. 18, pp. 273-288

20 Treatment of Advanced Uterine Carcinoma and Ligation of the Internal Iliac Arteries. C. Ryall.
21 Roentgen-Ray Diagnosis of Pulmonary Tuberculosis. G. H. Orton.

February 14, XXXIX, No. 19, pp. 289-304

22 Primary Pneumonia in Childhood. R. Hutchison.
23 Need of Preparation for Anesthesia. J. D. Mortimer.

February 21, XXXIX, No. 20, pp. 305-320

24 Acute Arthritis. W. H. White.
25 Clinical Surgery an Art and a Science. C. B. Lockwood.

Medical Press and Circular, London

February 21, XCIII, No. 3798, pp. 183-210

26 *Treatment of Acute Edema of Lung. A. Robin.
27 Antityphoid Inoculation. W. B. Leishman.
28 Dental Hygiene of Childhood. G. Thomson.
29 Epidemic of Methylic Alcohol Poisoning at Berlin. M. Stadelmann.
30 Intrinsic Cancer of Larynx: Operation by Laryngo-Fissure. S. Thomson.

26. **Treatment of Acute Edema of Lung.**—To bring about acute pulmonary edema there must be a renal factor, a cardio-arterial factor and a broncho-pulmonary factor with an accidental cause to set the process going. Immediate energetic treatment comprising free blood-letting will in eight out of ten cases effect a cure. The patient must be put on the lacto-vegetarian diet, the action of the heart being improved by the administration of digitalin in cardiotonic doses. The next thing is to try and reduce arterial tension, with which object in view Robin prescribes as follows:

℞	Gm. or c.c.		
Sodii nitritis	1		gr.xv
Sodii lactatis	4		ʒi
Sodii silicatis	2	or	ʒss
Potassii bicarbonatis	8		ʒii
Aquæ dest.	120		℥iv

Ft. solutio. S. Three or four tablespoonfuls every hour for four hours.

The etiologic factors in the production of acute pulmonary edema are seven in number: (1) Renal disease, especially of the interstitial kind; (2) aortic affections and arterial cardiopathies; (3) pleuropulmonary affections such as pleurisy and pneumonia; (4) thoracentesis, when the effusion is too rapidly withdrawn; (5) certain infective states, eruptive fevers, acute articular rheumatism, influenza, typhoid, erysipelas; (6) certain affections of the nervous system; (7) intoxications and dyscrasia, such as acute alcoholism, but only when the kidney is damaged; the injection of saline solutions, owing to sudden increase of arterial tension, inhalations of nitrite of amyl, and the use of iodid of potassium and, lastly, gout. In most instances acute pulmonary edema is the consequence of Bright's disease; consequently the treatment, that is to say the prophylactic treatment, is that of chronic nephritis.

Journal of Tropical Medicine and Hygiene, London

February 15, XV, No. 4, pp. 49-64

31 Some Effects of Climate on Health of Imported Tea-Garden Labor in Assam. C. Roper.
32 Scientific Investigation of Malaria. M. D. O'Connell.
33 Antimalarial and Antiyellow Fever Work in Calabar, Southern Nigeria. W. Best.

Bulletins de la Société de Pédiatrie, Paris

January, XIV, No. 1, pp. 1-32

34 Symmetrical Gangrene in Boy of 3. (Cas très grave de maladie de Raynaud chez un enfant de trois ans.) G. Variot and Morance.
35 Inherited Syphilis of the Nervous System. (Quelques faits d'hérédosyphilis du système nerveux.) H. Barbier and Gassier.
36 Foreign Bodies in Esophagus; Two Cases. (Corps étranger dans l'oesophage.) H. Abrand.
37 Experimental Rachitis. A. B. Marfan and Feuillie.
38 Simulated Ileus and Pneumococcus Septicemia. (Pseudo-occlusion intestinale et septicémie à pneumocoque.) H. Triboulet and S. I. De Jong.
39 Intoxication from Milk and Tolerance for Desiccated Milk. (Intoxication par le lait liquide et tolérance pour le lait sec.) M. Nageotte-Wilbouchevitch.

Grèce Médicale, Syra, Greece

February 15, XIV, No. 4, pp. 1-4

40 *Healthy Cholera Bacillus Carriers. (Questions d'hygiène et de prophylaxie internationale.) A. Panayotatou. Commenced in No. 1.

40. **Healthy Cholera Bacillus Carriers.**—Panayotatou is an official of the international public health office at Alexandria, Egypt, and he reviews the experiences to date with healthy cholera germ carriers as recorded in the literature and then gives the details of the similar occurrences at Alexandria in the last few months.

Seventeen healthy bacillus carriers were found on five ships arriving in the harbor from other Mediterranean ports; three of the ships had no cases of cholera on board. The bacillus carriers and those presenting the disease were always among the poorest and most crowded passengers, confirming the assumption that cholera is a disease affecting almost exclusively the lowest strata of society. The bacillus carriers on the infected ships had always been in more or less direct contact with the sick. The disease broke out in several of the cases later than the incubation period of five days, which is accepted as the limit by the international convention. One two months' babe had in its stools vibrios agglutinating at 1 to 20,000, while it seemed perfectly well all the time; its mother who tended it exclusively was free from cholera bacilli. It was noted that the healthy carriers lost their bacilli in one or two days when the carriers were from ships free from cases of cholera, while the carriers who had been in direct contact with the sick kept the bacilli for from six to thirteen days. The conclusion seems evident from these experiences that the only means for successful prophylaxis is by bacteriologic examination of the stools of all on board ships from infected ports, or at least of all the steerage passengers. This will permit the immediate release of all whose stools are free from germs, while the carriers should be isolated until the vibrios have disappeared from their stools.

Presse Médicale, Paris

February 10, XX, No. 12, pp. 121-132

41 Toxic Action of Hectine on the Ear. (Pronostic des troubles auriculaires provoqués par l'hectine.) Gaucher and Guggenheim.
42 Diuresis in Course of Typhoid Fever. M. Labbé and Bith.
43 *Gout of the Salivary Glands. (La goutte des glandes salivaires.) E. Deglos.

February 14, No. 13, pp. 133-140

44 Subacute Anterior Spinal Paralysis. (Paralysie infantile à type Duchenne-Erb.) A. D'Espine.
45 *Headache from Chronic Cervical Myositis. (Les céphalées musculaires.) P. Hartenberg.
46 Staining Technic for Malaria Parasites. (Importance des colorations extemporanées quasi-vitales pour le diagnostic du paludisme et l'étude des diverses modalités d'hematies parasitées.) J. Sabrazès.

43. **Gout of the Salivary Glands.**—Deglos remarks that the salivary glands are sometimes affected in the course of acute articular rheumatism, and in this case the parotitis is promptly cured with sodium salicylate. He recently was called to a woman of 64, suffering from what seemed to be bilateral mumps. The salivary glands had swollen suddenly, the temperature was only a trifle above normal and the pulse 86. She had had attacks of gout at intervals for fifteen years, and Deglos assumed that the glandular trouble was of this nature and ordered a milk diet, copious drinking, colchicum in large doses and moist heat locally. By the next day the trouble had almost entirely disappeared, confirming his diagnosis.

45. **Headache of Muscular Origin.**—The muscles affected are those in the neck, Hartenberg having repeatedly found in cases of recurring or chronic headache that some of the muscles in the neck were tender, with elastic local swellings or the swellings had hardened to little nodules in the depths of the muscle. Besides the myositis, the lymph-nodes may be large and hard and there may be infiltration and thickening of the skin. The condition may entail migraine, and he has been able to cure in many cases of migraine by treatment addressed to the muscles, especially massage and galvanization. This condition of the muscles is not limited to the neck, but extends throughout the body as a rule, and is the explanation for many cases of assumed neuralgia, sciatica, abdominal algias, etc., the nerves being compressed and irritated by the interstitial nodule formation. Asthma, angina pectoris, gastralgia, pseudo-appendicitis may also be traceable to this cause in some cases. The primary cause is probably defective circulation of blood or lymph from lack of muscular exercise. Local cold and cold in general favor it, as also sedentary occupations. Hartenberg calls it "the rust of the tissues from lack of physical activity" and says that this sclerous cellulitis is a sign of premature senility, and that massage, which smoothes out the infiltrations and nodules, makes one young again.

Revue de Chirurgie, Paris

February, XXXII, No. 2, pp. 153-368

47 *Inflammatory Tuberculosis and Epithelial Cancer. (Tuberculose inflammatoire et cancers épithéliaux.) A. Poncet and R. Leriche.
48 *Tansini's Technic for Amputation of the Mamma. (La technique de l'amputation de la mamelle pour carcinoma mammaire par le procédé de Tansini et sur une nouvelle application de cette operation.) S. d'Este.
49 *Ligation of Common Iliac Artery and Neighboring Vessels. (Région termino-aortique, et ligature de l'artère iliaque primitive et des autres vaisseaux de la région.) A. Chalier and J. Murard.

47. **Inflammatory Tuberculosis and Epithelial Cancer.**—Poncet and Leriche do not mean to say that inflammation from tuberculosis is the exclusive predisposing factor, but they maintain that it certainly has something to do with the development of many tumors as well as of many skin affections, etc. For cancer especially, preceding irritation of the tissues seems an indispensable factor, and this may be of traumatic, chemical or infectious origin. It is their impression that tuberculosis plays a very important part here. They are not able to present proof to substantiate this impression, but urge definite research in this line.

48. **The Tansini Method of Mammectomy.**—D'Este gives a number of illustrations to show the remarkably fine outcome of Tansini's method of amputating the mamma with the glands up into the axilla. The incision encircling the mamma is egg-shaped except that the small end of the ovoid tapers to a point in the center of the axilla. A corresponding ovoid incision is then made on the back, slanting outward from the axilla. The incision curves up on the rear, leaving a broad base to the flap, on a level with and extending back of the axilla. After the breast has been removed, the ovoid flap from the back is slipped around to fill the defect. The mobilization of the flap is facilitated by a short incision sloping backward from the tip of the shoulder. The long narrow triangle of skin pointing upward that has been left between the ovoid incisions front and rear is drawn back and sutured to the skin of the back. The whole fits in perfectly, and some of the twenty illustrations show how a patient is able to raise her arm over her head without difficulty after sixteen days. There is no retraction of tissues or cicatricial growth—merely a linear N-shaped scar.

49. **Ligation of Common Iliac Artery.**—Chalier and Murad have been studying the anatomy of the lower end of the aorta, especially the reciprocal relations between the arteries and veins. They discuss the feasibility and technic for ligating vessels in this region.

Semaine Médicale, Paris

February 21, XXXII, No. 8, pp. 85-96

50 *Mumps Pancreatitis. (La pancréatite ourlienne.) L. Cheinisse.

50. **Pancreatitis During Mumps.**—Cheinisse presents evidence to prove that pancreatitis may be one or the sole manifestation of the acute infection called epidemic parotitis. The pain and protrusion of the stomach region which some writers have explained as acute mumps pancreatitis, may have been merely an acute gastritis as a manifestation of the infectious process. Cheinisse has encountered an unmistakable case of the kind, the pain in the stomach and incessant vomiting sustaining this assumption. In Pick's four cases, however, it was the pancreas region, not the stomach, which was tender, and there was no tendency to vomiting. In some of the cases the pancreatitis was accompanied by extreme slowness of the pulse, 44 being the pulse rate in Edgecombe's case. The pancreatitis, like the orchitis, may precede the parotitis; there was an interval of two days before the parotitis became evident in Sharp's case in a girl of 5. Cuche warns that the fever and pancreatitis may be the only manifestations of the disease, and reports an instructive example of this abortive form. A girl of 13 had typical mumps; ten days later her brother of 11 was taken with intense pain in the right hypochondrium and epigastrium, but there was no vomiting. The stools contained traces of blood and droplets of fat, the urine gave a positive reaction to Fehling's test, and the pancreas could be palpated enlarged. The child soon recovered and there was no trace of parotitis at any time. Although the prognosis seems to be favorable with mumps pancreatitis, yet the two cases reported by Harris in which diabetes mellitus quickly followed on mumps, suggests the wisdom of keeping an oversight over patients who have had pancreatitis during epidemic parotitis.

Beiträge zur klinischen Chirurgie, Tübingen

January, LXXVII, No. 1, pp. 1-333

51 *Operations on Anterior Mediastinum. (Die Eröffnung des vorderen Mittelfellraumes.) F. Sauerbruch.
52 *Reenforcing Herniotomy Wounds with Periosteum. (Die Sicherung grosser und übergrosser Bruchpforten durch Ein oder Aufnähen freier Periostlappen.) K. Henschen.
53 *Operative Displacement of Goiter. (Indikationen und Technik der operativen Kropfverlagerung.) K. Henschen.
54 *Cancer of the Pharynx. (Bericht über 136 Pharynxcarcinomfälle.) Schumacher.
55 Transpleural Laparotomy. (Beiträge zur transpleuralen Laparotomie.) Schumacher.
56 Enucleation of Encapsulated Abscess in the Brain. (Ueber einen Fall von abgekapseltem Hirnabscess und dessen Enukleation.) A. Billeter.
57 *Accessory Thyroid Tumor at Base of Tongue. (Zur Pathologie und Therapie der Zungenstruma.) H. E. Walther.
58 *Fever-Producing Influence of Salt Solution. (Zur Genese der Hyperthermie.) S. Wideröe.
59 *Traumatic Tetanus. (Zur Symptomatologie und Serumtherapie des Tetanus traumaticus.) G. Huber.
60 *Differential Pressure Procedures in Treatment of Stenosis of the Trachea. (Die Verwendung des Ueberdrucks zur Beseitigung von Trachealstenosen.) T. Nägeli.
61 Laceration of Lesser Trochanter. (Die isolierte Abrissfraktur des Trochanter minor.) T. Nägeli.

62 Fracture of the Scaphoid Bone. (Fall von Fractura ossis navicularis pedis.) J. Brodsky.
63 The Bacterium Prodigiosum in a Knee Effusion. (Ueber den Befund des Bacterium prodigiosum im Exsudat einer Gonitis.) H. Freysz.
64 *Repair of Large Defects in the Abdominal Wall and Rectal Prolapse. (Zur Technik der operativen Heilung grosser Bauchbrüche und Mastdarmprolapse.) H. Brun.
65 *Bismuth Poisoning. (Experimentell-klinische Beiträge zur Frage der Wismutvergiftung.) F. Zollinger.
66 Fracture of the Lower Jaw. (Ueber die Frakturen des Unterkiefers und ihre Behandlung.) F. Egger.

51. **Operations on the Anterior Mediastinum.**—Sauerbruch reports four cases in which he opened the anterior mediastinum to remove a tumor; it proved inoperable cancer in three cases. In the fourth case he was able to remedy by this means suffocation from compression of the trachea by an intrathoracic goiter. Instead of dividing the sternum across to obtain access to the mediastinum, he slit the sternum lengthwise and found this a valuable innovation. The skin was incised in a slightly curving line from the neck, along the sternum, and curving a little toward the nipple. He gives the details of the technic, and says that this longitudinal incision, even when the tumor proves inoperable, yet gives great relief by enlarging the chest wall in front and reducing the pressure on the organs and vessels below. This effect was particularly noticeable in one of his three inoperable cases. He reports further remarkable improvement in a case of exophthalmic goiter in which he removed the extremely large thymus. The patient was a young woman, a waitress at Davos, with typical exophthalmic goiter and pronounced myasthenia. Even chewing was difficult on account of the weakness of the muscles involved, and the girl was unable to feed herself. No improvement was observed after ten weeks' rest in the hospital; then the right superior thyroid artery and vein were ligated, but no improvement followed except that the goiter gradually decreased slightly in size. The general symptoms had become aggravated. Under the influence of Garrè's case of improvement after thymectomy and Oppenheim's statement that myasthenia is particularly liable in exophthalmic goiter in which there is enlargement of the thymus, Sauerbruch enucleated the thymus, which was very large. He gives an illustration of the three parts in which the thymus was removed, the total weighing 49 gm. The general condition gradually improved and the blood picture slowly returned to normal. The eyeballs subsided so that the lids were able to cover them; the pulse rate dropped from 110, 120 or 140 permanently to 100, and the patient is able to be up and about and climb stairs. He entered the mediastinum through Garrè's collar incision. The three lobes of the thymus readily shelled out from inside the capsule. The goiter was very soft and vascular, but this was unmolested.

52. **Reenforcing Herniotomy Wounds with Periosteum.**—Henschen reviews the literature on the subject of the repair of large defects in the abdominal wall, with or without alien or autoplastic supports, and then describes his favorable experience with a free flap of periosteum taken from the leg and placed on top of a fascia flap, to remedy a very large abdominal hernia opening following a suprapubic incision on the bladder. Periosteum seems to be peculiarly adapted for the purpose, he says, but it is important to have its fibers run parallel with those of the fascia flap and also the fibers in the abdominal wall.

53. **Operative Displacement of Goiter.**—Henschen reports three cases and cites several on record in which an enlarged goiter causing suffocation was pushed into a new site near by, thus relieving the air passages and vessels from compression without inflicting on the patient the loss of the thyroid or of more than half of it. He reviews the various technics that have been followed: The thyroid can be pushed over or under the muscles by five different methods or the new bed for it can be in front of the muscle, according to seven different methods. The choice depends, naturally, on the conditions in the individual case. In his three cases he worked the goiter, or the half left after partial thyroidectomy, through a slit in the sternocleidomastoid muscle, "like a shirt stud," and held it in place with a suture or two to shorten the slit. The thyroid did not seem to change in size or its circulation suffer in any way from this premuscular dislocation.

54. **Cancer of the Pharynx.**—Schumacher reports a series of 136 cases of cancer of the pharynx at the Zurich surgical clinic during the last thirty years; in eighty-two, conditions were found absolutely inoperable. He thinks that this suggests carelessness on the part of the internists first consulted; in many instances the patients had been treated for weeks and months for mere "sore throat," and the proportion of such cases is no smaller now than in previous decades. The total immediate mortality in the fifty-nine operative cases was 35 per cent.; twenty-five of the thirty-two patients leaving the hospital in good condition died of recurrence within one year; five died in less than four years, and only three of the total 136 patients survived for more than five years, one of this group dying the tenth year from recurrence in a gland. The survival of an average of seven months scarcely compensates for the severe mutilating operation; the patients do not have time to become accustomed to the consequences of the operation before recurrence is on them. His conclusion is that cancer of the pharynx requires the most radical intervention if any is attempted; the tendency to a conservative technic at the Zurich clinic is perhaps the reason why the results compare so unfavorably with those reported by Gluck with his unsparing, radical technic.

57. **Accessory Thyroid at Base of Tongue.**—Walther states that sixty-nine cases of an accessory thyroid in the root of the tongue are on record, and adds two new cases to the list. His patients were women of 40 and 50, of cretinoid aspect; the tumor at the base of the tongue had been first noticed twenty-six and one year before the operation. The growth showed plainly in the Roentgen picture; it proved to consist of thyroid structure. It is important to think of the possibility of an accessory thyroid in such cases, as also to examine whether the tumor may not be the only thyroid, in which case its removal might be followed by myxedema.

58. **Fever-Producing Influence of Salt Solution.**—Wideröe's animal experimentation has demonstrated that salt solution and Ringer's solution have an unmistakable effect in raising the temperature, which is not observed with sugar solution. The sugar solution, besides this advantage for infusion, has the further advantage of supplying nourishment to the patient.

59. **Traumatic Tetanus.**—Huber devotes nearly a hundred pages to the detailed report of sixty-nine cases of traumatic tetanus observed at Zurich in the last thirty years. In four cases the portal of entry was an erosion in mouth, nose or uterus. Serotherapy was applied in thirty-eight cases, but no benefit was unmistakably apparent in any case, and the mortality was not reduced. The only chance for it to do good, he thinks, is when it is applied in prophylaxis. Only eleven of the total sixty-nine patients recovered; in two the incubation had been five and seven days, in the others from ten to seventeen days. The antitetanus serum used was from the Berne serum institute in charge of Tavel and Kolle. The mortality of the thirty-eight serum-treated patients was 81.58 per cent., while it was only 64.5 per cent. of the thirty-one patients of the anteserotherapy years.

60. **Differential Pressure Procedures in Treatment of Stenosis of the Trachea.**—Nägeli describes a case in which an elderly woman was suffering from extreme dyspnea from compression of the trachea by a thyroid cancer. As the preparations for its removal were being made, the apparatus to induce positive differential pressure was applied and at once all dyspnea ceased, the stridor was arrested, and the cyanosis subsided; the mask was removed for a moment when the suffocation at once returned but was banished again on reapplication of the positive pressure. This was confirmed again and again, the conditions requiring tracheotomy. The operation was carried to a successful conclusion and the woman survived for nine months. Research on animals was then undertaken to ascertain whether the differential pressure procedure could actually relieve stenosis of the trachea to such an extent as this case suggested. The outcome was a complete confirmation, and demonstrated further that it is immaterial whether the overpressure is with ordinary air or with oxygen; the effect is

mechanical and is most marked when the trachea is intact and the compression is from without. In case of cicatricial stenosis, the benefit is less pronounced. The method is peculiarly advantageous in that under the positive pressure the operation can be done with a minimal amount of anesthetic. It is proving a most valuable aid as an adjuvant to goiter operations, preventing the collapse of the trachea after removal of the thyroid which has been compressing it; the overpressure thus averts the necessity for tracheotomy which otherwise might be necessary.

64. **Repair of Large Defects in the Abdominal Wall.**—Brun gives a Roentgen ray picture of a square of silver filigree used years before to reenforce the suture after a herniotomy. The filigree has changed its shape to some extent, is broken and torn, and shows a number of sharp projecting points of wire where it is torn. He suggests that it might be better to use a pad made of small silver rings, possibly a double pad, like an iron ring pot scraper, or perhaps, a silk net might be better still. In conclusion, Brun describes the successful cure of prolapse of the rectum by a strip of fascia, taken from the thigh, which is run around just above the anus, drawing it up to close the aperture enough to restrain the tendency to prolapse of the bowel above. He gives an illustration of the needle devised for the purpose; it is coiled like a snake, almost in a circle, at right angles to the handle. This method is particularly good for the elderly and for children.

65. **Bismuth Poisoning.**—Zollinger's experimental research confirms the importance of getting all the bismuth out of the system as rapidly as possible when symptoms from it develop, and warm olive oil is recommended for this, especially when the poisoning is from a Beck fistula. The symptoms of bismuth poisoning from external application are cited as fever, headache, nausea, difficulty in swallowing, stomatitis, blue line on the gums, nephritis, convulsions and lockjaw. With internal administration the symptoms occur very rapidly and run a rapid course, especially in children. Intense cyanosis, diarrhea, dyspnea and death from arrest of the respiration formed the symptoms in two infants one and two years old. No changes in the buccal mucosa were observed in these cases. In another case there was a metallic taste in the mouth, blue line and erosions in the lining of the cheeks. Zollinger thinks that the symptoms in this latter case indicate bismuth poisoning while in the two others the trouble was more a nitrite poisoning.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

February 17, XV, No. 41-58. Last indexed March 2, p. 669

67 *Acute Non-Suppurating Thyroiditis. (Die acute nicht eitrige Thyreoiditis.) W. Hagen.

67. **Acute Non-suppurating Thyroiditis.**—Hagen reviews what has been published on this subject and reports a case personally observed. In his case the thyroiditis developed in connection with a duodenal ulcer; in twelve cases on record polyarthritis and in eleven acute tonsillitis had just preceded the thyroiditis.

Berliner klinische Wochenschrift

February 12, XLIX, No. 7, pp. 289-336

68 *Bacteriologic Diagnosis of Thyroid. (Die bakteriologische Typhusdiagnose auf Grund von neueren, in der praktischen Typhusbekämpfung gesammelten Erfahrungen.) W. Gaehtgens.
69 *Internal Ear and Tendon Reflexes. (Labyrinth und Sehnenreflexe.) O. Beck and P. Biach.
70 *Toxic Action of Salvarsan. (Zur toxischen Wirkung des Salvarsans.) G. Stümpke and E. Bruckmann.
71 *The Epiphanin Reaction in Syphilis. (Ueber Untersuchungen mit der Epiphaninreaktion bei Syphilis.) F. M. Meyer.
72 Pharmaceutical Evils. (Pharmazeutische Misstände.) J. Ruhemann.
73 The German Red Cross in the Italian-Turkish Campaign. (Vom Türkenkrieg.) F. A. Theilhaber.

68. **Prophylaxis of Typhoid.**—Gaehtgen's research confirms the fact that search for typhoid bacilli in the secretions of the tonsils and throat will seldom give positive results. The occasional finding, however, of typhoid bacilli in ulcerations on the pharynx sustains the importance of scrupulous care of the mouth as indispensable for effectual prophylaxis of typhoid. The sputum should be thoroughly sterilized. He cites a case in which a maid contracted typhoid from eating what was left from the meals of a typhoid patient. Bacilli were cultivated from the stools in 71 per cent. of his total material during the first week, and from the blood in 63 per cent. During hot weather the typhoid bacilli are crowded out by proliferation of other bacteria, so that the findings even in the stools may be negative.

69. **Relations Between the Internal Ear and the Tendon Reflexes.**—Beck and Biach tested the knee-jerk of patients and then poured cold or hot water into the ear until nystagmus was induced and then tested the knee-jerk again and again, comparing the responses on both sides. The tendon reflexes on the side involved were exaggerated, but only one of the superficial reflexes, the Babinski toe reflex, was exaggerated. All the other superficial reflexes were apparently unmodified.

70. **Toxic Action of Salvarsan.**—In one case jaundice developed and in the other herpes zoster after intravenous injection of salvarsan. The jaundice appeared each time after the two injections of salvarsan, which is cited as evidence of the possibility of a pure toxic jaundice.

71. **Epiphanin Reaction in Syphilis.**—Meyer has applied this test (described in THE JOURNAL, Jan. 21, 1911, p. 228) to the serum of 100 patients and found that it revealed the presence of syphilis with constant regularity. Positive findings were obtained also in a few cases of acute infections or cancer, but the curve was entirely different from that in the syphilitic cases.

Correspondenz-Blatt für Schweizer Aerzte, Basel

February 10, XLII, No. 5, pp. 145-176

74 *Fatal Lead Poisoning from Snuff. (Fall von tötlicher Bleivergiftung durch Schnupftabak.) E. Stadler.
75 Digestive Disturbances in Infants and Their Treatment. (Die Ernährungsstörungen im Säuglingsalter und deren Behandlung.) E. Wieland. Commenced in No. 4.

74. **Fatal Lead Poisoning from Snuff.**—A young housewife presented symptoms of lead poisoning, optic neuritis and finally a brain affection from lead poisoning, which soon proved fatal. The poisoning was traced to the lead foil wrapping of packages of snuff, of which the young woman had consumed 10 gm. a day for months.

Deutsche medizinische Wochenschrift, Berlin

February 15, XXXVIII, No. 7, pp. 297-344

76 *Alcohol Injections in Trifacial Neuralgia. (Behandlung der Trigeminusneuralgien mit den Schloesserschen Alkoholeinspritzungen.) J. Dollinger.
77 Experimental Research on the Complement-Binding Antibodies in Tuberculosis. (Bedeutung der komplementbindenden tuberkulösen Antikörper.) F. Schieck.
78 Embryonal Cells Behave Like Cancer Cells in Respect to Blood from the Umbilicus and Retroplacental Serum. (Verhalten embryonaler Zellen gegenüber Nabelblut und Retroplazentarserum.) R. Kraus, K. Ishiwara and J. Winternitz.
79 Relations Between Natural Immunity and Antibodies. (Beziehungen zwischen natürlicher Immunität und spezifischen Serumstoffen.) G. Seiffert.
80 Difference in Action of Morphin and Opium on the Intestine. (Unterschied in der Wirkung des Morphins und des Opiums auf den Darm.) E. Popper.
81 Results of Combined Salvarsan and Mercury in Treatment of Syphilis. (Erfolge der kombinierten Salvarsan-Quecksilberbehandlung bei Syphilis.) W. Scholtz. (Diagnostische und therapeutische Bedeutung der Spirochaeta pallida nebst Bemerkungen über die wirksamste Bekämpfung der Syphilis.) E. Hoffmann.
82 Abnormal Lime Metabolism Responsible for Rachitis. (Neue experimentelle Untersuchungen über die Pathogenese der Rachitis.) W. Dibbelt.
83 Groove Drill for Puncture of the Brain. (Verwendung eines Rinnenbohrers zur Hirnpunktion.) O. Goetze.
84 Twin Extra-Uterine Pregnancy. (Zwillingsschwangerschaft mit heterotopem Sitz der Früchte.) L. Pernice.
85 Traumatic Appendicitis. (Zur Frage der traumatischen Appendicitis.) F. Brüning.
86 Depressing Action of Roentgen Rays on Growth of Sunflower Seeds. (Zur Kenntnis der biologischen Wirkung der Röntgenstrahlen auf das Wachstum der Pflanze.) J. Wetterer.

76. **Deep Injections of Alcohol for Trifacial Neuralgia.**—Dollinger's experience confirms that of others in regard to the ability of deep injections of alcohol to arrest and cure trifacial neuralgia for a time. In the majority of cases the neuralgia returns in from one to five months, he says, but rarely in as intense a form as before, and another injection cures it anew. In some cases there has been no more pain for over a year to date. Severing and stretching the nerve give only transient relief. The alcohol injections have materially

restricted the field for the Gasserian operation, which is still a very serious affair on account of the frequently severe bleeding. Since Dollinger has been making the alcohol injections he has not found it necessary to remove any Gasserian ganglions, but would not hesitate to do this if the patient's age, social position, business, etc., made it especially important to relieve him once and for all permanently of his neuralgia.

Medizinische Klinik, Berlin

February 18, VIII, No. 7. pp. 263-302

87 *Anaphylaxis as Explanation of Sudden Death After Burns. (Ursachen des Verbrennungstodes.) M. Heyde.
88 Is Name Exophthalmic Goiter Outgrown? (Sind Begriff und Name der Basedowischen Krankheit beizubehalten?) A. Krecke.
89 Vaccine Therapy in Gonorrhea. (Behandlung der Gonorrhoe und ihrer Komplikationen mit Gonokokkenvaccin.) F. Hagen.
90 Migration of Foreign Body from Right into Left Bronchus. (Zur Diagnose der Bronchialfremdkörper.) F. Barnes.
91 Epileptic Seizures from Appendicitis. (Epileptische Krämpfe infolge Appendicitis.) F. Berger.
92 Determination of Hemoglobin Content of the Blood. (Zur Methodik der Hämoglobinbestimmung.) G. Maly.

87. **New Point of View for Treatment of Burns.**—Heyde comments on the obscure causes of death in fatal cases of burns, saying that even larger areas of skin may be destroyed by scalping or other accident which yet cause no special disturbance, while in case of a severe burn the physician has always had to reckon with some mysterious factor which may prove rapidly fatal at any moment. This mysterious factor, Heyde thinks, is a condition of anaphylaxis induced by absorption of substances from the burned tissues which act like an antigen; after a certain time the body becomes sensitized and any further absorption entails fatal anaphylaxis phenomena. The disturbances observed after contusions, torsion of internal organs and similar conditions in which there is considerable destruction of tissue, have a similar origin—absorption of albumin from the injured tissues. The albumin, modified by the destructive processes, acts like an alien albumin. This explanation of the fatalities after burns applies in particular to the cases in which the patient seems to be doing well for twelve or fifteen days and then suddenly succumbs with phenomena for which no postmortem explanation can be found. Heyde has had a number of cases of this kind, mostly in children and the burns were not particularly extensive. The children seemed to be doing well when suddenly they developed serious symptoms, the temperature dropping, and the little patients soon died in convulsions and delirium. Similar phenomena can be reproduced in animals at will by inflicting a small burn or reimplanting some of their own tissues incinerated outside; the animals die with symptoms of hyper-susceptibility, although the tissues implanted or the suspension injected is in itself harmless. These considerations suggest that it would be wise in case of burns to remove the burned tissue more thoroughly than has been the practice hitherto. Heyde adds that calcium chlorid and atropin have proved effectual antidotes to methyl guanidin, which fact might be utilized in combating the effects of burns.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXIV, No. 2, pp. 195-382. Last indexed January 20, p. 233

93 *Senile Osteomalacia. J. Reich.
94 Obliteration of the Appendix in Youth Result of Inflammation, in Age Result of Sclerous Changes. (Zur Frage der Appendixobliteration.) E. Miloslavich and K. Namba.
95 Acute Colitis. E. Sonnenburg.
96 Occurrence of Zones of Hyperalgesia After Injuries of the Skull. (Auftreten von hyperalgetischen Zonen nach Schädelverletzungen.) K. Hannsa.
97 *Hydrops of Bile Apparatus. (Zur Frage des Hydrops des gesamten Gallensystems.) J. Berg.
98 *Sodium Nucleinate in Prophylaxis of Peritonitis. (Beobachtungen und experimentelle Untersuchungen über den Wert der Injektion des nukleinsauren Natriums bei der Prophylaxe der operativen Infektion des Peritoneums.) E. De Paoli and A. Calisti.
99 *Bile Peritonitis Without Perforation of Bile Passages. (Gallige Peritonitis ohne Perforation der Gallenwege.) G. Doberauer.
100 *Operative Treatment of Cerebellar Cysts. (Zur Kenntnis der operativen Behandlung der Kleinhirncysten.) A. v. Eiselsberg and L. v. Frankl-Hochwart.
101 The Leukocyte Count in Tetanus. (Ueber die Leukocytose bei Tetanus.) H. Bennecke.
102 *Operative Treatment of Tumors of Spinal Meninges. (Operative Behandlung der Geschwülste der Rückenmarkshüllen.) L. M. Pussep
103 Plastic Operations on the Esophagus. (Zur experimentellen Pathologie und Chirurgie des Schluckapparates—Oesophagoplastik.) J. Schreiber.
104 *Connection Between Cancer in Ovaries and Stomach. (Primäres oder metastatisches Ovarialcarcinom?) O. Schaeffer.

93. **Blunders in Treatment of Senile Osteomalacia.**—Reich says that the failure to recognize senile osteomalacia is peculiarly disastrous, as it can be so easily cured by phosphorus and cod liver oil. It is generally mistaken for rheumatism, sciatica, or other neuralgia, and is treated for years unavailingly on this mistaken basis. The senile type of osteomalacia is distinguished by its slow course, the disturbances coming on very insidiously and slowly. The pains, however, appear early and persist tenaciously. They are generally felt first in the chest and sacrum, then in the thighs and later in the pubis; the pelvis is seldom involved, and this is one reason why osteomalacia is so seldom suspected in patients outside of a pregnancy. The pains are aggravated by contact, and those in the chest are rendered very severe by coughing or sneezing, a point useful to remember in differentiation. The pain in the thigh is aggravated by pressure on the thigh from any side; with sciatica this occurs only with pressure on one side as a rule. Contracture of some of the muscles of the legs is common in senile osteomalacia, especially contracture of the adductors, causing a peculiar gait, the typical aspect of the patients being further characterized by a deep groove across the epigastrium and by their growing shorter in stature. The muscular contracture sometimes subsides in bed, but returns as the patient gets up. Paralysis was never noticed in the six cases reported in detail, but vasoconstrictor phenomena were common, and the disappearance of these vasoconstrictor symptoms under phosphorus confirms their dependence on the osteomalacia syndrome. Reich has never encountered any trophic disturbances, but Curschmann has reported two cases with such. In some of Reich's cases the patients had been treated for years for rheumatism or sciatica, without benefit; under the phosphorus the pains promptly subsided and marked and durable benefit followed. He uses a 0.01 per cent. solution of phosphorus in cod liver oil, the patient taking from three to five teaspoonfuls of this daily. It has to be kept up for months, but he has never noticed any untoward by-effects from its use even when it was kept up for a year. During the first two or three weeks the patients had better stay in bed. On account of the osteomalacia pains in the chest, the patients breathe superficially and bronchitis is common among them, with danger of pneumonia until they improve under the phosphorus. He thinks that this phosphorus treatment should be given a trial in every case of osteomalacia at any age before operative measures are applied. He adds that we have no reason to assume that the internal secretion of an organ dries up with cessation of the genital functions of the organ; the internal secretion of the ovaries, for instance, may continue, become excessive or perverted, and may be the cause of osteomalacia in the elderly. Two of the six patients were men; one patient was a virgin of 64, and the first symptom in her case was that her skirts seemed to be too long for her, there was no pain until several months later. Another patient had noticed that she was growing stiffer, and that it was difficult for her to stoop over, her skirts seemed to grow longer, and her feet bigger and painful. The symptoms in this case had continued for twenty years before the affection was properly diagnosed and practically cured by the phosphorus-cod liver oil. Trauma induced an exacerbation of all the symptoms in one case; in another the condition was aggravated by an existing valvular defect. Another patient was a man of 65, who had been treated ineffectually during seven years for assumed sciatica, but was cured in a few weeks by the phosphorus. He measured 5 cm. less than before the osteomalacia developed.

97. **Case of "White Bile."**—Berg reports a case of partial gall-stone obstruction of the common bile duct, in which the bile in the biliary passages seemed to have turned to water. The change occurred acutely, together with acute infection of the biliary passages. The patient had had symptoms of cholethiasis for five years with recurring infection of the bile ducts. The case shows that changes in the chemical com-

position of the bile may be a factor in the production of stones; attention hitherto has been directed too exclusively to stasis and infection as the main factors.

98. **Prophylaxis of Peritonitis by Sodium Nucleinate.**—The clinical and experimental experiences related in this article seem to show that prophylactic injection of sodium nucleinate in operations on the abdomen is scarcely needed in well equipped clinics, except when operative infection from the organ being removed is feared. But conditions are different when the surgeon does not have skilled assistance at his disposal; under such conditions the prophylactic injections may help and will give him greater confidence in his operating. The power of resistance to infection seems to be increased in the peritoneum by the preliminary injections, but this is not manifest in the subcutaneous tissue. Paoli and Calisti had only one death from septic peritonitis among the 200 patients given the prophylactic injections, a far better showing than in preceding similar series. At Eiselsberg's clinic, also, the mortality from operative infection dropped from 9.6 per cent. to 4.6 per cent. during the five years of the prophylactic injections, but he does not ascribe this improvement to the injections, but rather to improved technic. This Paoli and Calisti think is unjust; they believe that the credit should be given the injections for some at least of this better showing.

99. **Bile Peritonitis Without Perforation of the Bile Passages.**—Doberauer has recently encountered two cases of peritonitis with considerable bile in the abdominal cavity, in which he was unable to detect the slightest lesion in the walls of the biliary passages. The permanent recovery after draining the abdomen and gall-bladder confirmed the assumption that the walls were intact. A contusion in one case and typhoid fever in the other were the predisposing factors for the seeping of the bile through the walls.

100. **Cerebellar Cyst.**—In the case reported, the type of the headache, the pain radiating to the back of the neck, the vertigo, inability to stand, bilateral choked disk, and slight disturbances in swallowing pointed to a tumor in the posterior cranial fossa and the loss of the right corneal reflex apparently located the tumor on the right side. It proved to be a cyst in the cerebellum, which was successfully evacuated at two sittings six days apart. After the removal of the cyst the symptoms subsided, but the patient's speech became slightly defective, with inability to pronounce certain letters and an echoing repetition of certain sounds. The improvement realized has been permanent during two years to date.

102. **Tumors in Spinal Meninges**—Pussep reviews the literature on tumors in the spinal cord and membranes and reports with minute neurologic details three cases of tumors in the spinal meninges which were successfully removed in Bechterew's service at St. Petersburg. The benefit was prompt and pronounced, the spinal cord functions being promptly restored even in the case in which the cord had been compressed by the tumor until it was only 0.5 cm. thick. The cord fibers had not been broken, except in the third case, and in this instance the functions of the broken fibers could not be restored. The prognosis for mere compression is excellent, but only partial restoration of function can be anticipated when any fibers are broken. He describes the sequence in which the motor and sensory disturbances gradually righted themselves after the operation.

104. **Connection Between Cancer in Stomach and Ovaries.**—Schaeffer reports a case in which a primary cancer in the right ovary progressed without any interference with menstruation, which was regular and painless. The patient was a v-para of 37, who complained merely of oppression in the stomach during the last two months; the umbilicus had been protruding a little for four months. A tumor was palpated in the left pouch of Douglas and some ascites was found in the abdomen. The exploratory laparotomy revealed a cancer in the left ovary with metastases spreading upward to the stomach, where a knobby infiltration could be felt, evidently secondary to the ovarian tumor. The patient died a month later. There had been absolutely no symptom in this case to call attention to the ovarian cancer. When the umbilicus was seen to protrude this was evidently a sign of metastatic ascites, and the malignant disease must have been then far advanced. There is still a possibility, however, that a prompt laparotomy at that time might have permitted the discovery and removal of the primary cancer and saved the stomach from involvement. Schaeffer urges the application of all the chemical and roentgenoscopic tests for stomach and intestinal functioning and findings in cases of cancer in the ovary, even when there is nothing to call attention to the gastro-intestinal tract. All preparations should be made for resection of the stomach at need in operating on the ovaries, and he advises removal of both ovaries whenever resection of the stomach is to be done, and removal of both ovaries when one is found cancerous.

Münchener medizinische Wochenschrift

February 13, LIX, No. 7, pp. 345-400

105 *Roentgenoscopic Examination of Motor Functioning of the Stomach. (Prüfung des Magens auf "rohe Motilität" mittels der Durchleuchtung.) G. Holzknecht.
106 Salvarsan in Syphilis. (Zur Frage der Abortivbehandlung der Lues mit Salvarsan.) K. Stern.
107 Salvarsan in Anthrax. (Milzbrand und Salvarsan.) G. Schuster.
108 Postural Influencing of Intracranial Circulation. (Ueber die Beeinflussung der Blutzirkulation im Schädelinnern durch die sogen. Sternokleidostellung des Kopfes.) O. Muck.
109 *Silicic Acid in Milk Sterilized in Glass Bottles. (Die Uebergang von Kieselsäure in die Milch beim Sterilisieren in Glasflaschen.) H. Schulz.
110 Vaccination of Rabbits. (Die Kaninchenimpfung.) W. Ponndorf.
111 *Typhoid Carrier in Institution. (Typhusbazillenträgerin in einem Erziehungsinstitut.) K. Bernhuber.
112 Vertical Strabismus. (Ein Fall von Höhenschielen vor 120 Jahren, nach Selbstbeobachtung des Kranken—und einige von heute.) W. Schoen.
113 Case of Alkaptonuria with Ochronosis. V. Poulsen.
114 Treatment of Febrile Abortion. (Darf dem praktischen Arzt eine Behandlung des fiebernden Aborts nach bakteriologischen Gesichtspunkten heute schon zugemutet werden?) E. Holzbach.
115 Dosage of Roentgen Rays. (Zur quantitativen Messung der Röntgenstrahlen bei therapeutischer Verwendung.) E. Runge.
116 *Chronic Cardiac Insufficiency and Strophanthin Treatment. (Chronische Herzinsuffizienz und intravenöse Strophanthintherapie.) A. Fraenkel. Commenced in No. 6.

105. **Test for Motor Functioning of the Stomach.**—Holzknecht and Fujinami report experiences which show that in case of pylorospasm 200 c.c. of water is generally passed along out of the stomach after the normal interval of sixty or seventy minutes or less, while with stenosis of the pylorus the interval is materially longer. The particulars are most instructively shown by the sinking and floating capsules, each containing some bismuth in an insoluble capsule, one containing enough air to make it float. As the water is expelled, the floating capsule sinks lower and lower until it can be seen lying beside the heavy capsule. They call this the "test for raw motility," and say that it will often clear up the diagnosis after failure of all other measures.

109. **Silicic Acid, from the Bottles, in Sterilized Milk.**—Schulz states that even a good quality of glass yields up silicic acid to the milk when it is long boiled in the bottle, and a poor quality of glass yields it constantly even with brief boiling. He found the proportion of SiO_2 in a liter of untreated milk from 0.0004 to 0.0064 gm., but the proportion increased by 0.0028 to 0.0116 after boiling for five minutes in a bottle of good glass, while the increase was from 0.0016 to 0.03 when boiled in a cheap glass bottle. He thinks these amounts of silicic acid passing constantly into the milk given to infants are sufficient to explain at least the obstinate constipation in certain bottle-fed infants, and possibly to throw light on infantile scorbutus as the result of an excess of silicic acid.

111. **Typhoid Carriers.**—Bernhuber relates that a boys' school has had a number of cases of typhoid fever in the last ten years, sixteen between 1907 and 1910, with three deaths, and large sums of money were spent in perfecting the sanitary arrangements, but without eradicating the typhoid endemic. Three simultaneous cases in 1910 roused the authorities to make a bacteriologic examination of all the inmates, and the cook was found to be a chronic bacilli carrier. She had had severe typhoid fever twenty-two years before, and an attack of jaundice eight years later, and had

been in the employ of the institution since its opening. The cook succumbed not long after this discovery to heart disease, and typhoid bacilli were found in all the organs examined. During the year since her death the institution has been free from typhoid.

116. **Intravenous Strophanthus Treatment of Chronic Heart Disease.**—Fraenkel advocates systematic repeated intravenous injections of strophanthin when digitalis is not borne or has lost its effect in chronic heart disease. In a typical case related in detail of chronic valvular defect and degeneration of the myocardium, with lost compensation and congestion in the liver, digitalis was not borne by the mouth, but, under small intravenous injections of strophanthin, the patient was kept in fair condition for a year and a half, and then treatment was suspended as the improvement was so marked. She was a woman of 48, and she had required tapping eight times and eighty-five intravenous injections of strophanthin had been made in the eighteen months. He commenced with half a milligram and repeated the injection only when the favorable effect had died out. The doses ranged from a quarter to a whole milligram, the total amounting to 0.0845 gm. strophanthin. At the end of the course the ascites had nearly entirely subsided, the liver was much smaller than at first, and the patient could walk on level ground without shortness of breath and she was able to sleep without the morphin she had previously required. Progress in this method of therapeutics, he says, is not so much in the choice of a preparation of strophanthus as in the systematic and cautious manner of its use and study of indications requiring the medication by the mouth or by the intravenous route.

St. Petersburg. medizinische Zeitschrift

February 14, XXXVII, No. 3, pp. 33-46

117 *Underfeeding as a Therapeutic Measure. (Die Unterernährung in der Therapie.) Hermann.

117. **Underfeeding as a Therapeutic Measure.**—Hermann cites a number of instances showing how animals can do without food for months at a time, even outside of hibernation. The Rhine salmon, for instance, comes up from the sea to the Upper Rhine to spawn every year, and during the four up to fourteen months in the river it eats nothing, its stomach being found constantly empty. The ovaries during this time grow from 0.4 per cent. to 19 or 27 per cent. of the body weight, mostly by transformation of the reserve substances in the muscles; the eggs in the roe are rich in nuclein and lecithin while the muscles are drained of these elements. Male seals also go without food, he says, during months at a time in the rutting season. These and similar examples show that living beings can exist without food for months at a time in good health. Hermann has had a patient, a butcher of 35, at one time a hard drinker, whose mind became affected and he ate absolutely nothing for sixty days, merely drinking copiously of taara, an acid drink. At the end of this time his mental condition had so much improved that he became self-supporting again. Hermann knows of another case of this kind, a teacher, 56 years old, rather corpulent, who suddenly ceased to have any desire for food and took none for sixty days, merely drinking water freely. He lost flesh, but did not miss any of his classes, and when he began to eat again he was not especially hungry. His health did not seem to suffer in the least. Physiologic and other research has demonstrated that during fasting the brain loses least (0 to 3 per cent.), the heart 3 per cent., and the blood 17 per cent.; the spleen 63 per cent.; the liver 56 per cent., and the muscles 30 per cent. Hermann thinks that these figures and other data which he cites confirm the fact that fasting for three or four days is not dangerous; the economy gains more than it loses, if the bowels are kept open. The benefit realized from a course of fasting can be estimated by analysis of the blood and of the excreta which shows the clearing out of waste products. The Karell cure, grape cure, vegetable day of diabetics, and similar courses of dieting are only a mild form of fasting. He quotes Dewey's statement that the fasting should be kept up until the body has got rid of all the toxic waste. When this point is reached, the individual is notified by return of an imperious appetite.

Therapeutische Monatshefte, Berlin

February, XXVI, No. 2, pp. 89-156

118 Theoretic Bases for Tuberculin Therapy. (Ueber die therapeutischen Grundlagen der Tuberkulin-Therapie.) J. Bauer.
119 Theoretic and Clinical Bases for Internal Disinfection. (Innere Desinfektion.) J. Morgenroth.
120 Experimental Pharmacology. (Anwendungsgebiete der experimentellen Pharmakologie für die Therapie.) H. Januschke.
121 Availability for Food of Disintegration Fragments of Proteins in Place of the Ordinary Complex Proteins. (Ueber die Brauchbarkeit tief abgebauter Eiweisspräparate für die Ernährung.) F. Frank and A. Schittenhelm.
122 *Salicylate Salve in Rheumatism. (Zur perkutanen Salizyltherapie.) P. Scharff.
123 Scopolamin Solutions Do Not Keep Well and Should be Made Fresh. (Ueber die Haltbarkeit von Scopolaminlösungen in Ampullen.) H. Langer.
124 The Salt Content of the Air at the Seashore. (Salzgehalt der Seeluft.) W. Heubner, A. Loewy, F. Müller and W. Cronheim.

122. **Salicylic Medication Externally.**—Scharff has for some time been advocating a salicylic acid, turpentine and sulphur unguent, which in fifteen years' experience he has found extremely efficient in rheumatic and rheumatoid affections. Each of the four ingredients is active in combating the rheumatism, and the urine soon gives the reaction for salicylic acid, showing that the drugs are absorbed. The formula is:

℞	Acidi salicylici	10.
	Solve in ol. terebinthinæ....................	10.
	Sulphuris praecip. vel sublimati............	
	Terebinthinæ ....āā	40.

In a typical case described in detail it promptly cured a woman who had been absolutely helpless from rheumatism involving every joint and very painful. She was able to move only her head. The salve is applied to the parts and covered with oil silk or rubber tissue or dusted with powder. The oil silk generally sticks to the skin and may require no further dressing except the clothing to hold it in place. On exposed regions a starched dressing outside may be found useful to protect the part. The sensation ranges from an agreeable warmth to smarting, but the smarting is generally bearable and is gone in less than half an hour. The salve is left unmolested for from three to five days, and is then renewed if the skin is not too sensitive; otherwise a soothing application is made at first. He has cured in this way in a week all his patients with acute articular rheumatism, thus sparing the stomach the internal salicylic medication. He has found his salve useful also in myositis, sciatica and other neuralgias, in attacks of gout, tendon sheath lesions, contusions and sprains, the pain-soothing and hyperemia-inducing action of the salve under its air-tight covering promptly curing the trouble, especially when supplemented by massage and electricity.

Wiener klinische Wochenschrift, Vienna

February 15, XXV, No. 7, pp. 259-290

125 Tuberculosis of the Hilus of the Lung in Children. (Die Hilustuberkulose des Kindes im Röntgenbilde.) E. Sluka.
126 *Lordotic Albuminuria. (Zur Kenntnis der lordotischen Albuminurie.) F. Hamburger.
127 *Influence of Sex on Origin and Form of Heart Disease. (Ueber den Einfluss des Geschlechtes auf die Entstehung und Gestaltung von Herzkrankheiten.) M. Herz.
128 Research on Blood Serum with Cancer. (Aus dem Gebiete der Krebsforschung.) A. Krokiewicz.
129 Quarantine Experiences. (Quarantänestudien.) E. Wiener.
130 Breast-Nursing Propaganda. (Poliklinische Beobachtungen aus der Stillpropaganda.) E. Mayerhofer.
131 Psychotherapy. (Das psychagogische Heilverfahren.) H. Kahane.

126. **Albuminuria from Mechanical and Vasomotor Causes.**—Hamburger remarks that Jehle's discovery that lordosis induces albuminuria in some persons is certainly the greatest progress of recent years in the knowledge of albuminuria in general. It threw light at once on the albuminuria of puberty and orthostatic albuminuria, but it does not explain everything. Besides the mechanical factor of the impediment to the circulation in the kidney from the lordosis, there must be vasomotor factors at work. This is the only explanation possible for the cases in which under identical mechanical and physical conditions the albuminuria occurs on some days and not on others. In a recent case a boy of 13 had had headaches, sleeplessness, pains in the heart, and was losing flesh, all coming on after severe emotional stress. Examination two weeks later confirmed the severe neurosis affecting mainly the

circulatory apparatus. The urine was free from albumin; the boy was then instructed to kneel down in extreme lordosis for five minutes. It caused nausea and vomiting and a syncope, and enormous amounts of albumin were found in the urine; it coagulated throughout on boiling. The previously rigid arteries became quite soft. Under valerian and clearing up of the misunderstanding causing the emotional stress, all symptoms completely subsided. In other cases the child would have albuminuria one day and not the next, although all conditions were alike. The same degree of lordosis or stasis in the kidney circulation will induce albuminuria in one child and not in another, and even in the same child at different times the response may vary.

127. **Influence of the Sex on the Origin and Form of Heart Disease.**—Herz comments on the rarity of true angina pectoris and Cheyne-Stokes breathing in women, while he has found mitral stenosis more common in them and aortic insufficiency more common in men. When a man has true angina pectoris and Cheyne-Stokes breathing, a serious lesion must be accepted with a fatal outcome before long. But when a woman presents this syndrome the outlook is much less serious. He has known women with enormously enlarged hearts and a blood pressure of over 200 mm. keep in subjectively fairly good condition for years. Climacteric sclerosis of the aorta and uterine myoma-heart have no analogies in men. The fat heart of women seems also a far less serious condition than in a man presenting the same symptoms—becoming easily fatigued, with shortness of breath on exertion and pounding heart beat. He has found that a cardiac neurosis is frequently associated with mitral stenosis in women. Men generally display remarkable tolerance to valvular defects. He has known a number of men with mitral insufficiency, left from rheumatism in youth, who seem to be little disturbed by it, although leading a long strenuous life; he has never encountered analogous cases among women. In his experience, valvular defects of rheumatic origin are not transmitted by men to their offspring, but by the mothers to children of both sexes, while arteriosclerotic contracted kidney is more often inherited by daughters from the mother and coronary sclerosis by sons from the father. The familial form of arteriosclerosis generally is inherited by one or the other sex in the family, seldom by both.

Zeitschrift für klinische Medizin, Berlin

LXXIV, Nos. 3-4, pp. 179-354. Last indexed February 10, p. 450

132 Experiences with the Rosenbach Tuberculin. (Erfahrungen mit Rosenbachschem Tuberkulin.) R. Kohler and M. Plaut.
133 *Deforming Arthritis with Atrophy. (Die sogen. Arthritis deformans atrophica.) H. Beitzke.
134 Measurement of Pulse Energy: Sphygmobolometry. (Weitere Beiträge zur Kritik der Sphygmobolometrie und zur Verbesserung ihrer Methodik.) H. Sahli.
135 Sensibility of the Skin. (Zur Lehre von der Hautsensibilität.) A. Goldscheider.
136 Favorable Influence of Meat Extractives on Utilization of Vegetable Food (Ueber den Einfluss der Extraktivstoffe des Fleisches auf die Ausnützung vegetabilischer Nahrung.) H. Wolff.
137 *Pathogenesis of Polyneuritis. H. Eppinger and A. Arnstein.
138 Ice Test of Functional Capacity of Arteries Unreliable. (Der Kältereiz als Mittel zur Funktionsprüfung der Arterien.) M. Hellendall.
139 Consumption of Oxygen in the Lungs. (Gibt es einen nennenswerten intrapulmonalen Sauerstoffverbrauch?) N. Zuntz.
140 Excretion of Urine and Salts in Diabetes Insipidus. (Bemerkungen zu der Arbeit von Forschbach und Weber: Beobachtungen über die Harn-und Salz-Ausscheidung im Diabetes Insipidus.) E. Meyer.
141 Rise in Blood-Pressure After Removal of Both Kidneys. (Ueber Blutdrucksteigerung nach doppelseitiger Nierenexstirpation.) E. Mosler.

133. **Deforming Arthritis with Atrophy.**—Beitzke expresses surprise that so little attention has been paid to the worn places found so frequently in the joint cartilages at necropsy. He has been making a special study of them and has become convinced that these places become worn by friction aided by various mechanical causes, such as tight shoes. Then when some toxic products or infectious germs get into the body, these worn places supply a place of lesser resistance, and a deforming arthritis is set up. He gives the tabulated details in this respect from 200 cadavers, all but eighteen male and seventeen female cadavers showing joint changes, most common in the toes. Over 87 per cent. of 139 with chronic disease had these joint changes. They were rare in the young; occurred in 60 per cent. in the cadavers between 20 and 40, in 95 per cent. between 40 and 50, and in 100 per cent. after this age.

137. **Lead Poisoning and Liver Disease as Factors in Polyneuritis.**—Eppinger and Arnstein report a case of polyneuritis occurring in chronic lead poisoning which presented several unusual features. In a number of other cases cited polyneuritis was evidently due to liver disease, and in the lead poisoning case there were signs of this also. They think that the liver derangement has much to do with the development of the polyneuritis; some toxic product normally taken care of by the liver is allowed to remain unmodified or is modified in some abnormal manner, and it acts on the nerves, inducing the polyneuritis. The suggestion is tentatively advanced that the recent research on the peculiar sensitizing properties of fluorescent substances (Tappeiner and Hausmann) may explain the polyneuritis in these cases as the result of the action of urobilin in the blood—urobilin being a fluorescent substance. Hematoporphyrin might also be considered from this standpoint. In the lead-poisoning case the polyneuritis was of the Landry type and the patient presented intense urobilinuria and urobilinemia.

Zeitschrift für Urologie, Berlin

February, VI, No. 2, pp. 97-175

142 Shape and Location of the Kidneys. (Zur Morphologie und Topographie der Niere.) E. Wolff.
143 Anuria Years After Nephrectomy, Cured by Slitting Kidney Down to the Hilus. (Anurie bei Solitärniere.) D. Giordano.
144 *Mental Complications of Enlarged Prostate and of Prostatectomy. (Fernkomplikationen bei transvesikalen und perinealen Prostatektomien. Prä- und postoperative Geistesstörungen.) B. Guisy.
145 Stab-Wounds of the Kidney. (Zwei Fälle von Stich-Schnitt-Wunden der Niere.) P. D. Solowow.
146 Influence of Injection of Prostatic Secretion and of Prostate Cytotoxin. (Versuche mit Prostatacytotoxin.) J. Sellei.

144. **Mental Disturbances with Hypertrophied Prostate.**—Guisy has observed mental derangement as a postoperative complication in three of his last seventeen cases of prostatectomy. He called attention in 1896 to the frequency of mental disturbances in connection with malformations or various affections of the urogenital apparatus, including the prostate as well as the testicles. Insomnia, melancholia and hypochondria, in particular, frequently accompany chronic prostatitis of gonorrheal origin or follow venereal excesses. He reported three cases at that date: in one a man of 70 with senile hypertrophy of the prostate, had a sudden attack of mania in which he tried to cut his throat with a razor; another of 60 drowned himself; another, only 50 years old, with chronic prostatitis, developed chronic melancholia and avoided his wife and children. Guisy has encountered nine similar cases among his ninety-three prostate patients since, the mental disturbances ranging from changes in character, torpor and melancholia, with or without optic or auditory hallucinations, general tremor and twitchings, to maniacal attacks with or without a tendency to suicide. His experience seems to indicate that these psychoneuroses may be due not only to disturbances from the enlarged prostate, but may occur as a consequence of its removal, that is, of total prostatectomy. None of his patients had shown any previous tendency to nervous or mental disease. One of his patients a few days after perineal prostatectomy became irritable and melancholy and in six weeks maniacal attacks developed, recurring for nine months before the patient, a man of 69, regained his normal poise. In another case a man of 59 showed within a week after the prostatectomy a complete change of character, and in two months the melancholia with suicidal tendency required institutional care, and there has been no improvement since. Guisy observed a similar severe melancholia, after prostatectomy for severe urogenital tuberculosis, in a man of 29, who had borne without disturbance the removal of the left testicle and vas and the epididymis on both sides two years before. Guisy is convinced that the internal secretion of the prostate has a direct influence on the brain, while he does not think it has any special action on the testicles, or vice versa.

Zentralblatt für Chirurgie, Leipsic

February 17, XXXIX, No. 7, pp. 209-248

147 *Removal of Hypophysis Tumor Through Anterior Cranial Fossa. (Intrakranialer Weg zur Hypophysis cerebri durch die vordere Schädelgrube.) N. F. Bogojawlensky.
148 *Etiology of Scoliosis. (Neuer Beitrag zur Aetiologie der Skoliose.) V. Chlumsky.
149 Incision for Appendicectomy. (Zur Schnittführung bei Appendixoperationen.) K. Frankenstein.
150 Plastic Restoration of Anus After Resection of Rectum. (Anusplastik nach Exstirpatio recti.) C. Bayer.

147.—**Access to Hypophysis Through Anterior Cranial Fossa.**—Bogojawlensky reports a case in which he successfully exposed and removed a tumor in the hypophysis cerebri through an opening made by turning back a flap in the frontal bone, opening up the anterior fossa. The skin-bone flap was cut 9 cm. long, the incision about 2.5 cm. from the median line, and the incision at right angles to this was also 9 cm. long and at a distance of 2.5 cm. from the top of the orbit. Six weeks after the flap had been cut it was turned back, the dura cut in H-shape and turned back, and the patient's head allowed to hang down over the edge of the table, the end of which was raised about 30 degrees. The right frontal lobe was separated from the roof of the orbit, and this exposed a cleft 5 cm. broad in front, the optic nerve seen in its depths, nearly 8 cm. below. The tumor causing the trouble was distinctly visible in front of the optic commissure, and it was easily scooped out. The patient was a man of 35 who had had symptoms of a hypophysis tumor for two years. He recovered from the operation without the slightest drawback, except that a little effusion under the flap required release the next day. He was able to sit up in two weeks and in three weeks the acromegaly had already retrogressed considerably. Vision was not disturbed. The ease and successful outcome in this case are cited as establishing beyond question the superiority of this intracranial intradural mode of access through the anterior fossa, which permits ample oversight of the field and an aseptic operation.

148. **Origin of Scoliosis.**—Chlumsky has found that the fetus is liable to maintain a position in the uterus which induces a tendency to scoliosis. Born with this tendency, it requires appropriate correction from the start or a settled scoliosis results which it is difficult or impossible to correct later. The infant's spine should be examined as a routine measure, and any tendency to scoliosis should be recognized at once and corrected before it becomes chronic.

Zentralblatt für Gynäkologie, Leipsic

February 17, XXXVI, No. 7, pp. 193-224

151 Febrile Abortion. (Vorschläge für weitere Forschungen über den fieberhaften Abort.) E. Sachs.
152 Formation of Vagina Out of Part of Rectum; Second and Third Cases. (Zwei weitere Fälle von Scheidenbildung bei angeborenem Vaginaldefekt.) G. Schubert.
153 Technic for Pubiotomy. (Die prophylaktische Ablösung der Harnblase bei Ausführung der Pubiotomie.) Ruhl.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 11, XXXIII, No. 18, pp. 177-192

154 Intravenous Infusion in Treatment of Cholera. (La cura del colera e risultati ottenuti colla fleboclisi resa pratica con metodo speciale.) G. Marcolongo.

February 13, No. 19, pp. 193-200

155 Diaphragmatic Pleurisy. (Caso di pleurite diaframmatica.) L. Paglieri.
156 *Uterine Hemorrhage After the Menopause. (Le metrorragie dopo la menopausa.) Dalché and P. Roy.

156. **Uterine Hemorrhage After the Menopause.**—Dalché reports a number of examples of women of 57 to 67 years of age who had repeated uterine hemorrhages, but refused operative treatment for the suspected cancer, and after a few months the hemorrhages ceased and there has been no further disturbance to date. In one case there seemed to be a swelling in the broad ligaments, but nothing has been heard from it to date. In another case there seemed to be a return of menstruation for a time at 60, three years after the last traces of menstruation. The women had mostly had metritis years before, had borne numerous children and had more or less ptosis of the viscera. Cholelithiasis, gout, obesity, or heart, or kidney affection, or a mucous polyp—any of these is liable to induce uterine hemorrhage after the menopause. In one case the only apparent cause for the late uterine hemorrhage was lumbo-abdominal neuralgia.

Riforma Medica, Naples

February 10, XXVIII, No. 6, pp. 141-168

157 Effect of Fatigue on Blood and on Course of Infections. (Alcuni fenomeni che l'affaticamento produce sul sangue e nelle infezioni.) D. Scalfati.

Revista de Medicina y Cirugia, Havana

February 25, XVII, No. 4, pp. 91-124

158 The Laboratory in Prophylaxis. (El laboratorio como medida profilactica.) J. F. Arteaga.
159 Vaccination Against Typhoid. (La vacunacion contra la fiebre tifoidea.) L. M. Cowley.

Hygiea, Stockholm

January, LXXIV, No. 1, pp. 1-128

160 *The Mechanism of Visual Accommodation. (Hur jag fann den intrakapsulära ackommodationsmekanismen.) A. Gullstrand.
161 *Solidified Carbon Dioxid Snow in Treatment of Tumors of the Skin. (Om behandling af hudtumörer medels kolsyra i fast form.) G. Nyström.
162 *Pregnancy as a Predisposing Factor for Malignant Disease, Especially for Gastric Cancer. (Några fall af cancer ventriculi i samband med graviditet jämte betraktelser öfver graviditeten såsom ett disponerande moment för uppkomsten af kancer.) F. Lindstedt.

160. **Mechanism of Visual Accommodation.**—This is the address made by Gullstrand on receiving the Nobel prize for his research on dioptrics.

161. **Carbon Dioxid Snow in Treatment of Superficial Tumors.**—Nyström is enthusiastic over the fine results he obtained in treatment of epitheliomatous tumors with carbon dioxid sticks, and reports the experiences on which this opinion is based. The harmlessness of this method of treatment, the simplicity of its application, the possibility of exact dosage, relative painlessness, smooth effectual action, the ideal cosmetic result and the inexpensiveness of the method are its chief advantages, he declares. He gives pictures of several of the fourteen epithelial cancers or rodent ulcers he has treated in this way. One patient had a cancer of the cheek with five metastatic nodules around, the condition absolutely inoperable. Under combined carbon dioxid treatment and thermocauterization the surrounding nodules and then the extensive cancer occupying the entire lower half of the cheek gradually retrogressed. In January she had been turned away from the surgical clinic as inoperable, but the photograph in September shows not a trace of the former malignant disease except a small scar left where the cancer had eaten into the parotid gland. His experience with warts was favorable when the wart protruded, but less so when the growth extended downward into the tissues instead of projecting above. The same distinction was apparent in the treatment of angiomas; in his thirty cases the protruding were rapidly benefited, the flat and deep felt the influence less, and could not be cured except by prolonged and intense applications, and not always even then.

162. **Pregnancy as Predisposing to Cancer.**—Lindstedt gives the particulars of four cases in which symptoms of gastric cancer developed during a pregnancy and the patients died a month or so after delivery. The women were 22, 25, 31 and 33 years old; two were primiparæ, one had borne a child and one two children previously. The cancer ran a remarkably rapid course in all the cases. Among the 743 gastric cancer cases examined post-mortem at Stockholm, the women far outnumbered the men in the ages under 35, while the men far outnumbered the women after this age. Lindstedt tabulates these and other statistics from various clinics and countries, a total of thirty-eight tables, striving to determine from the data presented whether pregnancy enhances the predisposition to cancer. His final conclusions are that it probably does increase the predisposition to malignant disease in the uterus, breast and stomach, as well as in other organs.

Books Received

Acknowledgments of books received, being ephemeral matter not necessary to be included in the bound volumes, appear on the second, fourth or sixth advertising page following.

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SANITATION AT PANAMA

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Before going directly into the question of sanitation at Panama I think it would be well to tell something of the geography of the locality, and to dwell somewhat on a few other points.

I am frequently asked how the work is getting on at Panama, and if it is really as far advanced as the papers report. As far as I can judge, what the papers say about represents the condition of affairs. The chief engineer states that he will be ready to pass ships through the canal by the fall of 1913, and that it will be formally opened by Jan. 1, 1915.

It is not generally appreciated that if a line were to be drawn straight south from the United States through Panama, this line would barely touch Ecuador and would in general fall well west of South America. In other words, South America is altogether east of North America in longitude. This causes the isthmus connecting the two continents to run in a general direction from east to west.

The Pacific Ocean, south of this isthmus, was known to the early explorers as the South Sea, and the Caribbean, lying to the north, as the North Sea. The canal runs from Colon on the North Sea to Panama on the South Sea. Panama, in latitude, is thirty miles south of Colon and, in longitude, thirty miles east of Colon.

It is not really a canal which the government is building at Panama, but a waterway consisting of lakes, locks, canal- and sea-approaches. In selecting this location the lowest point in the mountain range extending from Alaska to Patagonia was found to be at Panama, where the mountains run east and west. Then the river on the north and the river on the south which had their source nearest this low point, in the back-bone of the mountain range, were located. These rivers were damned, forming lakes; these lakes were connected through this lowest point in the mountain range by a deep cut; locks were placed in these dams so that ships could be raised into the lakes or lowered from the lakes; and then, lastly, approaches were cut from the North Sea on the north to the dam across the northern river, and likewise from the South Sea on the south to the dam across the southern river. This is the waterway being built by our government across the Isthmus of Panama. A ship coming from the north will sail south through the northern approach, seven miles to the northern locks, where she will be lifted 85 feet to the surface of the lakes; she will then sail 24 miles south through the northern lake, then 9 miles through the cut connecting the two lakes; then she will be dropped 30 feet into the southern lake, then sail 2 miles through this southern lake, then be dropped through locks 55 feet from the lake level to the level of the South Sea, and then sail 8 miles through the southern approach to the South Sea. If it were being contemplated to connect Los Angeles and New Orleans by canal, and a similar plan were adopted, we would proceed as follows: Place a dam in the Mississippi River for the purpose of backing the waters of this river to the foot-hills of the Rockies on the east; then another dam in the Colorado River for the purpose of backing its waters to the foot-hills of the Rockies on the west. We would now have two great lakes, one to the east of the Rockies and the other to the west. Connect these lakes by a cut through the lowest point in the Rockies; put locks in the two dams, connect these two locks by waterway with the Pacific, on the west, and the Gulf of Mexico, on the east, and we have a waterway exactly similar to the waterway connecting the North and South seas at the Isthmus of Panama.

The health conditions at Panama when the United States took charge, in 1904, were very bad. For four hundred years this isthmus had been considered the most unhealthy spot in the world and the mortality records will sustain this opinion. The official pilot chart, in 1903, says:

> The Panama Canal District is one of the hottest, wettest and most feverish regions in existence. Intermittent and malignant fevers are prevalent, and there is an epidemic of yellow fever at times. The death-rate under normal conditions is large.[1]

From 1520, the year in which the route across the Isthmus was first established, to 1820, when South America threw off the Spanish yoke, the Isthmus of Panama was the chief route of travel between the western coast of North and South America and Spain. Most of the travel to and from the Philippines also came and went by this route. During all this time a constant stream of Spaniards was always passing through Panama. These Spaniards, in general unacclimated persons who had to remain some time waiting on vessels, paid a heavy toll to yellow fever, malarial fever and dysentery, the endemic diseases of Panama. As these travelers were often the highest officials of Spain their death caused wide comment throughout Europe and gave Panama the deservedly bad reputation which she obtained at this time.

From 1820 to the discovery of gold in California, in 1849, the Isthmus was not so much used as a point of transit, but on the discovery of gold, unacclimated Anglo-Saxons by the thousands flocked to the Isthmus for passage to California. They suffered from the endemic diseases of the Isthmus just as did their predecessors, the Spaniards. The unsavory reputation of the Isthmus was still further enhanced. In 1853, the Fourth Infantry of the United States Army was sent from eastern United States to California. They went by way of the Isthmus of Panama. General Grant was at the time quartermaster of the regiment. The railroad was completed at this time only about half way across, so that the regiment had to march from Gorgona to Panama. From the time they left Colon to the time when they reached San Francisco they lost eighty men out of a strength of 810. The present railroad across the Isthmus was under construction from 1850 to 1855. During this period the mortality was so great that several times construction had to stop because the laboring force had died or were sick. No statistics were retained concerning this period, so we can judge of conditions only from individual instances. At one time the construction company imported 1,000 negroes from the West Coast of Africa, and within six months these had all died off. At another time, for the same reasons, they brought over 1,000 Chinamen and within six months these had died off. One of the stations, at present, on the Panama Railroad is named Matachin. The tradition is that this name is derived from the Spanish words *mata,* "killed," and *Chin,* "Chinamen," because this was the point where the thousand Chinamen were housed and where most of them died.

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[1] West India Pilot. Ed. 6, 1903, i.

During the period from 1881 to 1889, when the work on the French canal was at its maximum, unacclimated persons again came to the Isthmus in large numbers. The mortality among them was excessive. For this period it is again difficult to give accurate statistics. The French were building their canal through Columbian territory and they had no more police control of the adjacent country than a railroad contractor would have over the country through which his railroad passed if he were building a railroad in any one of the United States. We would simply know that Sam Smith was on his rolls and working for him on Wednesday and that on Thursday he was absent. Whether Smith had died or gone to work for someone else the contractor would have no means of finding out. This was the case with the French at Panama.

They had a most excellent system of hospitals where the sick were well taken care of; and we have the well-kept records of these hospitals. They show that during the construction period of the old French company, from 1881 to 1889, 5,618 employees died in these hospitals. But the French were, at this time, doing their work by contract and each contractor was charged a dollar per day for each man he had in hospital. It will readily be understood, therefore, that if the French contractor were anything like the ordinary contractor, not a very large proportion of the sick would go to this hospital. We hear of many individual instances of heavy loss. The first French director, Mr. Dingler, came to the Isthmus with his wife and three children. At the end of the first six months all had died of yellow fever except himself. One of the French engineers, who was still on the Isthmus when we first arrived, stated that he came over with a party of seventeen young Frenchmen. In a month they had all died of yellow fever except himself. The superintendent of the railroad brought to the Isthmus his three sisters; within a month they had all died of yellow fever. The Mother Superior of the sisters nursing in Ancon Hospital told me that she had come out with twenty-four sisters. Within a few years twenty-one had died, the most of yellow fever. Many other instances of this kind could be cited.

From the best information which I can get, and which I consider accurate, I believe the French lost 22,189 laborers by death from 1881 to 1889. This would give a rate of something over 240 per thousand per year. I think it due to the French to say that we could not have done a bit better than they, if we had known no more of the cause of these tropical diseases than they did.

The great discoveries in tropical medicine made during the time between the coming of the French to the Isthmus and the coming of ourselves, however, namely that certain species of mosquito transmit both yellow fever and malarial fevers, has enabled us to protect ourselves against these and other tropical diseases.

The French, with an average force of not more than 10,200 men, lost in nine years 22,189 men; we ourselves, with an average force of 33,000 men, in nearly the same length of time have lost less than 4,000. The death-rate among the French employees was something more than 240 per thousand; our maximum rate in the early days was 40 per thousand; our rate at present is 7.50 per thousand. Malaria, from a maximum of 821 per thousand taken sick—i. e., that, out of every thousand of our employees in the course of the year, we have 821 taken sick with malaria—we have reduced at present to 187 per thousand. But most important of all, yellow fever has been entirely banished. We have not had a single case since May, 1906, now a lapse of almost six years. The general death-rate has been reduced from a maximum of 49.94 per thousand to a rate, for the year 1910, of 21.18 per thousand. Such a rate compares favorably with that of many parts of the United States.

Now, as to what these results have cost, two syndicate writers from the United States have attacked the Sanitary Department very vigorously on the score of expense. One of these writers stated that while great results had been accomplished at Panama in the line of health, it was at the result of enormous expenditure; that sanitation had cost some two million dollars per year; that if the same sum were spent per population in the United States for health, that country would now be spending at the rate of $1,200,000,000 for sanitation; that if the United States were to spend the same on health matters, according to area, as is spent on the Isthmus, the sum would amount to the enormous figure of $12,000,000,000. Neither of these writers, however, got their figures from the chief sanitary office and both are entirely in error as to their statements.

The expenses of sanitation on the Isthmus have amounted to about $365,000 per year; one of the writers stated that it was $2,000,000. Now take the population of the United States at 90,000,000, and the population of the Zone at 150,000. If the United States spent in the same ratio as we do on the Zone the expenditure would be $219,000,000; the writer stated $1,200,000,000.

If the expenditure were in the ratio of area, the area of the United States being 3,500,000 square miles, and the area of the Zone being 500 square miles, the health expenditures in the United States would amount to two billions; the writer, just cited, said that they would amount to twelve billions.

It would be interesting to be able to tell just what the United States does spend on health. It is very difficult to give figures for the whole country on this subject, but we can approximate it. Take the health department of Chicago, for which the appropriation this year is $600,000. The work of this department covers neither foreign quarantine nor mosquito work; the large bulk of our health expenditures on the Isthmus are for these two items. For the purposes for which Chicago health department spends $600,000, we on the Isthmus spend about $50,000. If the whole of the United States spent on these items in the same ratio that Chicago does, the present expenditure of the country would be $27,000,000. If the United States spent in the same ratio as we do on the Zone, their expenditure would be $30,000,000. That is, we on the Isthmus spend one-tenth more per capita on these subjects than is spent in the United States for the same purposes.

This is not extravagant, I think, when the difficulties under which we have labored are considered.

An extract from an address of one of the highest railroad officials in the United States has recently been quoted to me. This official stated that the sanitary expenditures on the Isthmus would have been 5 per cent. of the total cost when the canal had been finished; that he thought that the sanitary results accomplished had been worth many times the amount spent, and that he believed that these same measures would, as a matter of economy, be adopted in all future works of this kind. How much more emphatic might he have been if he had known that, instead of costing 5 per cent. of the total appropriation, they had actually cost less than 1 per cent. of the total appropriation for all purposes.

But what I wish particularly to emphasize is this: that while the great works in the tropical sanitation, of Laveran, Ross, Reed, Finlay, Carter and many others, have enabled the sanitary department on the Isthmus to take a vital part in the work of building the canal, this is not the greatest good that we hope, and expect, will flow from this conspicuous object-lesson. We hope that our success at Panama will induce other tropical countries to try the same measures; and that thereby gradually all the tropics will be redeemed and made a suitable habitation for the white man.

But if this is to come about, it must be shown that it can be done at reasonable cost, and within the moderate means of these tropical regions. And such statements as have been made by these writers, and given wide circulation by means of syndicate letters for all the leading newspapers, must not be allowed to pass entirely uncontroverted.

I therefore wish to say most emphatically that considering the results and difficulties surrounding the subject, the sanitation of Panama has not been costly. When the canal shall have been finished it can be shown that sanitation cost about $365,000 per year. For a population of 150,000 this means an expenditure of about 1 per cent. per capita per day for each individual, and this sum is well within the means of any tropical country.

Glanders.—A thorough study of the complement fixation method in the diagnosis of equine glanders by the Bureau of Animal Industry, reported by John R. Mohler at the Washington meeting of the Society of American Bacteriologists, December 27-29 (*Science*), demonstrated that it may be considered a specific test. The results obtained supported the contention of Schutz and Schubert in their recommendation that it be taken as the official test by the German government. Even very small quantities of glanders antibodies can be detected by this method, and it is only in their presence and that of a glanders antigen that the specific reaction occurs. As glanders is sometimes communicated to human beings and then is a very formidable disease, these facts may have considerably more than a veterinary interest.

THE PRESENT STATUS OF PSYCHOLOGY IN MEDICAL EDUCATION AND PRACTICE *

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Three or four decades ago a couple of courses in a medical school, followed or accompanied by visits to the patients of a practicing physician, sufficed to produce a doctor of medicine. At that time almost all that a medical school afforded was an opportunity for the work of dissection and a convenient place to take certain courses and see demonstrations in chemistry and materia medica. Other subjects were gradually introduced into the curriculum, until at the present time four years' study is required, approximating four thousand hours of didactic and laboratory instruction. The traditions of an anatomic character have, however, not entirely changed. Much attention has been and is now paid to studies involving the structure of the body, although, within the past few years, the requirements have been expanded in those subjects which deal with function. It is a gratifying evidence of the advance of the functional standpoint in medicine that such a discussion as that of to-day can be held, with practicing physicians and medical educators taking part.

Not many years ago the subject of psychology was considered to have little relation to matters of practical endeavor. Even in connection with those medical topics which we now appreciate as having very close associations with psychology, there was more or less opposition, tacit if not open, to the consideration of psychologic matters. But, during the past five or ten years there has been a gradual turning, so that to-day the importance of an understanding of mental matters is more generally recognized. The reasons for this are numerous. The proportion of one insane to three hundred of the general population, which holds in most civilized communities, has served to indicate the importance of a knowledge of mental processes for the general practitioner as well as for the psychiatrist. The success, financial and therapeutic, of the non-medical healers (Christian Scientists, Mind Curists, Chiropractics, Emmanuelists, and others) has been only too evident, and, even though many of the faddy patients have eventually returned to be treated by medical practitioners, the success, only temporary, though it may be, of the psychologic procedures, has demonstrated the influence of the mind in the alleviation of abnormal conditions.

A more general realization of the occurrence of hysteriform, neurasthenic and degenerative mental states in the sick, the delinquents and the criminal, has also tended toward our appreciation of psychologic matters.

If we were to conclude that psychology has no place in the general scheme of medical education to-day, we should fall short of stating the truth. In a few schools, in which the force of certain individual professors has been felt, special courses dealing with psychology are offered or required as one of the requisites to the attainment of the medical degree. But, even in those other medical schools in which psychology as a topic has no place on the program, parts of the subject are taught in certain ways. A careful examination of text-books of physiology, of the practice of medicine, of neurology, and of psychiatry will show that, disguised or called by different names, mental states are discussed.

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* This and the four following papers were read in a symposium on "The Relations of Psychology and Medical Education" before a joint session of the American Psychological Association and the Southern Society for Philosophy and Psychology, held at the Government Hospital for the Insane, Washington, D. C., Dec. 28, 1911.

It is well recognized that much of the discussion of the so-called physiology of the sense-organs and of the cerebrum is a treatment of mental phenomena. Instead of the activities of the rods and cones, we have information regarding contrast, color sensations, and visual perceptions. Instead of a physiology of the Schneiderian membrane, the olfactory qualities are mentioned. Instead of the activities of the cerebral cells, percepts, images and associations are referred to. As it is given, this part of psychology is incomplete, and even though its psychologic character is often unassailable, it is often inadequate as a foundation for the abnormal psychology which is needed in the applied subjects of the medical curriculum.

In the courses in psychiatry, it is usual to give a brief summary of psychology, under the guise of general symptomatology, but when it is realized that the present requirement of the Association of American Medical Colleges regarding instruction in psychiatry is twenty hours, it is not difficult to understand that psychology must give way to the practical need of the enumeration of symptoms. It should also be noted that the requirements in this subject outlined for medical schools give no opportunity for didactic instruction, for this subject is placed on a purely clinical basis. In other words, no provision has been made for special instruction in psychology, even as allied to psychiatry, by those who force certain scheduled arrangements on the schools.

As justification for the time given to psychologic topics in certain medical courses, instructors have been wont to call attention to the fact that mind is a function of the brain, and that as such it is a part of physiology. But with equal weight it may be urged that chemistry is a part of physics and that these subjects should not be separated. Whatever theoretical viewpoint we may have of the relation of mental and bodily processes, it must be realized that psychology is now admitted to be a science, independent and not a part of physiology, psychiatry, or neurology. If it be admitted that it is essential for the student to be informed of the kinds of mental processes, the conditions under which they occur, and their interrelations, in order that he may have an adequate understanding of certain physiologic, neurologic, psychiatric, and therapeutic topics, it does not help matters to attempt to disregard psychology as a subject. It will not remedy the condition to shift the responsibility for its teaching to another department of the university, and the splitting of it into parts which are obviously disjointed is only a therapeutic makeshift.

The fact that psychology has to deal with the mental side of the life of an individual gives at once an indication of the place mental matters hold in medical practice. The physician depends on the mental processes of his patient for the information that will enable him to make a proper diagnosis. At the same time the accounts of the patients' sensations and feelings help the physician to appreciate or to evaluate the effect of the treatment which is instituted. In many cases the mental processes are the direct objects of consideration. They are sometimes the only symptoms which are to be observed, and they are the changed conditions which it is the function of the physician to alter.

It makes little difference what branch of medical practice we consider, we find that mental states must be taken into account by the practitioner, although he may not realize the importance of this psychologic aspect of his practice. For example, when a patient appears with a pain in his shoulder or in the thorax, or with a feeling of malaise, he approaches a physician because of these painful or disagreeable feelings. The patient may not know that the pain in the shoulder is due to some disturbance in the colon, or that the malaise is due to an infection or that it is psychic in origin. The patient realizes his abnormal feelings or sensations, and he consults the physician because of these. The physician tries, either by drugs or other physical means or by psychotherapeutic measures, to replace the abnormal sensations with those which are normal. The surgeon does much the same. It is his business to attempt by operative measures to relieve the patient of pain or discomfort. It is not necessary, however, that because of this the physician and surgeon should have an intimate acquaintance with psychologic research. In many cases the physician and the surgeon may well perform their duties without a knowledge that the symptoms for which they are consulted are mental. Psychology is, however, of greater import in other branches of medical practice. Here we should include many of the diseases commonly called "nervous" and all of those which are known as "mental." It is in connection with these diseases that a more intimate acquaintance with the facts and methods of psychology and of psychotherapeutics is necessary.

In the examination of the mentally abnormal, a knowledge of psychology, its results and its methods, is essential. It was formerly deemed sufficient to record observations which could be made by anyone without a knowledge of psychologic matters. It was deemed sufficiently accurate to note that the patient had delusions of grandeur, or that he had hallucinations or some other form of mental abnormality. But the introduction of experimental methods made it evident that certain conditions which were superficially alike might be fundamentally different from a psychologic point of view. To what extent these psychologic analyses are valuable for diagnosis and treatment, I shall not consider. The important fact is that these analyses tend to a better understanding of some of the symptoms, and in that way contribute to the sum of knowledge of the disease as a whole.

Psychologic knowledge is also of value in the treatment of diseases. The placebo has been a favorite remedy for generations and it has succeeded in curing many who did not need the most powerful alkaloids and other drugs. It is probable that many "cures" by chemical means are of the same character, i. e., mental. We are all probably aware of the results of Rivers' work on the pharmacologic action of alcohol and other poisons. These drugs were repeatedly reported to have marked effects on mental processes, but careful testing, by the application of psychologic principles, revealed the fact that the peculiar mental effects of these drugs were at times not to be found when the subjects were not aware that the drugs were being taken. In these and in other similar pharmacologic tests the mental effect of knowledge appears to be much greater than the chemical action of the drug.

The relation of psychology to psychotherapeutics is more commonly recognized, but the conceptions of psychology and of psychotherapeutics held by many practitioners of medicine are inadequate. A year or two ago, I listened to a surgeon read a paper on psychotherapeutics in which, after an hour, he summed up all of psychology and all of the therapeutic methods of mental medicine under the one topic of suggestion. An eminent neurologist in this country has grouped all the methods of psychotherapeutics into three different classes: hypnosis, suggestion and persuasion. He outlines a criticism against the tendency to believe in the supreme efficacy of one particular line of physical or chemical treatment, such as electricity or serum therapy, but fails to realize that the advocates of the universal use of such measures have been only as exclusive in their chemical and physical therapeutics as he has been in considering the psychic influences which may affect the diseased individual.

Not only suggestion but other individual methods of psychotherapy have been advocated as the panacea for all mental ills. At present it is the Freudian method, psycho-analysis. There is nothing new in the principles underlying this method. It is well known that it is an adaptation of association psychology to certain practical needs, and it appears to me unfortunate for both psychology and for psychotherapeutics that the devotees of this method, who deal with only a few of the types of mental disease, should write and talk of Freud's psychology as if Freud were responsible for a new kind of psychology or for a new system of mental science.

In relation to medical research the value of psychology is not as widely appreciated. That its methods are of value in the investigation of the mentally abnormal has been recognized for a number of years, but they have also been found useful in the investigations of physiologic and pharmacologic topics. The employment of psychologists in institutions for the insane, the feeble-minded and defectives has not become general, and is even rare when we consider the amount of time devoted to pathologic anatomy, for only in a few places has an endeavor been made to supplement the work of the pathologic laboratory by the addition of psychologic investigators.

From time to time those who have appreciated the possible value of psychology for medical purposes have questioned the value of present-day psychology. They ask for a psychology, not like that of the psychologist, but a psychology which may be applied toward the solution of their own problems, one which is aimed at practical ends. It has been assumed that psychology as it is being taught and investigated deals with matters of no concern, or of too abstract a nature, for practice. The exact form of the kind of psychology which is demanded, I do not know; but it appears that it should be a hybrid between the present laboratory psychology and medical practice. This kind of psychology we shall never attain until medical practitioners do more psychologizing and the psychologists become better acquainted with the problems of medical practice. The applications of a science must be made by those who utilize the science in a practical way; they usually cannot be made by those who have not a definite interest in the practical applications. Psychologists are, therefore, not directly at fault because of the lack of this application, any more than the physiologic chemist is at fault because he does not directly apply his results in a therapeutic way. A kind of psychology which is needed is that of every-day people, not only that of the trained investigator. Psychologists might provide this, but they have not. It cannot be doubted, however, that some psychologists have hindered an understanding of and cooperation with medical problems, not only by their aloofness, but also by their "damn the practical side."

On the other hand, it has been assumed that the technical terms which the psychologists have used are too special for the practical ends of medicine, and other expressions have been interjected into medical literature which usually have no basis except the prejudice against the use of certain terms which are considered technical. These objections have come from many who would consider a similar procedure on their part in relation to histology absolutely unwarranted. Histologic methods and terms, however technical they may be, and anatomic names are things to be admitted and reckoned with, but apparently, psychology and its methods are somehow to be considered to be different.

It has been said that all of us are psychologists in a very practical way, inasmuch as we interpret the actions of others in terms of our own mental processes, and that, in as far as we interpret the actions rightly, we not only are good psychologists, but at the same time we are successful in our dealings with other men. Because we all have psychologic experience of this practical nature, it has been supposed by some that this is sufficient for all practical needs. It has been assumed that because each of us has a mind, each is able to observe and to record mental facts of value. It is just as unquestionable that each of us has a body, and that we are thereby able to observe and to add to the sum of human knowledge regarding the structures and functions of that body. We have the same, or nearly as much, casual knowledge of the elements of the body as we have of mental elements, and without an experience in analysis we are as capable of observing the functions of bodily parts as we are of observing the functions of a mental order.

There can be no doubt that much of the success of the followers of Christian Science, of "mind cures" and of other fads and fancies, has been due to their recognition of the psychologic factors in the mental life, even though this recognition has been reached by unscientific reasoning, and without special training. It has been largely because of the lack of recognition of the psychologic aspect of disease by the medical profession that nonmedical healers have been denounced, but, as Prince rightly remarks, these should be looked on rather as an evidence of lack of medical insight. Those who have charge of medical education must realize that students of medicine should not be permitted to pass through their course of medical preparation without at least an elementary knowledge of mental processes. It is necessary that the graduate in medicine be prepared to appreciate the power of mind for health or illness; that he be given at least a view of mental conditions, signs and therapeutics; and that he be prepared to treat many individuals who now seek with success charlatans of all kinds.

THE VALUE OF PSYCHOLOGY IN PSYCHIATRY

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I must begin with a remark as to definition: We are considering the relationship of two fields of debatable connotation. Naturally to me the fixed part of the problem is psychiatry—i. e., the orderly and systematic description, analysis, differentiation and melioristic handling, either in terms of brain disease or in terms of Nature's experiment, of cases or conditions in which mental life is disturbed.

As the second part of the problem we have to discuss the psychology, which is the fixed point to most of you and of which it is said that as to the contents of a book of psychology there is to-day no special doubt; we might then assume that our problem would be the value of such a psychology in psychiatry, either in a narrow sense of study and care of insanity or the wider sense given above.

The question must, however, arise and will be discussed to-day: Are there not psychologies of different scope and possibly psychologic problems in psychiatry as important as the psychologic problem to the teacher and investigator of so-called normal psychology? The next alternative here would be: Is this necessarily merely applied psychology? Or do we not have to speak of the general psychologic problem in a field presenting special experimental problems, situations and possibilities?

Most of us would probably shrink from a dogmatic psychology consisting of pure principles. The domain is the field of psychologic experience, and the science becomes specified according to the methods employed. On this point I feel strongly that psychology as a science must work with as many different types of method as are necessary to reduce the events to well-defined experiments of Nature. In other words, it must cope with the problems of introspection and also with the other problems dealing with the biologic, physiologic and even anatomic conditions of mental life. Without this an unwarrantable gap is left between psychology and the medical sciences.

Psychiatry inevitably has to deal with the mental facts presented by the patients. We call their conditions mental diseases because the mental activities are involved, either in a leading way or incidentally to disorders of non-mental functions of the organism such as metabolism, circulation or direct damage of the brain. As one deals with psychologic facts, it is, to say the very least, desirable, and I should say essential, that one should use such methods and standards as will pass muster in the light of the critical, or if you please, scientific observation of such facts. Whatever passes into the records as material concerning psychologic reactions should be fit to represent a sufficient and accurate record of the events.

There was a day when the mental manifestations were overrated and misinterpreted in a system of archaic conceptions of chiefly moralizing character in many ways quite remote from actual psychology, i. e., from the laws and conditions of behavior and mentation. We often hear Heinroth quoted as the archfiend acting against good sense and science, owing to his emphasis on sin. He used psychology as it existed in his days with its moralizing standards of qualitative valuation of the reactions of his patients. Then came a period when practically everybody believed that psychology at its best could serve only in description and for symptomatology, furnishing merely highly untrustworthy "signs" of "real diseases back of the symptoms." Huxley's view of mental life as an epiphenomenon rests on this same standpoint. The average physician who insists on translating the plain functional facts into neurone-mythology practices systematically mere neurologizing tautology. To-day we fail to see exclusive sense in either extreme. We describe facts in terms of objective observation, but often in the form of functional valuation and in terms of utterances or expressions and automatic or volitional activities and reactions, which we are forced to treat as a record of psychologic material; and we also use and induce reactions such as suggestion or habit-training or helps in clearing up mental tangles, directly as dynamic agencies in the readjustment of a normal course of mental life of our patients.

The evolution of psychiatric literature gives little clearness in this matter, because for various reasons the issues are slurred over, or, to put it more correctly, not yet clearly in sight.

Kraepelin started his career under the influence of Wundt, and with an effort to get critical accounts of the effect of drugs, etc. The result is the use of the curve of work in various forms, the ergogram, the addition-series, etc., in the main with but meager application in his actual psychiatry which represents the facts under more or less schematic set headings: apperception, orientation, hallucinations, delusions, sensorium, attention, memory, retention, stream of thought, judgment, affective life, disorders of volition and application, and the physical symptoms. Kraepelin may well be classed with those who, notwithstanding an interest in experimental methods, study the psychologic facts in their patients as mere symptoms of more or less hypothetical diseases back of them. Aschaffenburg's study of associations, continued by Isserlin, and the work of other pupils of Kraepelin remain in this setting. The Würzburg school and Sommer were more intent in the direction of inventories and standards of recording; the book of Störring was the German Wundtian statement of the material covered in a much less strict manner by Hyslop in English. The French school of Ribot and Binet and Janet followed a descriptive classificatory trend, but with a strong biologic leaning and a gradual emancipation from neurologizing tautologies. Then came the Freudian movement, powerfully reenforced by the work of the Zurich school; while in this country a number of more or less systematized lines of interest and work have pushed their way to the present discussion.

The chief facts to-day are (1) that the division between psychoneuroses and insanities has become less marked, so that psychopathology has become the scientific definition of psychiatry generally, and with this an acknowledgment of the importance of psychology is guaranteed; and (2) that a number of workers urge closer contact with psychology proper, but are apt to find a categorical separation of a strictly emancipated laboratory psychology, everything else being called "applied psychology," or no psychology at all, as I should infer from the statement of a psychologic leader who wrote that the psychiatrist can get along without psychology. We admit differences of emphasis in the interests of laboratory men and what we might call field-workers, but urge the importance of making the most of the common ground. On this common ground the psychologist may follow up his pet studies, or the psychopathologist may stick to problems of his own; but the sooner we agree on common ground, or even on a formula and plan as to what we shall call the common ground, the better it will be.

Some of us feel that in the life of the individual and in interindividual relations reactions occur and determine developments to which neither anatomy nor physiology in their narrow sense can do justice, but in which we are forced to speak in terms of a psychology or at least a biology which is able to scrutinize the reactions of behavior and mentation, the conditions under which they occur and their effects in the course of life and behavior of the organism that shows them. We study deliriums, depressions, dominant ideas, delusions and obsessions for the rôle they play, the conditions under which they arise, the effect on the stream of mentation and mental balance, and their modifiability. We are confronted with facts which cannot any longer be passed off as mere manifestations of mysterious things back of them; but which stand more and more clearly as well-defined reactions for which we have only psychologic terms and which represent momentous units of dynamic psychology. A suggestion once induced in a patient may be the central part of a biologic reaction which cannot profitably be split, to the point of non-recognition and unintelligibility, into mental and physical facts in keeping with a self-evident and over-emphasized and distracting logical frill of psychophysical parallelism. Mental facts taken as biologic reactions of the type of mental integration play a decided rôle and we must meet them with—to say the least—respectable methods.

In speaking of "mental integrations" I imply the whole of our attitudes and activities, including the respiratory and vasomotor and circulatory and cerebral activity involved, and also the situation in which the reaction takes place as a process of adjustment. The "integrations of the nervous system" would thus form an essential link in the broader "integration of the personality."

Our first task is to make ourselves and our students describe critically and correctly whatever involves the reactions of the type of behavior and other objective manifestations of mental activity. This is no small task even with students who pretend to have some training in psychology, since it usually was psychology of a less matter-of-fact type, and the students do not necessarily know how to use the foot-measure of simple observation through having used the chronoscope. Our first problem is to learn to describe ordinary events of behavior, and the description must as far as possible render the facts so that if the same conditions were reproduced, we should be forced to expect the same results, whether they be normal or abnormal, such as an automatic or peculiar act, or evidence of amnesia, or an obsession or a delusion or a delusional system or a wave of depression or what not. We must be able to see an event as an experiment of Nature, study the conditions, the modifiability, the rôle of the various integrated parts of the event and the probable mode of dynamic hanging together of the facts; and this is a thing to be acquired by practice in concrete situations.

To my mind, psychopathology and psychology have to study mental events and their settings and their effects in terms of activities of behavior. There may be a psychology for any one teacher's or investigator's sake divested of all but the introspective considerations; to us physicians psychopathology and psychology demand studies with a clear command of the biologic settings and a definite sizing up of the mental dynamics and also of the non-mental dynamic factors. This gives all the desirable space to the most microscopic introspective analysis and to any other lines of interest; and it will be up to the devotees of the various standpoints to bring forth types of work which will make themselves acceptable and inspiring to the workers who must live with a psychology which works and lives rather than a psychology easy to teach or easy to write.

That psychopathology sees a value in psychology, from all I have said, is above question. The special lines I chose to emphasize may of course appear somewhat perplexing and confusing in the eyes of the normal psychologist with his narrower laboratory problems—they must be experienced on concrete cases to be fully understood and appreciated, and I should urge that we accept that condition and give and receive a mutual promise of good faith and tolerance and gratitude for mutual help.

Within the field of studying psychopathologic cases and branching off from it there are many lines of psychologic research and training which the medical student will learn to acquire with interest, not as amplification of the obvious and sheer accumulation of details, but as a clearing of issues striking at the very roots of the dynamics and of the estimates in the field in which he works. As long as he makes it a rule, as far as possible, to record events together with the conditions under which they arise, the description of the event, and the results, and a sizing up of the time and of the influences needed for a readjustment of a state of balance, the worker is on the safe side and sure to record valuable material, no matter how complex the facts may be from the point of view of a detailed analysis in terms of structural psychology.

But even if the time had not come for a recasting of issues toward dynamics, there are many lines of psychologic estimates and modifications of mental states by non-mental or mental agencies equally interesting to the various types of psychology. Look at the Binet tests and at the methods outlined by Sommer, Franz and many others. I am confident that Dr. Watson will outline fruitful lines of psychologic training which we shall all welcome whether we agree on all the above tendencies or not.

Summing up the situation, I wish to emphasize my view that psychology will become a much more real issue when it aims to guide students in the correct and critical recording of the plain facts of conduct and behavior and the mechanisms at work, and when it does more to encourage them to take the common-sense attitude about psychology; when it puts the emphasis on what shows objectively as well as subjectively, namely, the conditions, types and results of mental activity; when it trains the student to see, in the special psychologic methods, methods of accuracy and greater comparability; but above all, when the data can be formulated in terms of adaptations of a living functioning organism with the system of mental integrations—the conditions and structure of which are becoming increasingly better understood. The student should learn that psychology is the study of a certain type of reactions, of the conditions under which they occur, of what they do and how they can be modified and kept from miscarriage. How to use the reactions either as mere signs of broader disorders, or as dynamic factors, must be learned in the study of cases and by experimentation. In this connection I should urge that we avoid depriving the field of its freshness and concreteness in courses to undergraduates by teaching abstract systems of psychopathology merely illustrated by the parade cases of the literature, and leaving them with dyspepsia when confronted with our plain hospital cases and the less sensational disorders. It is equally uncalled for to describe psychopathology merely as "applied psychology." We do not call pathology "applied physiology," or autopsy work "applied pathology." For the establishment of some fundamental facts the simple autopsy is sufficient; for others it is the starting-point of deeper work, possibly demanding an experimental reconstruction of the facts. In psychiatry the so-called clinical observation and clinical conversation and routine examination with its record in questions and answers is the basis for the various ramifications, and the more we cultivate safety in these ordinary starting-points the safer our position. Psychopathology is not applied psychology. It is a field from which psychology may expect just as much broadening out as psychopathology can expect help and experience from the methods of so-called pure psychology. If, for instance, we can work with dynamic principles in psychopathology, all the better for psychology as a whole; but even on neutral ground with methods already current in psychology, valuable collaboration is possible and offering friendly companionship of interests.

I repeat: Psychology is the only field of experience from which we can get the proper designation and understanding of many reactions which we must learn to describe, to differentiate, to understand for the conditions under which they arise, for the share played by the different integrative factors of the reaction as a whole, for a reduction to terms of an experiment of Nature and for the study of its modifiability. Even in its most dogmatic form psychology offers methods and précautions to our workers; and the more we shall learn to know whère we can safely depend on qualitative tests of our reactions and where quantitative tests are possible and worth while and the more we shall use the dynamic aspects of the facts, the greater will be the appreciation of a demand for psychology on the part of medical students. Psychopathology is not merely applied psychology, but can be a legitimate and fruitful field of psychology at its best.

On this ground, it would seem desirable to have a member of the staff in psychopathology add to the course on physiology an outline of psychology of normal life, and to the course in pathology an outline of psychopathologic fundamental experiments and reaction-types, so that when psychiatry is introduced, the student has a first-hand experience with the fundamental facts and methods as outlined by Dr. Watson and Dr. Prince.

PSYCHOPATHOLOGY AND NEUROPATHOLOGY: THE PROBLEMS OF TEACHING AND RESEARCH CONTRASTED

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The ideas that I wish to bring to this symposium are few, and I hope not too unorthodox. How shall research psychology and research medicine come together, on what ground, and to what ends? I wish (1) to insist strongly on the unique value of the pathologic method, not merely for the diagnostic and therapeutic purposes of medicine, but for biology as a whole and for the most vital of biologic sciences, psychology. I wish (2) to point out how pernicious in research may be the dogmatic insistence on the doctrine of psychophysical parallelism in medical or premedical courses in psychology—pernicious because it inhibits the free interchange of structural and functional concepts and the passage to and fro of workers in the several sciences. I wish (3) to show that psychology and physiology have more in common than either has with such structural sciences as anatomy and histology, and that the main common element of both mental and cerebral processes is the time-element as against the space-element of the structural sciences. On this ground (4) I conceive that the mind-twist and brain-spot hypotheses for the explanation of certain forms of mental disease are entirely consistent with each other, since from a different angle each is dealing with the same facts. Above all (5), let us not divide up the tasks of research as we divide up the tasks of teaching, since research, looking to the future, defies the compartments of the past.

> "It always leads to a better understanding of a thing's significance," wrote W. James, "to consider its exaggerations and perversions, its equivalents and substitutes and nearest relatives elsewhere. . . . Insane conditions have this advantage, that they isolate special factors of the mental life. . . . The study of hallucinations has in this way been for psychologists the key to their comprehension of normal sensation, that of illusions has been the key to the right comprehension of perception. Morbid impulses and imperative conceptions, 'fixed ideas,' so-called, have thrown a flood of light on the psychology of the normal will; and obsessions and delusions have performed the same service for that of the normal faculty of belief."[1]

It is perhaps in such complex fields as this that the natural analyses effected by disease possess their widest scope. Even where more artificial analysis is possible, the pathologic method has often yielded the most fortunate short cuts. One of the richest generalizations of biology at large (the dictum *omnis cellula e cellula*) could hardly have been achieved without decades of labor by a commission of biologists empowered to study normal cells, and only normal cells. The utilization of abnormal material gave a long-range induction almost at once. The pathologic foundation of the doctrine of evolution is obvious to anyone who considers what survival of the fit means in terms of the unfit. The doctrines of immunity derive an indispensable constituent from the law of regeneration in surplus, which Weigert observed in his studies of interstitial tissue. The bacteriology of disease has afforded some of the shortest cuts and the longest new ranges of thought of which we know or can conceive. The more complex the subject of our study, the less progress do we make by confining our attention to the normal presentment of that object. Normality is baffling, like the roc's egg to the climbing Sinbad. A niche, a wedge, fragmentation, dissection, division of intellectual labor, all the screening and sifting which lie at the basis of experimentation, these characterize the method of pathology, which pays small heed to the pedagogic divisions of any former stage of a given science. The research pathologist follows the trail of the concrete through whatever ranges of the abstract become necessary, and through no others.

It is here that the school divisions of psychology and brain physiology, of psychology and brain anatomy, of brain physiology and brain anatomy, of anthropology and social statistics, of sociology and criminal anthropology, and a host of other abstract school divisions have entered to divert the research worker from his duty to the concrete complexity.

Particularly dangerous I find to be certain school tendencies born of the doctrine of psychophysical parallelism. The teacher of psychology desires to keep *mind* logically distinct from *body;* the teacher of physiology disclaims expert knowledge of psychology; the teacher of brain anatomy almost skilfully avoids giving his point of view about anything remotely functional.

The student grows to a feeling that the confines and septa of pedagogy are the confines and septa of research. For the development of psychopathology and of neuropathology, which I consider to be school divisions of knowledge of no ultimate logical importance, no other single doctrine has, to my thinking, been so pernicious as the doctrine which proposes to separate mind and body before we know much about either.

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[1] James, W.: Varieties of Religious Experience.

Most of us remember James' neat criticism of the *ohne Phosphor, kein Gedanke* psychology. "The phosphorus-philosophers," said James, "have often compared thought to a secretion. 'The brain secretes thought as the kidneys urine, or as the liver secretes bile,' are phrases which one sometimes hears. The lame analogy need hardly be pointed out. . . . We know of nothing connected with liver- and kidney-activity which can be in the remotest degree compared with the stream of thought that accompanies the brain's material secretions."

I remember smiling as a college student at the folly of these phosphorus men, thus dispatched at a blow. The fact is, a friend explained to me, *ohne Gedanke, kein Phosphor.* Thereafter I was not long in succumbing to the artistic simplicity of idealism.

It took me many years to learn that neither phosphorus, etc., nor the streams of thought could be dealt with so simply.

The proportions:

Brain : Thought : : Liver : Bile

or

Brain : Thought : : Kidney : Urine

are obviously fallacious; but, if we alter the proportions slightly to

Brain : Process of Thinking : : Liver : Process of Secreting

and

Brain : Process of Thinking : : Kidney : Process of Excreting

we have destroyed the fallacy which James ridicules.

We find that liver- and kidney-activity have one important thing in common with the stream of thought—namely, activity itself, the temporal features of all processes whatever.

One more interactionist! I hear you say. No, I reply, that would hardly be fair. How can we prattle interaction, if we do not know the factors we declare to interact? These factors in the interaction-complex, I repeat, we simply do not adequately know either in the concrete or in the abstract.

If not a parallelist and not an interactionist, what remains for a student? Must he not relapse into crusty mere critique or cowardly agnosticism?

Some years ago I ventured from my chosen path of brain analysis in mental disease at large to a discussion of dementia præcox in particular. I found that practically everybody had taken sides. It had become a game. The hypothesis of psychic factors was strictly opposed to the hypothesis of encephalic factors. Tangles and twists in the mind appealed to some; blots and spots in the brain appealed to others.

Contrary to my presuppositions (I do not pretend to be exempt from presuppositions), I found in the brains of subjects suffering from something like dementia præcox, certain lesions, partly congenital anomalies, partly lesions acquired in the individual's life. I was led for the moment, and still feel the impulsion, to confide in the brain-spot hypothesis *for dementia præcox.*

Then the secret is out! The reader believes that there are compartments in mental disease such that mind-twists work here, brain-spots there? No, I reply, I am not so naive as that, nor are the facts so simple.

"They quote you," said a practical psychotherapeutist to me the other day, "to the effect that dementia præcox shows lesions, and is therefore incurable, and is anyhow not subject to my poor psychotherapeutic efforts."

"Who quote me?" said I.

"Why, the materialistic doctors of the clinic!"

This was the sequel of my well-meant endeavor to work on an apical problem! The facts are these: I am not convinced that we can safely entify dementia præcox in the first place. I am not sure that the anomalies and scleroses which I found are primary causes in the group. I am still less of the opinion that the changes are secondary to mental twists. I think the lesions are such as to interfere with proper cerebration, just as water on the knee interferes with proper walking.

"I have no objection to the lesions of dementia præcox, if you do not regard them as primary," wrote one friend to me. Precisely, I reply. The lesions are neither primary nor secondary. They, or the cell-arrangements involved, permit or purvey the symptoms and signs of dementia præcox. The same facts viewed from one aspect are structural, from another aspect functional. Structure is in the main the spatial aspect of facts and events, function in the main the temporal aspect of the same facts and events. To say that mind precedes matter, or matter precedes mind, is to say that time precedes space or space precedes time. If you look sharply at a frozen moment held as a sort of preterite before your eyes, you will hardly discover more than something structural. If you follow the object for a time, you will discern inner or outer changes in the object, qualitative, quantitative, positional, or relative, which entitle you to describe the object only in functional terms.

Brain-changes and mind-changes have at least this temporal aspect in common: Whether both types of change are concretely identical is for research to decide. Pedagogy, the logic of the past, can decide nothing of the sort. Both types of change in virtue of being changes *überhaupt*, are opposed to the structural, *ex hypothesi* unchanging, killed, fixed and mordanted objects which neurology describes.

Suppose then that *for teaching purposes* we keep structure and function apart; suppose we even go a step farther and, for teaching purposes, separate function into two kinds, cerebral and psychic: I maintain that in research we should let the facts lead us where they will, over the hills and dales of physiology, into the deep borings of anatomy, or upward into the ethereal reaches of psychology. We have already weakened the pedagogic boundaries of many ancient sciences, and by new surveys, protracted litigation, and a thoroughgoing disrespect for precedent *coram factis,* we may achieve shortly new boundaries.

The majority of cases of mental disease are, I am convinced by special studies, characterized by the occurrence of obvious brain-lesions, i. e., even in the present stage of science they possess a structural pathology. Do they therefore possess no functional pathology? Their possession of the two aspects is a truism. Should we not study both aspects?

Furthermore, suppose we learn that, whereas three-quarters of our cases of mental disease exhibit obvious irrecoverable brain-lesions, another quarter fails to show these. Suppose the methods of microscopic research should still fail to show in many cases essential or irreversible brain-lesions, should we not stultify ourselves if we did not abandon *for the research campaign* both that psychopathology which has taught us the main course of our disease and the neuropathology which has proved usefully negative? Should we not repair at once to the chemistry of metabolism, the physiology of internal secretions, and the entire point of view of pharmacology? Discoveries in the latter fields, concrete and pertinent facts, would carry us back to the tissues and back to the processes of the nervous system, to neuropathology, structural and functional, and to psychopathology, and enlighten many dark corners therein. He who adheres to the classical problems as they lie within the teaching divisions of any science is not apt to change the face of that science.

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CONTENT OF A COURSE IN PSYCHOLOGY FOR MEDICAL STUDENTS

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For several years I have been interested in the general subject of the relation of psychology to medicine. It has long been a dream of mine that some day, when conditions are more favorable than they are at present, I should be able to persuade all of the research students in psychology in my charge to take a large amount of their training in the medical school, if not the whole of the medical course. While such a desideratum seems to be not immediately realizable there are certain signs at present which seem to show that the medical schools in their turn are becoming interested in our work and are not averse to seeing a closer relationship established between psychology and medicine. I believe indeed that interest has been so far awakened that some of the medical schools are willing to change their curriculum to such an extent as to admit a course in psychology.

The functional and practical phases of psychology are now so much in the forefront of discussion that there is no need on my part to dwell on the increasing need that the medical student has for psychology. It has been this change within the aims and ideals of psychology itself which has made such a symposium as the present one possible. Psychology is ceasing to be a purely academic science and is now willing to study questions dealing with every-day life. This change in our ideas of what is of value in psychology has not been a sudden one, but even so, the knowledge of it is not so generally widespread among medical men as it might be.

The other papers in this symposium have not flattered psychology. They have shown that our psychologic texts and a good deal of the research work in psychology are not especially valuable for the medical man. From the tone of the writings of certain medical men one would think that the days of psychology are numbered because of the failure of the psychologist to make his work directly applicable to the needs of medical men and especially to those of the psychoanalysts. But surely this is expecting too much of psychology. As I look back on our work for the last few years and on our attempts to teach psychology I confess that my conscience fails to prick me as much as it might. Surely medicine should not and need not expect to find its psychologic tools ready-made. The psychologist has had to adapt his tools from those supplied by physics and physiology. The recent psycho-analytic movement in medicine adds another large territory to the province of psychology. Special tools are needed. So far psychology has not been given, in certain medical circles at least, the credit which is its due for furnishing even unsatisfactory tools and methods which might be adapted to the needs of this body of workers. Surely it is evident that the methods used by Freud, and especially those of Jung, have been borrowed from psychology. I feel now that since this borrowing has been effected, those men have accomplished so much with the methods that it now behooves the psychologist to borrow them back again to retest them and to readjust them for use in psychologic research. It is this give-and-take spirit—a willingness to borrow and to lend—which will aid most in furthering research in the fields bordering on both psychology and medicine. The psychologist, I believe, is far more willing to accept what psychotherapy and psycho-analysis can give him than the medical man following these lines is to accept what the psychologist has to offer.

The psycho-analyst to-day asserts his complete independence of psychology, he invents and assumes mental functions and mechanisms which, according to his point of view, cannot be subsumed under those now current in psychology, and has gone so far as to introduce a host of new terms relating to them into the already sinfully misused vocabulary of the psychiatrist. He speaks of "suppressed complexes," and "sexual traumas," acquired sometimes in very early life, as actual living conscious factors. These are assumed to have more importance for the ultimate development of behavior than all of the rest of the mass of habits which the subject has to form between youth (often childhood), when the suppression is supposed first to take place, and late adolescence when at the moment of "shock" the "suppression" becomes "effective." Probably the too ready attempt to make a complete and independent system of psycho-analysis and the failure on the part of the devotees of this new cult to maintain an intellectual freedom in their system have hindered a wide-spread and scientific study of the methods of Freud and Jung. This is a serious matter both for psychology and for medicine. I firmly believe that these methods contain within themselves the means of tremendously furthering medical practice, psychology and legal procedure.

But my purpose is not to criticize the methods of the psycho-analyst. Let me say this, however, as being apropos of the type of course which I would suggest for the medical students: The psycho-analyst is using methods in a very crude and unsatisfactory way. He is building an enormous structure without looking carefully at the foundations. So long as we are content to use such terms as "suppression," "substitution," "symbolism," "latent" and "manifest" content "psychic censors," and the like, without further analysis, we are showing a willingness to revert to a type of "faculty psychology" which is worse than that which Herbart overthrew. What the psychologist would have the research[1] psycho-analysts do is to give a careful statement in understandable terms of these processes of substitutions, sublimations and repressions. There is no question in my mind but that such phenomena when rightly understood are statable in terms of present-day psychology — in terms of memory processes, retention, habit formation, habit conflicts, etc. It is at this place that I believe normal psychology may offer the medical men crude tools which they themselves can readily fashion to suit their special needs and a terminology by means of which they can state their findings in such a way as to be intelligible to the psychologist.

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[1] I am fully aware of the fact that there is a body of medical writers and medical practitioners who are willing to accept and to use very crude methods without attempting every now and then to revise and to reconstruct them.

For some time we have been attempting at Johns Hopkins University to arrange for a closer relationship between work in the graduate school and the work in the medical school. As conditions now stand a student may obtain his Ph.D. degree in psychology and his medical degree in six years instead of seven, under certain conditions which I need not mention here. Furthermore, any of the medical men may take in the final fourth year an elective in psychology. With the coming of the psychiatric clinic this relationship will be made still closer.

In attempting to give my ideas on this subject a clearer statement, I feel handicapped by the existing disparity in the psychologic training of the medical men before they enter on their medical studies. I shall take it for granted now that the students in medicine have had in their premedical work the equivalent of at least a three-months' course in elementary psychology, having as a text-book some psychology like that of Angell, Judd, or Titchener.[2]

A second difficulty that hampers us is the way in which anatomy (especially neurology) and physiology are taught. I feel that too much time is given to anatomy or rather to the type of anatomy that we have taught in medical schools, and when I say this I feel that a good many of the professors of anatomy in the country will agree with me. The student comes out of his course in anatomy with very little notion of the way the structures work, with very little notion of the integrated systems of conduction in the nervous system; and when he gets to physiology his attention is again attracted to the details of organs and not to the way in which the organs work when put together. I say this in all humbleness. It would be presumptuous for me to attempt to reconstruct the first-year courses in anatomy and physiology for the medical student, but the need for some change is imperative if we are to find a place for psychology in the medical curriculum. I am more and more convinced that the nervous system is badly taught by the psychologist and that in the future it would be well for him not to have less knowledge of the nervous system, but to try to teach it less and to confine his teachings more to the psychologic material. I do not believe any psychologist really wants to teach sense-organ structure or the architecture of the central nervous system. He ought to realize, and I think he does, that these subjects can be better taught by the men who are responsible for research in them.

Having relieved my mind of some of the difficulties in the way of teaching psychology in the medical schools, I may say, further, that before the course I have in mind will ever become popular with the medical student there must come some change in the ideals fostered by his whole course of instruction. The medical student must be taught that no matter whether he is specializing in surgery, obstetrics or psychiatry, his subjects are human beings and not merely objects on which he may demonstrate his skill. This shift in his ideas of value will lead him to feel the need of psychologic training and to accept that training in the fields of habit formation, association, memory and emotion.

I suggest that the course should require three periods each week: two laboratory periods of two hours each and one lecture, the course to continue for one full year, proably as an elective in the third year. I think that this should represent the minimum of time which should be devoted to psychology in the medical school. If the laboratory work is to be touched on at all, then let us do the work with some degree of thoroughness. Unless this amount of time can be given over to the work I should favor simply a lecture course covering the more important topics in psychology. While I fully realize the fact that psychology and psychologists have more or less wasted an enormous amount of time on the topic of sensation, I feel, nevertheless, that some experiments should be given in the topic of sensation. I suggest, therefore, that inasmuch as the whole ground cannot be covered, we centralize our efforts in sensation on two senses—vision and hearing. With a proper apparatus for the mixing of spectral colors the work in color-vision, including the tests on color-blindness, can be accomplished in three weeks' time. If we have to send the student to the color-wheel and have him go through the endless mill described by Titchener, he will get discouraged and waste the better part of three months and still come out with a very limited knowledge of the main features in the study of vision.

The study of auditory sensation, in so far as its data would be valuable for the medical student, can likewise be completed in a short space of time. One needs for this work a good set of forks, the Edlemann's testing-forks, a set of differential forks—the siren, the Lehmann acoumeter and some of the more common pieces of apparatus which every psychologic laboratory now contains. By means of these simple instruments we could give the medical student a command of the method of testing limits of tone, tone islands, pitch differences, difference tones and the like. The lecture-work going along with the study of sensation should condense the work in the sense fields. It should confine itself to the data and should leave out of discussion the endless details of color theories, and theories of audition. The emphasis should be placed on the function and use of these two sense-organs and on the methods of studying them.

I think that this short course in sensation would give the medical student some notion of the proper setting and control of a psychologic experiment.

These experiments on the sense fields should, in my opinion, be followed by a thorough study with laboratory and clinical work of the Binet-Simon tests, this work to be supplemented on the experimental side by such studies as Thorndike is making on the "curve of work," initial spurts in work, spurts after interruption, end-spurts, etc. —in other words, by tests which show the part that fatigue, disturbances and emotional factors play in the normal on-going of mental work. Although the work on "fatigue" in the usual sense is in a chaotic condition at present, I am not sure that we are justified in leaving it out of our course. I have the feeling that if psychologists will interest themselves more in the acquisition and control of motor processes rather than in the "pattern" or "content of consciousness" when entering on studies in fatigue, there will be brought about a rehabilitation of the ergographic methods of experimentation which will be to the advantage both of psychology and medicine.

In my judgment this work on mental tests should be followed by experimental studies in the acquisition and retention of skilful acts; these studies should be made under several different sets of conditions. This type of experimentation, showing the different stages and methods of acquiring accommodations, the distribution of effort in learning, the short cuts in learning, etc., should be of tremendous interest to the psychiatrist. It paves the way for the normal understanding of lack of interest at certain stages of development (apathy as shown in "resting places" and "plateaus," the understanding of "bungling," and "conflicts," the stamping in and retention of wrong methods of response and the effect of emotional states on the acquisition and exercise of habit). Furthermore, it shows when properly conducted, even on adult subjects as no other form of experiment does, the complete transition from a random unskilful type of response (infantile) to one essentially automatic. Certainly no medical man should deem himself prepared to give instruction in the subjects of hypnosis and the "subconscious" without a somewhat extended training in the rise of normal automatisms.

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[2] I entirely agree with the remarks made by Professor Angell in regard to the thoroughness of such an undergraduate course and the broad-minded way in which it should be conducted. It is, however, not feasible, even if advisable, to separate the undergraduate training in psychology of the medical men from that of the men who are to follow other vocations.

Our medical student will be prepared by this time to enter intelligently on the study of the normal process of association, memory and retention. My plan would be to make these studies purely "objective"—a definite task should be set, words, phrases and various other material presented; then the time of learning under ordinary conditions and under conditions of excitement (obtained by "rushing," interruption, etc.), the rate of learning and the errors in learning should be measured as any other biologic function is measured. Retention after definite interval under both normal conditions and under conditions of strain and excitement should be tested in a similar manner. Memory in the narrower sense ("associations with time, place and emotional setting") can very easily be tested by the picture method or by presenting concrete situations—now largely used in Germany in the psychologic training of students of law.[3] Definite intervals are allowed to elapse and then the accuracy of reproduction is tested by allowing the observer to give oral or written statements. The work should be amplified by testing the effect on reproduction of the various ways in which questions may be put to the observer. The word-association method can be conveniently made use of in this type of memory study. If these experiments on association, memory and retention are at all thoroughly made they will not only yield the medical student the mastery of the technic in this extremely useful field, but will teach him how to handle his patient and to prepare an intelligent record of his case.[4]

I feel that the course should contain a few lectures and several experiments on normal reaction time. Without criticizing the refinements in the methods of the normal psychologist, I think we can safely admit that the medical student does not need to measure reaction times by units as small as a sigma. At the same time I am not in favor of putting a stop-watch in his hands without at the same time telling him a little about the factors which influence reaction times, their normal variability, especially in untrained subjects and the individual peculiarities of different subjects in this and other respects.

With this foundation in practical psychology (not "applied") I think we can safely turn the medical student interested in psychopathology and psycho-analysis over to the psychiatric clinic. There, surely, is the place for him to obtain his knowledge of hypnotism, multiple personalities, suggestion and aphasia.[5] Only in the clinic can be obtained the material for study; without the individual study of cases all the lecture work in the world is unavailing.

While there is no manual of psychology dealing expressly with the material needed by the medical student, I feel sure that such will be forthcoming at an early date if psychologists and medical men will agree specifically on the necessary content of such a book.

In conclusion I wish to express my appreciation of the work of the psychiatrists for the interesting possibilities of research and interpretation which they are affording the normal psychologist. It is largely by reason of the broad-minded character of the work of Adolf Meyer, Hoch, Freud and Jung that the normal psychologist has been forced out of his academic reserve and into an active participation in the work of psychopathology.

THE NEW PSYCHOLOGY AND THERAPEUTICS

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The point of this symposium, as I understand it, is the relation between normal psychology and medical education. If by normal psychology is meant that which is taught in the ordinary academic curriculum as expounded in the more commonly used text-books, the question is a very simple one. At least it is such if I, as a teacher and practitioner of medicine, correctly apprehend the problems of pathologic psychology. I say that it is a simple question for I am unable to see any particularly close relation between this kind of normal psychology and the problems of medicine, and particularly psychotherapy. I would not say that normal psychology as commonly taught has no value whatsoever for the student of psychopathology and for him who is concerned with the healing of the sick organism. That would be an extravagant statement. If one digs through a text-book of normal psychology one finds here and there some observation, some fact, some theory, some principle which is of help in elucidating a pathologic condition, or which one may make use of for therapeutic purposes. But I think I am right in saying that one discovers these bits of gold in a massive collection of useless bits of information, because one has learned to know their meaning and value from the knowledge gained by one's studies in abnormal conditions, and not the reverse; that is to say, one's understanding of pathologic processes has not been gained from a knowledge of normal psychology.

For the most part the mass of facts gained from normal psychology is useless for the understanding of medical problems which include both pathologic processes and practical therapeutics. The problems with which normal psychology concerns itself are of little interest to practical medicine, and the principles which it involves are of little applicability to the problems involved in pathologic life. In other words, those processes, the disturbances of which are the manifestations of disease, are not the ones which normal psychology attempts to study and elucidate.

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[3] It has been a matter of interest to me that psycho-analysts have not more widely grasped the possibilities in this method for the unraveling of "suppressed complexes."

[4] One of the incidental but not least valuable results from the experiments in association with nonsense material (Ebbinghaus) would be the demonstration to the medical student that there is always a normal process of forgetting occurring without the intrusion of suppressed sexual complexes. It would not be surprising either that if after he had learned a series of sixteen nonsense syllables and found that after a few hours he could not recall one of them but could relearn the series in one-third of the original time of learning, he should come to the conclusion that a good many things could be accomplished by the normal functioning of the nervous system without the necessity of positing a "conscious unconscious content"—the "subconscious" to aid it.

[5] The only subject I should wish to have excluded as a special topic would be that of the "subconscious." Surely we gain nothing by this concept. We can study the visible and tangible effect of suppressions, tangles, conflicting habits and the like without positing a "subconscious." Personally I feel that the introduction of such a concept is as detrimental to the advance of psychology analysis as is the discussion of those philosophic remnants—psychophysical parallelism and interaction.

We learn in text-books a good deal about perceptions being selected groups of sensations and images, much of which any psychopathologist knows from his own observations, but of the important mechanism by which perception derives its meaning from the context, or associative processes, unconscious as well as conscious, we learn only so much as can be put in a few brief paragraphs.

We read long discussions as to whether feeling has one dimension, or two dimensions, or three or more dimensions; and we read a good deal about classifications of emotions; but we find almost nothing about the important part which feelings and emotions actually take in determining the processes of the mind. We find almost nothing of the mechanisms, conscious and unconscious, by which mental processes are driven in this direction or that by these effects. We read much about the nature and classification of instincts, but almost nothing of the mechanisms by which instincts determine conduct and the content of consciousness. We learn a good deal about memory-images, but almost nothing about memory as a mechanism which determines the building of complexes as an associative system which subconsciously determine the settings of our judgments, our attitudes and other mental processes; and we learn almost nothing of amnesia, one of the commonest of phenomena of everyday, as well as pathologic life. We learn a large mass of accumulated facts of conscious life, but nothing of the great subconscious life in which conscious processes find their sources and determining impulses. In short, normal psychology gives us a comprehensive knowledge of a conscious world, but that world which it gives us is a dead, inert, lifeless one. The problems with which normal psychology for the most part has chosen to deal are exceedingly interesting from the point of view of the higher culture, but they scarcely touch the vital questions which the disturbed, distressed human organism presents to the physician.

It is a serious question, therefore, whether the medical student, already almost submerged in the number of subjects which he is called on to master, should devote a serious portion of his time to the study of normal psychology as now studied and taught. There is one point of view, however, from which all psychologic studies must be of value, namely, in attracting the interest of the student to this type of culture, in directing his processes of thought along psychologic lines, in building up a psychologic setting or context and giving a trend to his culture by which the psychologic problems with which he will have to deal in diseased conditions will find an easier access to his imagination and awaken his interest. The student whose mind is well trained along lines of psychologic thinking will unquestionably have developed an attitude of mind which will give a meaning and interest to the problems in abnormal psychology that otherwise, without this previous training, he will only laboriously attain.

Normal psychology should be to pathologic psychology and psychotherapeutics what physiology is to pathologic physiology and physiologic therapeutics; but to attain this position processes and mechanism should be studied and elucidated rather than structures.

The problem of psychology has been defined by one of our first authorities as "the questions of what, how, and why" as regards its subject-matter. The answers to the questions "what" and "how" admittedly give us only a description of the facts, the "what" being the task of analysis, the "how" the task of synthesis. It is the answer to the question "why" that gives us an explanation of the facts, and this is the ultimate goal which science strives to reach. As Titchener properly says:[1] "If we attempted to work out a merely descriptive psychology, we should find that there was no hope in it of a true science of mind. . . . In order to make psychology scientific we must not only describe, we must also explain mind, we must answer the question why." And this is the real demand of applied science such as therapeutics is. Applied science has no use for a science that does not answer the question "why," does not give the explanation of the facts.

But we are told that any explanation of psychologic facts must be in terms of body processes — nervous processes; that "if we refuse to explain mind by body we must accept the one or the other of two equally unsatisfactory alternatives; we must either rest content with a simple description of mental experience, or must invent an unconscious mind to give coherence and continuity to the conscious. . . . But, if we take the first, we never arrive at a science of psychology; and if we take the second, we voluntarily leave the sphere of fact for the sphere of fiction." Consequently we must explain "mental processes in terms of their parallel processes in the nervous system."

Here I must part company with our distinguished psychologist, Professor Titchener, although I am not quite clear as to his real meaning. If he means that we should explain mind by specific parallel nervous processes, we certainly are entering the "sphere of fiction" indeed of romance, for we cannot correlate the simplest conscious process with any specific physiologic process, nor have we even a glimpse of the data which will allow us to approach the problem.

If on the other hand, he means a physiologic process as an abstraction or concept we are still entering, but justifiably, the sphere of fiction, though I would rather phrase it, of imagination, as much so as when we "invent an unconscious mind." Unconscious mental processes belong no more to the sphere of fiction than do unconscious physiologic processes. Both are simply concepts which we postulate to explain the facts. We simply say the phenomena occur as if the concepts were true, just as the physicists say, or used to say, that electrical phenomena occur as if a current of electrical fluid or particles flowed through a wire. So far as such concepts satisfactorily explain the phenomena and allow us to predict events we may treat them as true and as the cause of phenomena. To my way of thinking it does not make the slightest difference, so far as the purposes of explanation are concerned, whether we treat unconscious processes as physiologic or mental—both are concepts and in this sense only belong to the "sphere of fiction." And for the purposes of applied science—in the present case therapeutics — which rests on explanation, it is also necessarily a matter of equal indifference.

The important thing is that mental and physiologic events shall be related to antecedent events; in other words, that the mechanisms by which mental processes are determined shall be elucidated. This is a true functional psychology.

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[1] Titchener: Text-Book of Psychology

Normal psychology has strangely neglected this field and it has been left to students of medical problems—men not trained in psychologic methods—to attempt to work out these dynamic problems. If normal psychology is to become an applied science and in particular to become of help to medicine, to psychopathology and psychotherapeutics, it must occupy itself more than it has done with the problems of dynamics, of mechanisms, of function. One of the most serious criticisms of normal psychology is that thus far it has not been developed along lines that lead to findings that can be applied to practical life. All the physical sciences, chemistry, physics, geology, astronomy, biology, physiology, have contributed knowledge that can be made use of for practical purposes and thus each has furnished the data for an applied science. Psychology has lagged behind. One reason for this is that it has sought too little the explanation of phenomena — the "why" — and has confined itself too much to description — the "what" and the "how." To this extent it has failed to become "a true science of mind."

It is true that there has developed of recent years a movement to apply such psychologic "explanations" as we possess to pedagogic and social problems. But in these fields it must be admitted, in the first place, that only a limited number of the facts discovered can be applied in practice, and, second, that even if we were in complete possession of the "laws" which determined mental processes there will remain great difficulties in their practical application owing, as it seems to me, to the difficulty of controlling the conditions — human beings — to which we would apply them. In one field alone can we sufficiently control human beings, namely, in psychotherapy. But the processes which are involved in pathologic disturbances are the very ones which have been neglected in normal psychology. Unfortunately, as I have said, the professional psychologist has not occupied himself with searching out the mechanisms which are concerned in the abnormal manifestations with which the therapeutist has to deal. This has been left to the unprofessional psychologist — the physician. It is a pity; for it would be of great advantage to medicine if psychologists trained in psychologic methods would bring their experience and knowledge to the task of solving pathologic problems. They would find, too, in pathology a field of research that will furnish material which will disclose the mechanisms of mental processes in a way that does not obtain in normal conditions. As has been well said, "Disease dissects the mind far better than can the introspection of the psychologist."

Psychotherapy then, is an applied science and makes use of the complex mechanisms which underly and determine mental processes. Attempting first an understanding of the alterations of normal mechanisms which occur as pathologic processes (psychopathology), it endeavors to restore the normal balance by the force of normal processes. While psychotherapeutics is a so-called applied science, the application of the data supplied by science is an art. As the technic of an art differs in the hands of different craftsmen, so the technic of psychotherapy differs in the hands of different physicians. It would be out of place, therefore, in this discussion to enter on the question of therapeutic methods. Every method, however, must, consciously or unconsciously, make use of psychologic laws and processes.

What sort of psychology, then, should be taught to meet the requirements of medicine and particularly of therapeutics? The psychology that I would advocate may properly be termed the "New Psychology." Without speaking dogmatically, but only as I see the matter, I would say that it should include:

1. A study of the subconscious (whether regarded as psychical or physiologic) in all its relations. This embraces the content of the subconscious as the storehouse of conserved experiences; the influence and mechanism of the subconscious in determining conscious and physiologic processes; its incubations; its automatic manifestations — motor and sensory; its syntheses, dissociations, etc.
2. The phenomena of hypnosis and allied conditions.
3. Suggestion and its phenomena.
4. Memory as a process (as distinguished from its content and phases) and the part played by this process in conscious and subconscious activities.
5. Amnesia and its mechanism.
6. Fixed ideas, conscious and subconscious.
7. The dissociations and syntheses of "personality" and their mechanisms.
8. The emotions and feelings as forces which determine conscious and subconscious processes, dissociations, syntheses and activity, and which control the visceral functions of the body.
9. The emotional instincts as impulsive forces which determine mental activity and conduct.
10. The sentiments as complexes of ideas and emotions, and the part played by them in determining so-called personality and reactions to the environment.
11. Phenomena of repression, resistance, conflicts, inhibitions, etc.
12. The mechanisms of thought.
13. Complex formation.
14. The influence of complexes as conscious and subconscious settings or contexts in determining judgments, attitudes of mind, points of view, the meaning of perceptions, etc.
15. Associative processes and reactions, including word and galvanic reactions.
16. Habit processes.
17. Automatisms.
18. The mechanism of dreams.
19. The influence of the mind on the body.
20. Fatigue.

This is a rough and incomplete summary of the kind of psychologic knowledge which, in my opinion, the medical student needs in order to understand those disturbances of processes which appear as the symptoms of the psychoneuroses, and for the purposes of psychotherapy. Without such knowledge it is not possible to understand the protean manifestations of hysteria; the obsessions, the impulsions, the incompetencies of psychasthenia; the habit psychoneuroses; the autosuggestive phenomena due to attitudes of mind; the disturbances of the viscera dependent on emotional influences; the fatigue phenomena of so-called neurasthenia, and various other psychopathies amenable to psychotherapy. Nor is it possible to understand the symptomatology of the insanities. That our knowledge of the psychologic processes included in this program is now in only a formative shape is in no way an objection to making a beginning, and I, for my part, believe that the time is ripe for the colleges to include this field of psychology in their curricula.

I would point out that this program would supplement that suggested by Dr. Watson, not replace it; and further that the subjects included in it are all normal processes. They should be taught in a premedical course before the student enters the medical school, reserving instruction in the special disturbances of the normal processes, or psychopathology, for the medical curriculum.

But properly to train and equip himself in the New Psychology, the professional psychologist must leave his armchair introspections, and even his laboratory, and come to the hospital clinic. He must imitate the geologist and leave his academic shades and seek his material for study where it is to be found. It is in pathologic conditions of the mind that he will find his true field of research and the phenomena which will disclose the complex mechanisms of the mind. It is quite possible that his students also will have to follow him to the clinic where the instruction may have to be given. In any event I am sure that he will find a ready response from the physician, who will welcome him as an expert coworker.

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THE EFFECTS ON THE HEART OF "SOLUBLE DIGITOXIN, CLOETTA"

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An article by Benjamin Moore, professor of biochemistry at the University of Liverpool, appearing recently,[1] on this subject, is based partly on experimental evidence, and it is the purpose of the present paper to discuss the evidence submitted.†

In calling attention to the need, so universally felt, for more exact preparations of digitalis, Moore says:

> Although digitalis is one of the most valuable of all our cardiac drugs, its therapeutic administration still lies at the stage of development, comparable to that of the use of decoctions of cinchona bark before the isolation of quinin.
>
> The physician is still, unfortunately, forced to prescribe an infusion or tincture of digitalis leaves prepared on the same principle as a cup of tea, although the toxicity of the product so administered may vary as much as that of the domestic beverage.

It is well known that digitalis leaves do deteriorate and become moldy when they are kept in a damp place, but, fortunately, we are now able to obtain standardized digitalis leaves of good quality, and the idea that digitalis leaves deteriorate rapidly even when kept under proper conditions is wholly erroneous.

It is true that no absolutely stable liquid preparation of digitalis or any of its principles is known though one is constantly being informed that this much-to-be-desired result has been accomplished, the announcement being made usually in connection with some high-priced proprietary preparation of digitalis which enjoys a more or less ephemeral existence until the claim of stability is disproved.

It is also true that tincture of digitalis of fairly uniform strength can be procured now from any first-class pharmacist, and I have on hand a tincture of digitalis which has shown very little change in activity during a period of nearly two years.

That the use of digitalis is not so unsatisfactory as Moore supposes is shown by the fact that it has not been displaced by crystallized strophanthin, which is a perfectly stable crystalline body of constant composition. Crystalline ouabain was described about twenty-five years ago,[2] and more recently it has been prepared by Thoms, who introduced it under the name of g-strophanthin or gratus-strophanthin crystalline. Although this is regarded as a substitute for digitalis, having a constant composition and exact dosage, it has not attained any considerable degree of popularity.

Moore calls attention to the progress that has been made in digitalis therapy through the practice of standardizing the digitalis bodies, but he objects most plausibly to the methods of standardization mentioned by him, because they depend on the killing-power of the drug, whereas physicians do not want to kill their patients but to cure them.

While it is perfectly true that physicians do not wish to kill their patients, it is equally true that the action of digitalis which they utilize in curing them is that which kills if it be carried too far, and it seems to me that it would be quite as logical to object to testing the strength of strands of a cable by raising the tension to the breaking-point, on the ground that engineers wish the cable not to break, as it is to object to the method in vogue for testing the activity of the digitalis bodies on the grounds mentioned.

The argument urged by Moore against the accepted methods of standardizing the digitalis bodies is all too familiar to those who have heard all pharmacologic methods held up to derision, and the fact remains that Moore brings forward no evidence to show that there is any better method of standardizing the digitalis bodies than that which depends on their power to kill.

This method is recognized throughout the world by pharmacologists as the best one available, and since a great many investigators have sought earnestly, without success, for a better method, it will be necessary to furnish pretty strong evidence of the superiority of any other before it can hope for favorable consideration at the hands of either the pharmacologist or the clinician.

The orderly discussion of this article will necessitate reference to this subject again.

There is one statement made by Moore with which most of us will be inclined to agree, at least in part. He says:

> It requires some training of the ear to count the rate of heart-beat accurately in the rabbit, on account of the speed of the beat, but the heart-beat, although so rapid, is steady and regular, and with a little practice can be counted quite well.

The protocols show that the rate of the heart-beat, in some cases, was about 324 per minute, and he states that it was *almost* (italics mine) too fast to count. It is much better to use mechanical means for recording the rate of the heart-beat when it is so rapid, as most observers will agree, for comparatively few among even trained observers can count the heart-beat accurately when the rate exceeds 175 per minute.

The following statement of Moore's requires consideration:

> In the course of the present work, in order to avoid complicating the results by administration of alcohol at the same time and to render intravenous injection possible, I have evaporated off the alcohol from a tincture of digitalis, and then made the residue up as a fine suspension in saline. Such a suspension I have found entirely inert on intravenous injection, and it has occurred to me that the uncertain action of tincture of digitalis when given by the mouth may be due to its precipitation in insoluble form when largely diluted with water in the stomach.

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[1] Moore, B.: Brit. Med. Jour., Jan. 13, 1912, p. 60.

† The soluble digitoxin referred to is the proprietary preparation known as Digalen, and Moore's article strongly supports the claims by the manufacturers that it is a more reliable and less harmful preparation than digitalis.—Editor.

[2] Arnaud: Compt. rend. hebd. Acad. d. Sc., July, 1888.

This statement as it stands is wholly inexplicable, for there is no fact which is more thoroughly established than that the alcohol may be evaporated from a tincture of digitalis without altering the action appreciably so far as the digitalis is concerned.

The extract of digitalis of the United States Pharmacopeia is essentially such a preparation, being an evaporated fluidextract, which in turn is in part an evaporated tincture. If the evaporation of the alcohol sufficed to render the preparation inert, as would seem to be implied by the statement of Moore cited above, then the extract of digitalis would perforce be inert, which it is not, of course.

The protocol of Experiment XII seems to throw some light on the results cited by Moore. Reference to the protocol shows that he evaporated the tincture to *dryness*.

Every pharmacist knows, of course, that digitalis is injured by prolonged heating, or by heating to a very high temperature, and every pharmacist also knows that to evaporate tincture of digitalis to absolute dryness requires either prolonged heating or heating to a high temperature; hence one can only suppose that Moore either heated the digitalis too long or to too high a temperature, and it cannot be stated with too great emphasis that the alcohol may be evaporated from tincture of digitalis without destroying its action. That Moore destroyed the action of the tincture in the way mentioned has absolutely no importance, since a pharmacist would no more do that than he would incinerate it.

I placed 15 c.c. of tincture of digitalis in a flat-bottomed dish and heated it on a boiling water-bath until the tincture was reduced to a pilular consistence, after which the heating was continued at the same temperature for half an hour longer. The result was surprising, in view of Moore's statement just quoted, for when the resulting extract was diluted with saline to its original volume (15 c.c.) it was found to be nearly twice as active as digalen which was taken from an original, and previously unopened, bottle. The extract so overheated was soluble in water with only slight cloudiness.

This discussion may appear to be wholly superfluous, since such a procedure is never necessary, but the statement referred to might cause misunderstanding were it passed over in silence.

While Moore was so scrupulously careful to get rid of the alcohol in order that it might not interfere with the action of digitalis, that he actually destroyed the digitalis itself in the effort, he appears to be wholly oblivious of the fact that digalen also contains alcohol, and, since digalen is only about a fourth as active as tincture of digitalis, a dose of digalen actually contains nearly as much alcohol as a dose of tincture of digitalis.

Moore states that the residue left after evaporating the tincture of digitalis was made into an emulsion, which might give the impression that tincture of digitalis is immiscible with water.

It is very well known that digitalis contains a small amount of wholly inert fixed oil, a part of which is extracted in making the tincture, and that this causes a slight milkiness when the tincture is added to water.

If a perfectly clear solution is desired it may be had by using the defatted tincture of digitalis which mixes with water to form a perfectly clear solution. It is quite possible that this may precipitate after standing for some time.

The defatted tincture of digitalis has been recommended for general use at various times, but the advantages which it may appear to have over the official tincture have not sufficed to make it popular.

As to Moore's suggestion that the uncertain action of digitalis may be due to the precipitation in an insoluble form in the stomach, it may be recalled that the famous experiment of Koppe, in which 3 mg. of the insoluble crystalline digitoxin taken by the mouth gave rise to toxic symptoms, proves that digitoxin may be absorbed from the alimentary canal despite its insolubility in water, and, on the other hand, the most soluble members of the digitalis group, such as strophanthin, show the greatest variation in absorption from the gastro-intestinal canal.

While Moore does not say that digitonin is actively hemolytic, he would seem to imply that it is so, as indeed it is, and he does call attention to its being an injurious constituent of the infusion of digitalis. He discusses the actions of two digitalis bodies which were studied in his laboratory and says:

> Both of these bodies have a remarkably stimulating action on the cardiac muscle, and when perfused through the isolated heart show an increased force of beat and a slowing of the rate, and generally give tracings very similar to digitalis. But, unfortunately, they have in the end an injurious effect on the heart, appearing to render it edematous; and also they possess a highly injurious action on red blood-corpuscles, causing rapid hemolysis even in dilute solution. In many respects these sapoglucosids possess an interesting and suggestive resemblance to the bile salts, but their hemolytic and certain other properties rule them out as heart tonics. In crude digitalis such an injurious sapoglucosid—namely, digitonin—is always present, and in the infusion its presence is even necessary to dissolve the *crystalline digitoxin*, which is quite insoluble in aqueous solution.

Lest the foregoing give rise to misunderstanding of the actions of infusion of digitalis when used therapeutically, attention is called to the fact that while saponins, or the sapoglucosids, such as digitonin, are actively hemolytic when they are added to suspensions of red blood-corpuscles in normal salt solution, this hemolytic action does not occur when infusion of digitalis is taken by the mouth.

First, the amount of digitonin present in digitalis leaves is small, according to Sollmann.[3] Second, it is quite well known that the saponins of this type are not absorbed readily from the alimentary canal.

Third, when digitonin, or other similar saponin, is added to normal blood, or to red blood-corpuscles suspended in serum, hemolysis does not occur unless the proportion of digitonin, or saponin, is present in amounts several hundreds of times greater than could possibly be present in the blood after the administration of the therapeutic dose of infusion of digitalis.

The reason for this difference in the hemolytic action of these bodies in saline and in blood or serum suspension of the red blood-corpuscles is that the cholesterin of the serum combines with the saponin, or digitonin, far more readily than the red blood-corpuscles do, and they are spared the hemolytic action which the saponins exert in saline when the corpuscles are not thus protected. Ehrlich has likened this protection which the cholesterin affords to the red blood-corpuscles against the hemolytic action of these saponins to the protection afforded by a lightning rod to the building over which it is placed.

I have injected some twenty to forty times the fatal dose of digitalis directly into the veins of an animal without causing hemolysis. Richard Weil, who has done much work with these hemolytic agents, has informed me (orally) that 5 c.c. of blood contain more than enough cholesterin to protect the red blood-corpuscles against the hemolytic action of the digitonin which is found in a therapeutic dose of digitalis, and that under no therapeutic conditions could enough digitonin enter the circulation to cause the least particle of hemolysis.

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[3] Sollmann: Text-Book of Pharmacology, Ed. 2, p. 479.

I wish it to be understood distinctly that I do not advocate the injection of digitalis preparations directly into the veins in therapeutics.

Moore calls attention to a number of active glucosids in digitalis and says that the tincture or the infusion represents a "blunderbuss" of about half a dozen bodies with powerful cardiac action.

Further along in his paper he says, with reference to these bodies:

> It is obvious that among these many glucosids possessing a marked cardiac action, if one could be found free from the saponin properties of hemolyzing blood and sufficiently soluble in water to be administered without alcohol, and in case of need given intravenously, it would possess a preference as cardiac tonic. Such a substance would appear from Waller's work to be a rarity, but Cloetta claims to have isolated a body with these properties from digitalis leaves in his "Digitoxinum solubile."

There are several statements here quoted which require some explanation.

While Cloetta does claim to have isolated a principle such as Moore mentions, it is also true that Kiliani[4] severely questions the accuracy of Cloetta's claims.

Kiliani calls attention to several misstatements in Cloetta's papers dealing with the chemistry and identity of the so-called soluble digitoxin. Kiliani says, in part: "Cloetta's contention, that the molecular mass of digitoxin is reduced one-half by transposition into the amorphous state, is nonsense."[5]

Kiliani adds further: "Digalen is nothing but a high-per cent. digitalein."[6] He refers in this to the so-called soluble digitoxin, before its solution in glycerin, alcohol and water, in which form it is known as digalen.

Schmiedeberg, who isolated digitalein about thirty-five years ago,[7] examined digitalein chemically and pharmacologically, and states that it combines in itself to a peculiar degree the properties of digitonin, on the one hand, and of digitalin, on the other.

It is conceded by every one who has studied the subject that Schmiedeberg and Kiliani have contributed more to the chemistry and pharmacology of digitalis than any other two men who have ever lived.

If Moore is correct in stating that the sapoglucosids, such as digitonin, have such an injurious action on the heart after a seeming digitalis action, it would seem to place a very heavy responsibility on those who use digalen, in view of the statement of Schmiedeberg.

From what has been said it would appear that if Kiliani and Schmiedeberg are correct in regard to their statements concerning digalen and the duality of actions of digitalein, digitalis can hardly lay claim to a monopoly of scattering its shots in cardiac disease, but it would at least have the advantage of a preponderance of those constituents which do not injure the heart after a seemingly beneficial action.

After satisfying himself that commercial digalen was free from the objectionable property of causing hemolysis — presumably in the presence of serum — Moore says:

> The first impression obtained in studying the action on the heart by orthodox methods was disappointing, for it looked as if the substance was very weak, as compared with a standardized tincture of digitalis. So it is, if the ordinary sign of stopping the heart within one hour be taken as the standard of therapeutic activity.

After comparing the activity of digalen and tincture of digitalis on frogs and rabbits, Moore continues:

> From the point of view of lethal dose, therefore, digalen solution only possesses one-third to one-fourth of the strength of standardized tincture of digitalis. But the question arises: Does the lethal dose, as determined in this way, fix the therapeutic value of the drug? . . . and in our opinion, the effects on the heart obtained in the experiments on the intact mammal, and the minimal amounts required to develop a marked therapeutic action in the isolated mammalian heart, negative this proposition, and demonstrate, on the other hand, that the lessened lethal effect is a distinct advantage.

The method of standardizing the digitalis bodies has been discussed, and if we accept the weight of opinion of such men as Schmiedeberg, Focke, Gottlieb, Fraenkel, Sollmann, Edmunds and Hale, and scores of others, in regard to this question, then we must see that, according to the testimony of Moore himself, digalen is indeed possessed of a very weak digitalis action.

Moore states that one part of digalen in 500 parts of saline poisons the heart when it is perfused with this long enough, he then continues:

> Contrasted with this, even so high a concentration as 1 in 70 does not poison when serum is the circulating medium instead of saline, but instead the system—*cardiac muscle, serum and drug*—comes into equilibrium at the stage of therapeutic effect, and remains there steadily for days until the drug becomes changed or excreted.

Unfortunately, Moore does not appear to have made the simple experiment of *perfusing* the heart with such concentration of digalen in serum, he merely makes the assertion as quoted, apparently basing it on the experiment of adding digalen to the serum of the *intact* animal in such concentration, apparently oblivious of the fact that when digalen is so added to the serum (or blood) of the intact animal, numerous organs take up a part of the digalen, whereas, when the drug is perfused, the heart must of course continue to be acted on so long as the drug remains in sufficient concentration in the perfused fluid.

Moore assumes — and this is pure assumption — that the digalen when injected into the intact mammal is distributed between the serum and heart alone until equilibrium is established at the therapeutic stage and remains there steadily for days. This statement is simply amazing, and, in the absence of the least evidence to support it, it can hardly be accepted as correct, and indeed Moore must have overlooked the statement just cited, for he proceeds to give the protocol of Experiment II, in which about two and a half times the lethal dose of digalen (as determined by himself) was injected intravenously into an animal within a period of a few minutes less than twenty-four hours. If the drug continues to circulate for days in equilibrium at the therapeutic stage, it is difficult to understand why about two and a half times the fatal dose can be injected intravenously within one day without causing any effect other than therapeutic slowing of the heart-rate.

A detailed study of the protocols of all of Moore's experiments would require more space than we can devote to them here, but the following discussion will serve the desired purpose.

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[4] Kiliani: München. med. Wchnschr., 1907, i, 886.

[5] "Die Behauptung Cloettas, dass die Molekulargrösse des Digitoxins durch dessen Ueberführung in den amorphen Zustand auf die Hälfte herabsinken könne, ist eine Ungeheuerlichkeit."

[6] "Das Digalen wird nichts anderes als hochprozentiges Digitalein."

[7] Schmiedeberg: Arch. exper. Path. u. Pharmakol., 1875, iii, 16.

In Experiment I, digalen was injected intravenously at 11:52 a. m., 2:56 p. m. and 4:03 p. m., in equal amounts, the total amount injected being 4.3 c.c. per kilogram of body-weight, or 91 per cent. of the fatal single dose as determined in Experiment V. There was no slowing at 4:36 p. m., or thirty-three minutes after the last injection. If three doses of digalen, amounting to 91 per cent. of the single fatal dose, administered within a period of four hours and eleven minutes, in the way most favorable for securing prompt action — i. e., intravenously — do not produce slowing of the heart before the following day, we can hardly consider that digalen is the emergency remedy which it has so often been represented as being.

In Experiment II, the amount of digalen injected intravenously within a period of twenty-four hours was 11.4 c.c. per kilogram, or, as previously stated, about two and a half times the single fatal intravenous dose. The heart was slower by sixty beats per minute on the twelfth day.

That would suggest that digalen exhibited the so-called cumulative action of the digitalis bodies, if it suggested anything more than that the heart-rate of the rabbit showed considerable variations under normal conditions.[8]

That digalen does indeed show this so-called cumulative action has been proved by the experiments of Fraenkel,[9] who sought to refute the claim made by Cloetta that digalen exerted a prolonged therapeutic action without showing cumulation.

In Experiment IV, a rabbit received, by vein, 3.5 c.c. of digalen per kilogram of weight and showed an increase in the heart-rate of thirty-six beats per minute after an interval of nineteen hours and forty-five minutes. This is mentioned by Moore as a toxic effect, but the dose administered in this experiment is actually smaller than that given in Experiment I, in which the rabbit received 4.3 c.c. per kilogram of weight, and in which the results are cited as showing the therapeutic effects on the second day.

If we can accept these observations as correct, it must be difficult, indeed, to fix on a dose which will surely give therapeutic effects without danger of subsequent poisoning. The results in these two experiments are difficult to harmonize with the oft-repeated claim that digalen acts with great promptness after its intravenous injection, unless we suppose that the changes in rate were such as normally occur and are not to be attributed to the action of the digalen, but in Experiment V, a rabbit received a dose of 4.7 c.c. of digalen per kilogram of weight, or only some 10 per cent. more than in Experiment I (which showed no effects till the following day), and the heart-rate was slowed by forty-eight beats per minute within three minutes, showing the extreme rapidity with which digalen may act when toxic doses are given. Of course, it will be remembered that in Experiment I the total dose was given in three portions, but all within a period of four hours and eleven minutes.

If such a large amount injected at such brief intervals as in Experiment I gives no effect on the day of injection, while a slightly greater amount injected at once produces such a great effect in three minutes, followed by death in forty-three minutes from the time of injection, it must appear to the ordinary observer that it would be extremely difficult to foretell which doses would be followed by death, and which by the therapeutic action only.

Experiment VI is entitled "High Toxicity of Tincture of Digitalis (Standardized)." In this experiment a rabbit received 1.07 c.c. tincture of digitalis per kilogram of weight and died instantly. The injection was at 12:10, the animal was dead at 12:10. Experiment VII is entitled "Toxicity of Small Dose of Tincture of Digitalis (Standardized)." The dose in this experiment was actually greater per kilogram of body-weight than that in the preceding experiment in which the animal died instantly, yet this is termed a small dose.

Experiment VIII is entitled "Determination of Lethal Dose of a Standard Tincture of Digitalis."

Doses of 1.07 c.c. per kilogram, and 1.12 c.c. per kilogram of weight having proved fatal instantly, in one case, and in four hours in the other, Moore proceeds with the "Determination of Lethal Dose of a Standard Tincture of Digitalis" by doubling, and more than doubling, the instantly fatal dose, so he gives this animal 2.3 c.c. per kilogram by vein and records that it died almost instantly.

Since it is customary to reduce the amount which is instantly fatal when determining the fatal dose in subsequent experiments, it suggests that Professor Moore may have suspected what the reader has already guessed, i. e., that the instantaneous death of the rabbit in Experiment VI may not have been due entirely to any extraordinary toxicity of the tincture of digitalis, such as the protocol of the experiment would seem to imply, but that there may have been contributory circumstances, such as every laboratory worker encounters at times, for if there had been no such accident, there would have been no reason to more than double the instantly fatal dose, when "determining the lethal dose"; at any rate, in Experiment XI a rabbit received a dose of 3.75 c.c. per kilogram of weight, in the course of a day, and in addition the animal received 1.25 c.c. per kilogram on the third day, but the rate was practically the same at the end of the third and fourth days as before the experiment.

As a matter of fact, it need hardly be stated that these experiments give little information concerning the minimal lethal dose of either digalen or tincture of digitalis.

Moore discusses the perfusion of the isolated mammalian heart with digalen in saline, and says:

> The hearts used in these experiments were taken from medium-sized rabbits, so that the results can be strictly compared with those obtained in the previous section on intravenous injection.

It is somewhat surprising to read that the results of perfusion experiments can be compared strictly with the results of intravenous injection, if one is correct in accepting the context to mean that the comparison refers to *quantitative* actions.

The several tracings obtained from perfusion experiments with digalen do, indeed, show a marked action, but every one knows that digitalis-effects are obtained when digitalis bodies are perfused through the heart.

Since Moore maintains that the effects are strictly comparable to those obtained in the experiments with intravenous injection, it is interesting to note that full therapeutic effects were obtained within from three to nine minutes in all cases of perfusion; therefore, if we are to consider the results as really comparable to those obtained after the intravenous injection, we must suppose that the enormous doses of digalen used in the intravenous injection experiments were devoid of therapeutic action, at any rate, as previously cited, no slowing was stated to have occurred on the same day after an amount of digalen equal to 91 per cent. of the fatal dose as determined in Experiment V.

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[8] That the heart-rate varies widely in normal rabbits is shown by the initial rates of the different rabbits used by Moore. Two showed initial rates of 222 and 228 per minute, respectively, while one showed an initial rate of 300 per minute. The latter weighed 1,630 gm.; the one having the slower rate weighed 1,850 gm.

[9] Fraenkel: Arch. exper. Path. u. Pharmakol., lvii, 123.

When discussing the coefficient of distribution between the heart and the circulating fluid, deducing that digalen is safer than strophanthin, he says:

> Accordingly, in treating heart conditions of failing compensation, it is distinctly the weaker drug that is indicated and not the stronger one, and also the more readily soluble and diffusible one, so that accumulation may be avoided.

When this statement is made in connection with the announcement that digalen is not capable of poisoning the heart even in the concentration of one part of digalen to seventy parts of serum, it seems very favorable to digalen. It is true, indeed, as stated, that digalen is not very toxic, which is merely another way of saying that digalen has a very weak digitalis action, whether it be considered with reference to its therapeutic, or toxic, action. If mere weakness is desirable, however, that can be attained with tincture of digitalis by diluting it with from three to four times as much normal salt solution, or, better, the defatted tincture can be so diluted when a perfectly clear preparation is desired, though it is perfectly true that this may possibly have drawbacks so far as intravenous injection is concerned, and when that method of administration is desired the solution of strophanthin can be diluted to any desired degree.

While digalen is a weak preparation of digitalis, as stated, this is by no means true of the so-called amorphous digitoxin, and Moore himself states that this is capable of causing the heart to stop beating with a concentration of 3 parts in 5,000,000 of saline, though he denies such action when serum is used. This statement has been discussed already and attention is called to it again on account of an apparent discrepancy in the arguments advanced, and to show, by Moore's own experiments, that the active constituent of digalen is not the weak substance that one might suppose, however weak commercial digalen in liquid form is.

The statement just mentioned is based on Perfusion Experiment II, in which 1 c.c. of digalen was added to a liter of saline for perfusion. It would be a somewhat plethoric rabbit of medium size, into which so much digalen could be injected at once and not exceed the concentration of 3 parts in 5,000,000 of serum, since that would require a content of 1 liter of serum, or some ten to twenty times as much as would be found in the rabbits of the size used by Moore.

It is quite true that the toxicity of the digitalis bodies depends to a very large extent on the concentration in which they reach the heart, but that does not alter the fact that total quantity has something to do with the intoxication also, and when the limits of dilution are approached, it must be obvious that the abstraction of a very small amount would reduce the total below the point where there would be any action if the amount of perfusion fluid or serum were very small, and that the larger the volume bathing the heart the more that there would be to abstract before the concentration would fall below the point at which action would continue. But, as already pointed out, the true explanation of the difference in the action when 1 c.c. of digalen is perfused through the heart, and when the same amount is injected intravenously, is that in the first case the heart alone shares with the perfused fluid the distribution of the poison, whereas when this is injected intravenously other organs take up a part of it from the blood.

It is quite possible that the serum may give up digalen less readily than does saline, but no evidence is afforded by Moore that digalen acts differently from the other digitalis bodies in this respect.

It is the mission of the critic to examine in detail any work which bears on the questions which concern him, and it is because it seemed to me that Moore's results and conclusions would tend to give the general practitioner too high an opinion of digalen, with a correspondingly poor opinion of digitalis and its preparations that the present task was undertaken.

It is not impossible that digalen may have a place in therapeutics, but, obviously, a very limited field of usefulness, in the present state of our knowledge; it is equally obvious, however, that nothing but disappointment can result from its use under a total misapprehension of its relative and actual value in the treatment of cardiac disease.

It will be evident to the most obtuse that the conclusions at which Moore arrived are quite different from my conclusions.

It is safe to say that Moore's conclusions are pleasing to the manufacturers of digalen, and when manufacturers of proprietary preparations find literature suited to their purposes of advertising they proceed, very naturally, to make such use of it as they deem best, and it would not be at all surprising if Moore's article were circulated either in the form of reprints, or by means of liberal abstracting in medical journals.

414 East Twenty-Sixth Street.

TRACHOMA, ITS ETIOLOGY AND TREATMENT

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Trachoma is a disease of the conjunctiva, in which there is a characteristic connective-tissue hyperplasia. It is marked by a proliferation of lymphoid cells. The follicles formed by this proliferation tend to degenerate and to become encapsulated by the newly formed connective tissue. As a result of this inflammatory process, newly formed blood-vessels penetrate these follicles. They become distended with fluid, push their way above the surface of the conjunctiva, finally becoming degenerate, break down, and the overlying conjunctiva is replaced by scar tissue, and thus, step by step, the entire conjunctiva becomes destroyed. As a result of this chronic inflammatory process, connective-tissue changes take place in the deeper structures of the lid, normal blood-vessels become obliterated, all glandular secretion is checked and there is produced a general atrophy of the lid.

It was a little more than a hundred years ago that the significance of this disease began to be appreciated. When Napoleon invaded Egypt, in 1798, his soldiers were attacked with a violent form of ophthalmia. When they returned to Europe, those so suffering were discharged from the army. Similar outbreaks occurred wherever these discharged soldiers went, and thus the disease became disseminated throughout the country. This was thought at that time to have been the first introduction of trachoma into Europe, but subsequent investigations proved that it had existed there for centuries previously.

As to the contagiousness of trachoma, there can be no doubt. For the past hundred years it has been a menace to the problems of military hygiene in the European armies. Wherever large bodies of men are congregated, where intimate contact and foul air are unavoidable, rapid dissemination is certain.

In this country, those who live in the tenement districts of the large cities are living in constant danger of infection. Let one child in a large family of children become infected, and the contagion will attack them all.

Safford, in his excellent paper on trachoma, states that on the long voyages from Italy to South America on emigrant ships, the Italian government has found it necessary to segregate in a special part of the ship those passengers who are found, after a prescribed special medical examination by government officials, to be afflicted with trachoma, even though the countries to which they are going do not as yet exclude trachomatous immigrants.

"On the steamship *Oldenburg*, arriving at Baltimore in February, 1907, sixty-seven persons from the same compartment were found to be suffering from an inflammatory affection of the eyes, of the same general type, the origin of which was apparently due to the presence in their midst of four cases of trachoma in a state of acute exacerbation. Of these sixty-seven afflicted passengers, forty-eight developed trachoma, subsequently, while the remainder promptly recovered, under simple remedial measures."

The violence of the onset seems in some way related to the environment of the individual, conditions as stated above, being directly conducive to the more aggravated types. Improved methods of sanitation, and laws regulating immigrant traffic, have done much to minimize the frequency of these epidemics, and so to-day, except in the hot-beds of trachoma, acute onset is unusual.

Despite our intimate knowledge of the pathology of this disease, its etiology is still unknown. A summary of the work done during the past four years in this direction centers about the so-called trachoma corpuscles, or trachoma bodies. Halberstaedter and von Prowaczek, in Java, were the first to describe these bodies. Almost simultaneously Professor Greeff and his coworkers succeeded in finding and describing similar bodies. Fleming, from a review of the literature on the subject, is enabled to classify four different types, of which he considers only two as positive. These corpuscles have been found not alone in trachomatous eyes, but in eyes entirely free from any evidence whatsoever of trachoma. Stargart claims to have found them in a case of blennorrhea neonatorum. Fleming found them associated with gonococci, repeatedly, in connection with ophthalmia neonatorum. In one case, for the first few days only trachoma bodies were found; after the fifth day, both trachoma bodies and gonococci were present for several days, followed by a disappearance of the trachoma bodies. The gonococci continued to be shown for about ten weeks, when finally they disappeared and the trachoma bodies reappeared. They have been found at times in the gonorrheal urethra of both males and females.

The obscurity of their origin and the varied character of their morphology have led some of the investigators to consider the question as to whether we are dealing with a microorganism, a parasite, or a degenerate cell. Some adhere to the latter theory, and not without some foundation, for not only have these bodies not been isolated, but efforts to obtain them in pure culture have been unsuccessful. The consensus of opinion, however, is that they have some pathologic significance in relation to trachoma. They are found in the conjunctival epithelial cells. They present the appearance of minute diplococci situated in the protoplasm of the cell. They multiply until they occupy the entire body of the cell, pushing the nucleus to one side. As they increase in number, a reactionary product or zone forms about them, which finally gives way, liberating these corpuscles with a destruction of the cell-body. Trachoma has been communicated to apes and orang-outangs by inoculation, but as yet Koch's law has not been fulfilled.

The first point that I should like to emphasize is that trachoma is essentially a chronic disease, and that, with each succeeding month of its duration, new features arise to annoy and harass the unfortunate patient. Those who are not actively engaged in the treatment of trachoma, but refer their cases to the clinics which fall heir to most of them, cannot conceive of the terrible handicap which trachoma imposes on its victim. Years, as a rule, elapse between the time of its incipiency and the terminal stage of cicatrization, and, unless the patient is so fortunate as to have the disease arrested early by intelligent treatment, partial impairment of vision or total blindness is the result, and thus these poor unfortunate individuals become a burden to themselves and society.

While it is true that we do see cases of trachoma that run a very rapid and malignant course in the beginning, these are the exceptions that prove the rule, and it is thought by some that this violence of onset is due to a superadded infection. The typical patient presents himself at the office, or more often the clinic, stating that he was sent by the school physician or nurse to have his eyes examined. The patient has noted a stinging, burning sensation in the eyes at times, and an occasional slight redness of the eye-lid, with slight secretion, but the inconvenience was not enough to prompt him to seek relief. Some of these patients have been afflicted for months before they are seen for the first time; indeed, interference with vision and associated photophobia and lacrimation are sometimes seen on a patient's first visit.

The clinical picture of this chronic type is as follows: On inspection we note a slight drooping of the upper lids; the lids also appear thicker than normal, and the palpebral conjunctiva of both lids is studded with numerous translucent lymphoid follicles, varying from the size of a pin-head to that of a small grape-shot. In the early stage, these follicles are confined to the retrotarsal fold of the upper lid, and this must be doubly everted, while the patient is told to look downward, before they can be seen.

At this point it might be well to emphasize the great similarity between trachoma and follicular conjunctivitis. They are both prone to multiply under similar circumstances of bad air and overcrowding in public buildings. The follicles, both microscopically and macroscopically, are identical. In the early stage of trachoma there is very slight, if any, thickening of the conjunctiva. The arrangement of the follicles in rows are said to be characteristic of follicular conjunctivitis. In follicular conjunctivitis there is never any permanent thickening of the conjunctiva.

It is greatly to be deplored that there is no diagnostic point that will enable the general practitioner to separate these two diseases—to say nothing of the difficulty which the specialist encounters. We must wait until the second, or hypertrophic stage, before we can be sure of our diagnosis. Conjunctivitis that does not result in a hyperplastic granular destruction of a part of the palpebral conjunctiva cannot with certainty be called trachoma. The distinguishing difference between trachoma and follicular conjunctivitis is that the latter tends to spontaneous recovery, leaving a normal conjunctiva. Trachoma never does. I am convinced that a great many of our patients who get well under expression have cases of follicular conjunctivitis. All doubt as to the diagnosis is laid aside when the disease reaches its second stage, or that in which there is a hypertrophic thickening of the conjunctiva, associated with a beginning destruction of the lymphoid follicles and a deposition of fibrous tissue. But often months are passed in reaching this stage, when the patient's real suffering begins with associated impairment of vision. The palpebral conjunctiva becomes rough from the ulceration and destruction of the follicles and the tarsal cartilage becomes thick and irregular. The effect of this rough and inflamed surface coming in constant contact with the delicate corneal epithelium is erosion of the latter. Infiltration between Bowman's membrane and epithelium occurs, blood-vessels also penetrate between these two layers and thus we have a condition known as pannus. This always begins in the upper half of the cornea and is asserted by some to be a direct transmission of the disease process to the cornea. Others contend that it is nothing more than an inflammation due to the constant friction from the upper lid. No doubt this latter condition has a great deal to do with bringing this inflammation about. It seems a reasonable conclusion, therefore, that both factors are conducive to this condition. That they are not always present in every case of pannus is also evident, for we sometimes have pannus formed early, before there is any roughness of the lid, and, vice versa, there are cases in which pannus does not form, despite an extreme roughness of the lid. Safford notes that pannus is not apt to form in those eyes in which the lids lie in loose contact with the cornea.

In the third and last stage of trachoma the disease has become or is becoming arrested. The palpebral conjunctiva reaches the atrophic stage, and, in its place, has formed connective tissue. The tarsal cartilage also shares in this atrophy. As a result the lid is no longer held in its natural position, the lashes become sources of constant irritation from their inturning to the already inflamed cornea, and thus the pannus that was produced by the roughened conjunctiva is prevented from clearing up. Exudation finally finds its way beneath the basement membrane and becomes organized, and thus the vision of the individual is permanently impaired.

The acute type of trachoma differs from that already described in its first stage only, and it will only be necessary to refer to it briefly. The onset is sudden. The patient has symptoms of violent ophthalmia with photophobia, lacrimation and a free discharge of thin seropus. On examination, the conjunctiva appears swollen and the follicles may not have appeared; they are masked by the overlying conjunctival infiltration. Ptosis may be marked. They do not respond to treatment, and in a few weeks the acute swelling begins to subside; connective tissue forms, and the follicles stand out prominently. Pannus is apt to appear early. The hypertrophic stage supersedes the inflammatory stage in a few weeks, and the case begins to take on the chronic nature characteristic of the disease.

As to the medical treatment of trachoma, there has been no advance during the past ten years. It must be said, however, that the remedies which are used to combat this disease are not without effect. The great stumbling-block in the way of a successful cure is the patient himself. The pain, loss of time, and expense of carrying out the treatment cause the patients to fail to follow the physician's advice. For the first few weeks or months they require either the daily or alternate day visit to the office or clinic. The two main remedies depended on to combat the inflammation and to lessen hypertrophy are silver nitrate and copper sulphate; the former in cases in which there is much secretion, or in the presence of corneal ulcers, the latter, in cases in which there is marked hypertrophy. Both are extremely painful and persistently so. After a few weeks' treatment, symptoms are relieved and the patient does not return for treatment. Presently a relapse occurs, ulceration and destruction of conjunctiva sets in, and the patient's vision becomes impaired from corneal involvement, and the disease has progressed beyond the stage in which a cure is possible.

Expression is indicated in those cases of trachoma presenting numerous follicles in the retrotarsal folds, as well as on the palpebral conjunctiva. This operation does not bring about a cure of trachoma, as some might think. It merely lessens congestion, empties the contents of the follicles before the conjunctiva overlying them has been destroyed, and also makes the application of remedial measures more effective. That a great many cases of true trachoma have been arrested or cured by the combined method of expression and treatment with copper, there is no doubt, but, as said before, we are sure that a great many instances reported of successful cures are not cases of trachoma. I am firmly convinced that no cases that respond to expression, in a few weeks after treatment, should be classified as trachoma, although at the time they present precisely the same picture. This differentiation is emphasized for the reason that the physician, noting the successful results following expression, with very little attention to the after-treatment, is almost certain to fail to emphasize to the patient the importance of the after-treatment, and it is for this reason that relapses occur so often. The disease is allowed to progress into the hypertrophic stage, with beginning cicatrization, when successful cure by any and all methods becomes impossible, and a resort to surgical measures is the only means of relief at hand. This is an acknowledgment in itself of our inability to combat the disease successfully.

The surgical treatment of trachoma, as outlined by Professor Hiesrath, of Königsberg, and later modified by his pupils, Vossius and Kuhnt, has not received the recognition that it so justly deserves. Their results for the past ten years have been so uniformly successful, and their theories were based on such common-sense principles, that it is difficult to understand why this operative procedure has not been adopted wherever trachoma is found. These men recognized, in advanced cases of trachoma, the utter failure to arrest the disease by medical or mechanical (expression) means. They observed, in cases of old trachoma, in which a cure had been brought about by Nature, a complete obliteration of the retrotarsal folds, a shrunken and distorted cartilage, with its subsequent evil effects, a pannus that was dense and permanent, a complete destruction of all follicles and a dry and shrunken conjunctiva. With this picture, then, before them, their argument must have been: Since this disease process will not subside until the tissues involved are destroyed, why not remove them at once, and thus save the patient the time and suffering which Nature takes years to accomplish? Their reasoning was correct, as demonstrated by their results.

To Dr. H. W. Wootton credit is due for having brought this subject before the medical profession of this country. Although he was not the first to perform this operation here, he has done more than anyone else toward establishing it as a recognized surgical procedure.

The two operations indicated in advanced cases of trachoma are, first, a removal of the tarsal cartilage of the upper lid, together with its overlying conjunctiva and retrotarsal fold; second, a removal of the tarsal cartilage of the upper lid, alone. The former procedure is indicated in the beginning cicatricial stage, where roughened and ulcerated follicles still remain; the latter, where the follicles have been replaced by connective tissue, and the cartilage, while still hypertrophied, is undergoing retrograde changes which result in a distortion of the lid. In some cases the lids become everted. Entropion, however, is most common. Pannus that forms in the hypertrophic stage is prolonged into the cicatricial by distortions of the lid-margins, or an irregularity in the cartilage itself.

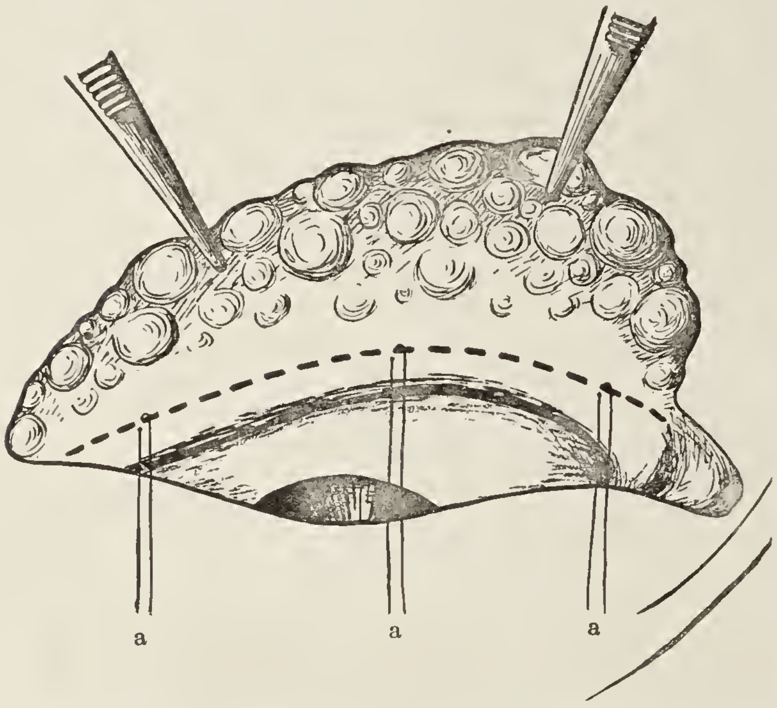


Fig. 1.—Doubly everted upper lid; a, sutures; line of dashes, line of upper incision.

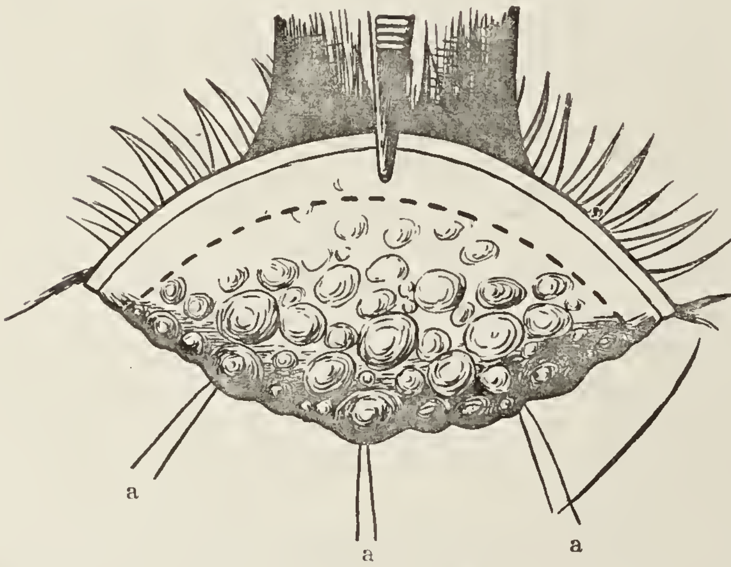


Fig. 2.—Upper lid everted; a, sutures; line of dashes, line of lower incision.

The operation of removing the cartilage and conjunctiva is termed combined excision, and is briefly described as follows: The upper lid is doubly everted by means of fixation forceps and horn. A horizontal incision is made through conjunctiva alone at the junction of ocular and palpebral conjunctiva (Fig. 1). The cut margin of the bulbar conjunctiva is slightly undermined, and three sutures are passed equidistant. The sutures are sufficiently long to admit of a needle at each end. The lid is now singly everted, and another incision 2.5 mm. from, and parallel to, the lid-margin is made through conjunctiva and cartilage (Fig. 2). The ends of this incision are made to unite with the posterior one, and the conjunctiva and cartilage are gently dissected away, care being taken not to remove any of the tissues beneath the cartilage, and to leave a very thin strip of cartilage above, if possible, to prevent injury to the attachment of the levator muscle. Next, the three sutures placed in the bulbar conjunctiva are drawn forward, each being armed with two needles, and are passed from within out, one end passing through the cut edge of the cartilage, the other just posterior. This causes coaptation of the bulbar conjunctiva with the 2.5 mm. strip of conjunctiva remaining; the fornix is obliterated. The sutures are tied over a wick of gauze, and the operation is completed. The diseased tissue has practically been removed, and thus we accomplish in half an hour what Nature takes years to do.

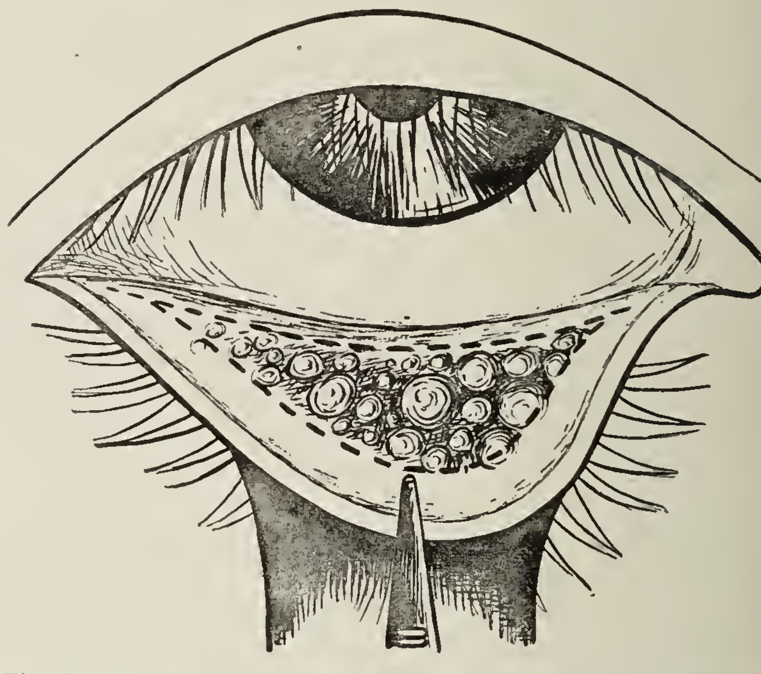


Fig. 3.—Lower lid everted; lines of dashes, lines of incision.

The results in a hundred or more of these patients, operated on by Dr. Wootton, myself and various other members of the staff of the Manhattan Eye and Ear Hospital during the past two years, demonstrate beyond doubt that this is the most successful means known of combating this condition. Careful statistics of these cases were not made, but the percentage of cure has been at least 75 per cent. By this I mean a complete arrest of all inflammatory action, a rapid clearing up of pannus, except in those cases in which ulceration had taken place, with resulting permanent opacities.

A resort to tarsal resection alone is less frequent, and the results, when the operation has not been done until late, less gratifying. The procedure is simple. The lid is everted, an incision through conjunctiva and cartilage is made 2.5 mm. from, and parallel to, the lid-margin, the cartilage is carefully dissected both anteriorly and posteriorly, removed, and the conjunctiva sutured in its original position, in a manner similar to that described in the preceding operation. Neither of these operations restricts the motility of the eye-ball, or interferes with the movement of the lids. They relieve ptosis and entropion rather than produce them, and, aside from a slight furrow or fold in the skin which is sometimes more than normal, produce no outward deformity. In the majority of cases pannus begins to clear up in a few days and the progress is rapid. Granulations sometimes spring up in the line of incision, especially if coaptation is imperfect, and may retard recovery. These may be removed with a strong solution of silver nitrate, or even the stick, provided only granulations are touched. Occasionally a dislocated eyelash becomes a source of irritation to the cornea. Such eyelashes should be removed with electric needle, or else regularly with cilia forceps.

Trachoma involving the lower lid does not lead to the bad results that are produced by the upper; where there is pronounced involvement, however, it acts as a source of constant irritation and retards recovery. Removal of the palpebral conjunctiva alone is here indicated, since the disease does not seem to involve deeper structures; besides a removal of the tarsal cartilage would result in immediate entropion. The procedure is simple, the two lines of incision being similar to the ones in the upper lid (Fig. 3), care being taken not to encroach on the bulbar conjunctiva behind, or through the tarsal cartilage in front. The conjunctiva is dissected away, and the raw surface is left to granulate and cicatrize over. The cartilage being left in place, no deformity follows. Should granulations become too exuberant, they should be removed by scissors or cautery. In a few weeks the surface has become smooth.

40 East Forty-First Street.

A NEW PNEUMO-ELECTRIC PROCTOSCOPE AND SIGMOIDOSCOPE

FRANK C. YEOMANS, M.D.
NEW YORK

Rectoscopy and sigmoidoscopy are now firmly established as the scientific method of examining the terminal segment of the large intestine. In patients having symptoms referable to the large bowel, it is no longer a question of the value of rectoscopy and sigmoidoscopy, but of the simplest and most efficient instrument for this purpose. Hitherto the practical methods of direct electric illumination of the proctoscope have been by carrying small incandescent bulbs near the distal end of the tube on insulated carriers.

Previous attempts at direct illumination of proctoscopes by a light within and at the proximal end of the tube have been few and the resulting instruments complicated and unpractical. Recently, however, Dr. James R. Hayden ingeniously conceived a new principle of thus lighting a tube and his idea has been cleverly executed in the Hayden urethroscope. By his courtesy I have adapted the same system of lighting to the proctoscope, simplifying the tube, however, to meet the requirements of proctoscopy and sigmoidoscopy.

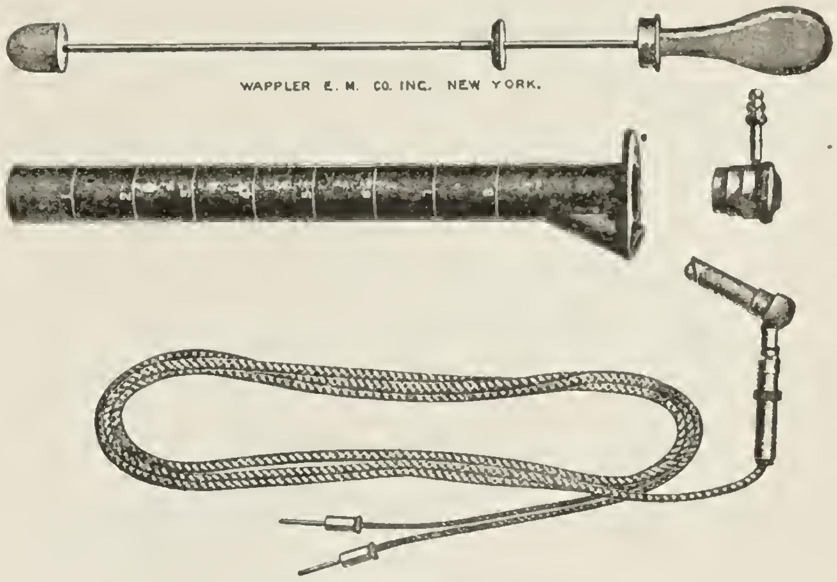
The new proctoscope consists of:

A. A tube 10 inches long and of seven-eighths inch diameter, graduated in inches, its distal end slightly oblique and the proximal end fitted with a large flange with milled edge and a small segment cut from one side to prevent rolling. An auxiliary tube perforates the flange and joins the main tube at an angle.

B. Illumination is direct and is obtained from a small but powerful electric bulb which is covered with a capsule bearing a plano-convex lens so set that the collected rays are refracted at a compensating angle to the light-carrier. The light is mounted on a carrier which fits accurately by a conical fitting into the auxiliary tube while only the lens projects into the main tube, focusing all the rays at its distal end and in no appreciable degree interfering with the vision of the observer or the introduction of instruments for examination, local applications or operation.

C. A metallic plug closes hermetically the proximal end of the examining-tube by a conical fitting and contains a glass window which magnifies the illuminated field at the distal end of the tube. This plug is perforated at the side for a small offset with a nipple for the attachment of a hand bulb to inflate the bowel to any desired extent. The conical fitting of window and light-carrier prevents escape of air when pneumatic pressure is applied and there is great facility in removing or inserting light or window.

D. The obturator has an olivary tip which facilitates the introduction of the tube, and a broad handle so that it does not roll on a flat surface.



Pneumo-electric proctoscope.

The tubes are of three sizes, (1) proctoscope, 10 inches long and of $\frac{7}{8}$ inch diameter; (2) sigmoidoscope, 14 inches long and of $\frac{3}{4}$ inch diameter; (3) infant's proctoscope, 9 inches long and of $\frac{1}{2}$ inch diameter, for examining children and strictures.

The same light-carrier fits all these tubes, but a smaller window is used for the infant's proctoscope. For the general practitioner the 10-inch proctoscope will be found most useful and will fill all requirements in the great majority of cases. The source of light may be either a six-cell dry battery or the street current with the usual electric controller interposed.

The features of this new instrument are:

1. Simplicity.
2. The fact that the instrument is sterilizable by boiling.
3. Direct illumination by a substantial bulb which will not burn out easily.
4. The same light-carrier for all tubes.
5. Thorough practicability for the examination, diagnosis or treatment of all abnormalities occuring within the rectum or sigmoid flexure below its apex.

46 West Forty-Eighth Street.

GASTRO-ENTEROSTOMY

TECHNIC OF THE OPERATION WITH THE USE OF A NEW INSTRUMENT

ADDISON G. BRENIZER, A.B., M.D.
CHARLOTTE, N. C.

The abdomen is opened by an incision about 5 inches long and 1 inch to the right of the middle line, beginning about 2 inches below the costal arch and extending the mentioned length to above the navel. The stomach is exposed, below which is the transverse colon and the omentum covering the loops of the small intestine.

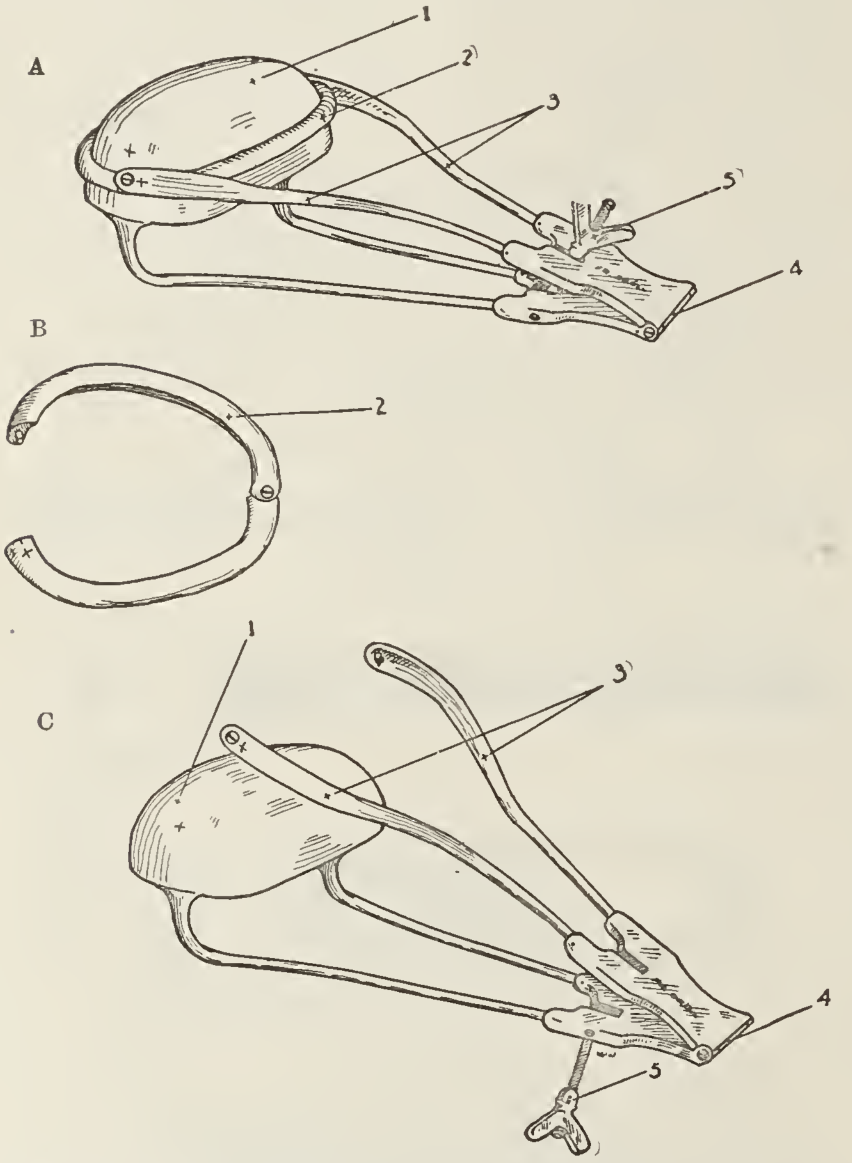


Fig. 1.—Instrument for gastro-enterostomy. A shows the instrument articulated and locked as seen applied in Figure 2: a hollow convex elliptical hemisphere (1) over which an elliptical band (2) corresponding in shape fits snugly. The hemisphere and the band are carried and supported on the two prongs (3) working on a hinge (4) and locked by a thumb-screw (5). The superior prong grasps the band between its arms by the fitting of two little pegs on the arms into two little pits on the band. C shows the thumb-screw released, the two prongs opened on their hinge and the band removed from the grasp between the arms of the superior prong. B shows the band itself opened on a hinge at one extremity and the break in the band at the other. One of the little pits for receiving the pegs on the arms of the superior prong is indicated. The numbers in A, B and C correspond.

The prongs of the instrument are opened on their hinge, the superior prong grasping the closed elliptical band (Fig. 1, A, B and C). The elliptical band mounted on the prong is pushed up, gathering omentum and transverse mesocolon and applied to the transverse mesocolon and with this structure interposed to the posterior wall of the stomach, directly in the middle line of the body. The convex hemisphere, elliptical and corresponding in shape to that of the band and made to fit into it, carried on its prong, is applied to the anterior wall of the stomach, opposite the band. The two prongs are pressed together, articulating on their hinge and thus carrying interposed between hemisphere and band from before backward: the anterior and posterior walls of the stomach and the transverse mesocolon. Now the omentum and transverse colon, held loosely between the locked prongs of the instrument, are carried upward out of the field as the instrument is everted.

The small intestines are exposed and the first loop of jejunum distal to the duodenojejunal plica is chosen and clamped with an intestinal clamp (Fig. 2).

The thumb-screw is tightened just enough to produce a slight paleness of the transverse mesocolon seen within the band.

The omentum, transverse colon and stomach thus held in the grasp of the instrument may be moved with perfect control of the field.

A vertical slit is made through the transverse mesocolon, exposing the serous covering of the posterior wall of the stomach and the slit held wide open by a stitch to either side.

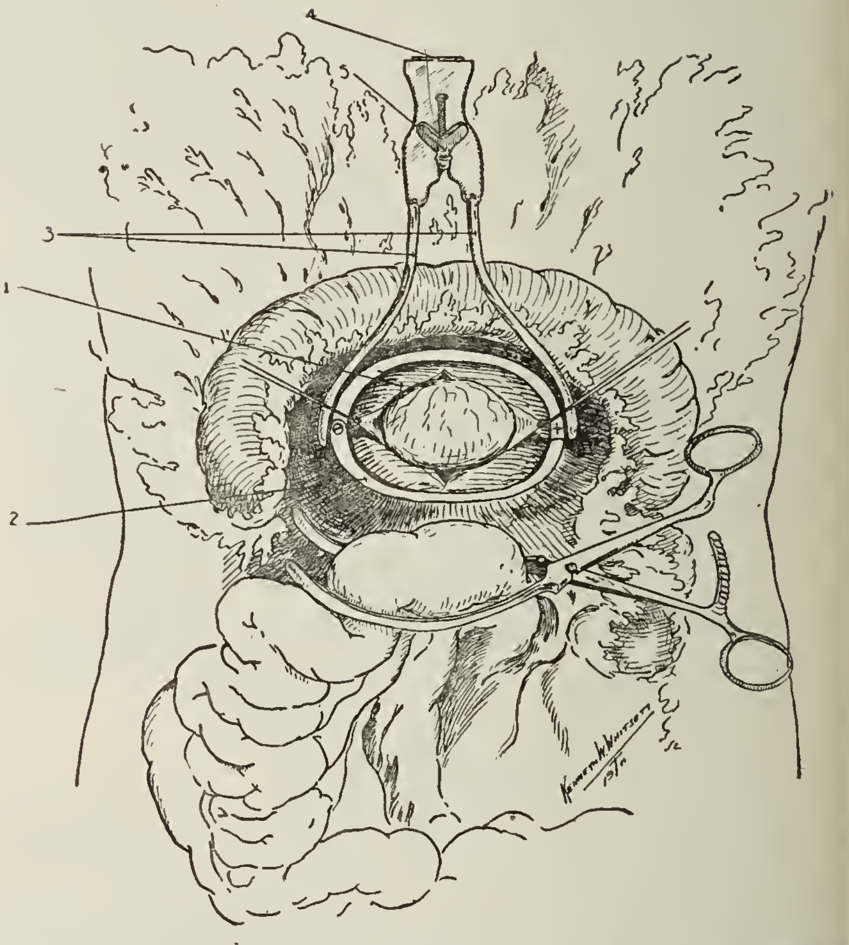


Fig. 2.—The omentum and transverse colon raised up, the relation between the posterior wall of the stomach seen through a slit in the transverse mesocolon and the first loop of the jejunum distal to the duodenojejunal plica. The instrument is in place and the intestinal clamp applied. It is clearly shown how the omentum and transverse colon are held out of the way between the prongs of the instrument and how the posterior gastric wall is pushed through the slit in the transverse mesocolon by the convex hemisphere being made to approach and appose the elliptical band and how it is held in between these two parts of the instrument. The numbers correspond with those of Figure 1, A, B and C.

The stomach and intestine are approached, a strip of gauze laid between them, apposed by a continuous silk suture. The region is packed off with gauze. Parallel incisions are made into the stomach and intestine about 2 inches long down to the mucous membrane. Another continuous silk suture is laid, uniting muscular coats of stomach and intestine along the lower lips of the incisions and ends left long at each angle. Now the mucous membrane is opened, the small amount of intestinal contents sponged away, using at each touch of the sponge a new one, for fear of soiling the region. The mucous membranes of the stomach and intestine are united by an in and out continuous catgut suture. The mucous membranes are closed all the way round and the opening between stomach and intestine established. (It is best to discard the instruments used in opening the mucosa as they carry some contamination). The second and first continuous silk sutures are picked up and continued all around the anastomotic opening uniting first the musculature and serous coverings and reinforced by the continuance of the first suture dipping down through the muscularis mucosæ. Especial attention should be given in rounding the angles, that the union be secure. The anastomosis is firmly established through the elliptical band which surrounds the opening on the outside and which must be removed.

Removing the elliptical band and instrument is quite a simple story, as simple as removing the intestinal clamp. The thumb-screw is loosened, thus allowing the two prongs to open on their hinge. The two arms of the prong bearing the band are pulled apart and the band allowed to fall free. The band in turn is opened on its hinge and slipped from around the anastomosis between stomach and intestine. The intestinal clamp being removed, the omentum is allowed to drop back in place.

The abdomen is closed by a continuous catgut suture uniting the peritoneum, interrupted catgut sutures for the fasciæ and the skin apposed by means of the small silver clamps of Michel.

After the second day the patient begins to take liquids in small quantities by mouth. The silver clamps are removed on the fourth day. The patient should reach his feet on the tenth day and leave the hospital on the fourteenth day.

There is certainly no more danger in the operation itself, but only in complications from the side of general and local conditions, which latter can be avoided by the choice of the proper operation and the proper technic in carrying out this operation.

The accepted operation of choice is the posterior gastro-enterostomy, an anastomosis between the most dependent portion of the posterior gastric wall over the antrum and the first loop of the jejunum distal to the duodenojejunal plica, through a rent in the transverse mesocolon. The opening between the stomach and the intestine should be large—larger than it is possible to produce with a Murphy button; the outflow of gastric and intestinal contents and bleeding should be absolutely prevented; the apposition and union should be perfect.

The difficult points to carry out in this operation are:

1. Holding and maintaining the omentum, transverse mesocolon and stomach above the field of operation, without removing these organs from the abdominal cavity; a condition much more favorable than having them surrounded by hot wet compresses.

2. Passing a sufficient surface of stomach through the transverse mesocolon and holding it there so as to make the necessary wide opening and without doing, through handling (pressing and tugging), undue injury to the stomach-wall.

3. Preventing the outflow of any stomach or intestinal contents.

4. Control of hemorrhage, without immediate ligation and usually without ligation at all.

With the operation of choice, the posterior gastro-enterostomy, with the use of this instrument (Narath and Brenizer) and following the technic I have described it seems that all demands may be perfectly carried out.

The instrument may be employed equally as well in doing an anterior anastomosis where the posterior is too difficult or impossible, as will appear evident on considering the the instrument.

902 Realty Building.

A CUTANEOUS REACTION IN GONOCOCCAL INFECTIONS *

ERNEST E. IRONS, M.D.
CHICAGO

In 1908, while studying the effects of gonococcal vaccines in gonococcal arthritis, I noted that the subcutaneous inoculation of dead gonococci in persons suffering from gonococcal infections frequently was followed in from twelve to twenty-four hours by local and general reaction.[1] This reaction consists of an area of redness, swelling and tenderness at the site of the inoculation, often an increase in pain and tenderness in the affected joints and other localizations, together with symptoms of general malaise, and sometimes increase in fever and leukocytosis. These phenomena resemble those seen in the tuberculin reaction, and are of value in the diagnosis of obscure cases, in which gonococcal infection is suspected.

This reaction has been observed by Bruck[2] in epididymitis, by Reiter[3] in pelvic infections in women, and also by others. Bruck has described a "cutireaction" in gonorrhea on injection of gonococcal vaccine.

In recent experiments with glycerin extracts of the gonococcus I have found that a well-defined cutaneous reaction, similar to the cutaneous tuberculin reaction, occurs in cases of gonococcal infection, when the extract is introduced into the skin by the method of von Pirquet.

In positive cases in from twelve to twenty-four hours, an area of hyperemia from 5 to 10 mm. in diameter appears around the point of inoculation of the extract. Frequently a definite papule develops. The control inoculation, using a similarly prepared glycerin extract of the washings from the same number of uninoculated culture tubes, shows only the point of needle puncture. In normal persons, and in those suffering from nongonococcal infections, the inoculation of the gonococcal extract produces no more reaction than the control inoculation, or at most a small area of redness 2 to 3 mm. in diameter.

Cases of gonococcal infection have been tested simultaneously with extracts prepared from several strains of gonococci, singly or combined in one preparation. The reaction to one strain is occasionally more pronounced than to the others. This observation tends to support the view that various strains of the gonococcus may differ in the reactions of immunity which they produce, and a combined extract of many strains may be desirable for practical use. The cutaneous inoculation offers several obvious advantages over the subcutaneous injection of vaccines. Like other tests, it no doubt will be found to have its limitations, and its value in the diagnosis of gonococcal infections is now being tested.

122 South Michigan Boulevard.

OBSERVATIONS ON THE OXYURIS VERMICULARIS, OR COMMON SEAT-WORM

PHILIP ATLEE SHEAFF, M.D.
PHILADELPHIA

Early one evening a male patient, complaining of itching about the anus, such as is common when seat-worms are present, received an enema of infusion of quassia chips, shortly thereafter expelling a portion of the fluid, which contained a

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* From the Memorial Institute for Infectious Diseases.

[1] Irons, E. E.: Jour. Infect. Dis., 1908, v, 279.

[2] Bruck: Deutsch. med. Wchnschr., 1909, xxxv, 470.

[3] Reiter: Ztschr. f. Geburtsh. u. Kinderh., 1911, lxviii, 471.

fine specimen of *Oxyuris vermicularis.* This was washed and transferred to a drop of water on a microscopic slide, and examined under the microscope with a magnification of 75 diameters.

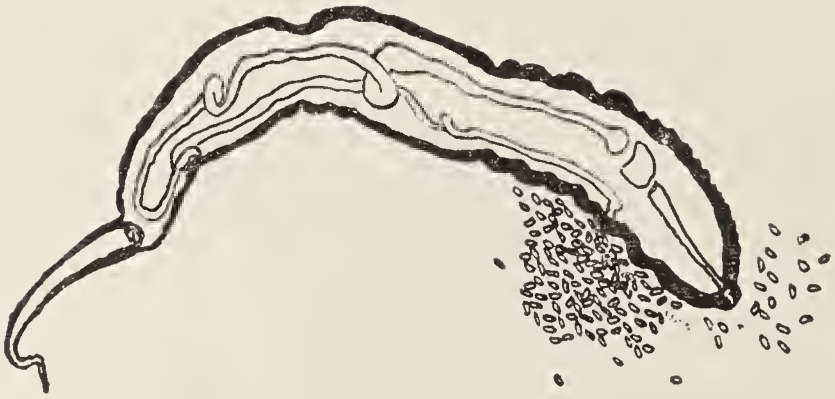
The worm, as a whole, presented no movement, but from almost one extremity to the other, with the exception of the awl-like pointed tail, contained, in its inner anatomy, a seething mass of eggs within a tubular structure that was in active state of contraction and expansion in various portions of its somewhat serpentine course.

This canal extended from the cephalic end of the worm to the caudal portion and back again, with numerous turns on itself on the way. One portion of this canal was engaged in shoving an egg, and another portion a great bunch of them, forward, only to be repelled by greater waves of peristalsis sending them back again, until overcome by still greater contractions which forced the ovular mass onward to the terminal portion of the canal. This opened at right angles to the body of the worm, back of the cephalic portion on the right side.

The contents, on reaching this point, seemed to rest awhile, as it were, in the "quiet before the storm," when presently a series of most violent contractions would occur accompanied by the discharge of the eggs, one at a time, from the body of the worm.

At times one or two made their exit in orderly succession, and on other occasions the violence and rapidity of their departure reminded one of the action, in miniature, of a modern magazine rifle.

After transferring the parasite from one slide to another and thus securing a half dozen specimens of the ova in "pure culture," I transferred it to a slide, allowing the water to evaporate, and then mounted the specimen in Canada balsam.



Oxyuris vermicularis with ova just deposited.

The uterine contractions still continued, less forcibly however, and not until the entire mass of ova within the worm had been expelled into the balsam did such muscular action cease. (The specimen is shown at this stage in the sketch.)

The entire time for the discharge of all the eggs occupied more than two hours. The eggs are elliptical in outline, one side of the ellipse being of greater convexity than the other, with a capsule light greenish yellow in color, and measuring over all 28 by 51 microns.

The worm is 6 mm. long and presents a crenated appearance in its anterior third.

4008 Baring Street.

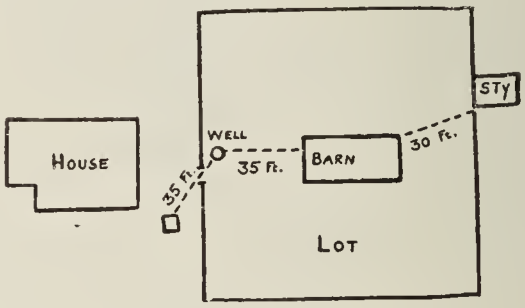
A MILK-BORNE TYPHOID EPIDEMIC

H. H. THOMPSON, A.M., M.D.
NOBLESVILLE, IND.

Noblesville is a typical county seat town of the central part of Indiana, with a population of about 5,000, where, previous to the year of this milk-borne epidemic, there had been only a few scattered cases of typhoid yearly. The sewage system was good and of ample proportions, and the city's water-supply came from deep-drilled wells, the ones supplying the largest amount of water being 300 feet deep and well cased. The principal milk-supply was from a dairy conducted by a man who made every effort to supply the people with pure milk and who tried in every way to run a strictly modern plant. But, as in every other city, there were several who sold milk in different parts of the city. Among these was a Mrs. H., who, living a mile from town, had established a milk-route that supplied about thirty-five families.

During the latter part of August and the whole of September, 1906, her husband suffered a severe attack of typhoid with a marked relapse. His case was a serious one and marked by three hemorrhages of some considerable moment. He had contracted the disease while working at his occupation, that of baker, in a nearby city where the disease was at that time prevalent. During the relapse of his disease he had been attended by a capable man who gave explicit direction as to the proper care of the excreta, but it is doubtful if they were carried out, as the patient was nursed by his wife and daughter. During the early days of the attack, however, and before the nature of the attack was definitely determined, all excreta were thrown into the privy on the premises without any attempt at disinfection, nor was the vault later properly cared for with any disinfecting material.

About the middle of January, 1907, an epidemic began in Noblesville, lasting through February. In all twenty-five cases developed during that time, three of which ended in death; and all but a few were of rather more virulence than usual. The city water was repeatedly examined and the results did not explain such a state of affairs. Then attention was directed to the milk-supply of the city. It was very quickly ascertained that, of the eighteen families affected, fifteen were purchasing their milk from Mrs. H., these families, too, being the only families in which there was more than one case.



An inspection of the dairy and methods of Mrs. H. showed a frightful and shameful state of affairs. It was her custom, since she had only four cows of her own, to collect the needed extra milk from the neighboring farmers night and morning and keep it in dirty cans from ten to twelve hours till bottled for delivery. Asked as to how she cared for her cans and bottles, Mrs. H. replied that she "washed them with suds and then rinsed them in the clear, cold water from the well." The accompanying diagram shows the location of the well and out-buildings and from their relation it will be readily seen how this "clear, cold water from the well" was the intermediary between the typhoid and the milk.

As the diagram shows, the well was situated directly about 20 feet to the rear of the house within the barn lot. This is a "dug well," 30 feet deep, walled with brick and with a driven well in the bottom, 30 feet deeper. Thirty-five feet farther on in the lot was a cow stable, back of which, about 30 feet, was the hog-pen and shed. At the time of my visit the roof of this was encumbered with carcasses of two newly-born lambs on which the chickens were greedily feasting. Thirty-five feet to the southwest of the well was the privy into which, during the previous August and September, had been thrown the discharges from her husband, then suffering from typhoid. This privy was open and the walls of the vault made of boards which were badly rotted. The open fall and winter with plenty of rain had really made of this well a cesspool for the drainage of the entire place.

At this time a bacterial examination of milk from this place showed more than 9 million bacteria per cubic centimeter with streptococci, but no typhoid; and the water from the well gave the following analysis:

Odor, very slight. Color, 00. Turbidity, marked. Sediment, much reddish. Free ammonia, 0480. Albuminoid ammonia, 0010. Nitrates, 0100. Nitrites, 0000. Chlorin, 5000. Total solids, 36.6. Fixed solids, 30. Hardness, 26.3. Iron, 0.22. Bacteria, 35 to the cubic centimeter.

Deeming this evidence sufficient, I ordered a discontinuance of the sale of milk from this place, and coincidently the typhoid stopped.

DISTRIBUTION OF CASES OF TYPHOID BETWEEN THE DAIRY ROUTES

Date Reported	H. Dairy Cases	Other Dairies Cases	Date Reported	H. Dairy Cases	Other Dairies Cases
1/19	1	.	2/10	1	.
1/25	2	2	2/11	1	.
1/26	4	.	2/13	1	4
1/27	1	.	2/23	3	.
2/1	3	.	2/28	1	.
2/5	1	.			
			Total,	19	6

Of this total of nineteen cases on the H. route there were fifteen families affected, or about one-half the number of families supplied.

Evidently the contamination was carried from the vault to the well and thence, in "the clear, cold water from the well," to the milk-cans and bottles and thence to the unsuspecting consumers. Though the typhoid bacilli do not live long in water, it has been proved that they may exist for weeks and even months in the soil. In this case they had lain in the privy from August, until the heavy rains of December had caused a drain into the well.

Since this epidemic occurred the state has provided for a more or less rigid and systematic inspection of all dairies, but I believe that such disgusting details and conditions still exist in many places, especially the smaller cities and towns. The large cities have of necessity rigid rules and inspection of their supply, and the smaller cities and towns must realize this danger and adopt plans for their protection.

THE VALUE OF CYSTOSCOPY IN SURGICAL DISEASES OF THE KIDNEY *

F. WEBB GRIFFITH, A.M., M.D.

ASHEVILLE, N. C.

In cystoscopy we have a means of exact diagnosis which is not generally utilized. In the male the electric cystoscope is used, while in the female we may use either the electric or the open-air method, the technic of which I shall briefly describe. I use, in women, exclusively the Kelly air-cystoscope, not because better results are obtained by it, but because, (1) its simplicity and (2) because, as an assistant to Kelly for a number of years, I am far more familiar with that method.

The external urethral orifice is thoroughly cleansed with boric acid solution, the patient then catheterized, and the catheterized specimen of urine saved in a sterile vessel for microscopic, chemical and bacteriologic examination if desired. A sterilized medicine dropper is then filled with 10 per cent. cocain which is injected into the urethra. The patient is then placed in the knee-chest position, and the urethra dilated. The cystoscope, which is simply a hollow tube, is introduced, and as soon as the obturator is removed, the bladder dilates from atmospheric pressure. By means of a head-mirror, light is thrown into the bladder, and a direct and thorough examination can be made. The cystoscope can then be turned to either side, and urine collected through it from either ureter. This gives a fair, although not absolutely accurate, method of comparing the urines from the two sides. A catheter may be run into the kidney and urine collected directly from that organ, while urine is collected at the same time from the other kidney, transvesically. If further and more accurate comparison of the functions of the two kidneys is desired, a catheter can be run into the opposite kidney. The urines obtained from the kidneys are subjected to bacteriologic, chemical and microscopic examination and compared with the mixed urine obtained from the bladder.

The patient is now turned on her back, each catheter connected with a sterile graduated vessel and the following observations made:

1. The amount of urine collected from each kidney in a definite time. The longer the time the more accurate the comparison. If we collect for only a few minutes, there is apt to be a tremendous error. For example, suppose the right kidney is hydronephrotic, holding 20 c.c. of urine and the left kidney is normal. During the first ten minutes the hydronephrotic sac will have emptied itself of the 20 c.c., while the normal left kidney was secreting possibly 5 c.c., making it appear that the right kidney was doing four times the work of the left, while, as a matter of fact, that 20 c.c. stored up in the kidney pelvis might represent several hours' work of the right kidney. Each succeeding ten minutes that the urine is collected will show a gain for the left kidney and in the course of an hour the true state of affairs will be apparent.

2. The manner in which the urine is secreted. The normal healthy kidney expels its urine in intermittent spurts of several drops at a time, while in a diseased kidney it is usually a continuous dripping, like that caused by a leak in the roof of a house. So, in the example mentioned above, the left kidney would have the regular intermittent spurts, while the right kidney would at first have a profuse continuous flow until the hydronephrotic sac was emptied and then start in with its dripping.

3. The estimation of what each kidney can do under stimulation, or what it could do provided the other kidney were removed. After having collected the urine for half an hour to determine what the kidneys are doing without stimulation, have the patient drink two or three glasses of water. Before very long there will be an increased output of urine, and if the one kidney is markedly diseased and the other has developed compensatory power, the difference in the increased output will be very striking. In other words, the healthy kidney has far greater power of responding to increased strain than has a diseased kidney.

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* Read by invitation before the Tri-State Society of the Carolinas and Virginia, at Columbia, S. C., Feb. 21, 1912.

4. The estimation of the functional activity of the kidneys. It is far beyond the scope of this paper to discuss the various tests which are employed to determine the relative activity of the two kidneys. Suffice it to say that cryoscopy, electricial conductivity of the urine, phlorizin and the numerous dyes have an important place in many of the diseases of the kidney and in the future will probably be of still greater value. As the reliability of these tests are dependent on a careful separation of the urine from the two sides, it is apparent that catheterization of the kidneys is almost a sine qua non. With these few cursory remarks, I shall briefly discuss some of the more common surgical diseases of the kidney.

TUBERCULOSIS OF THE KIDNEY

In western North Carolina, the study of tuberculosis is of the greatest interest, and I regret to say that we as surgeons are about ten years behind the internists.

We all remember when a persistent cough and slight fever were ascribed to "a touch of bronchitis," the general malaise to malaria, and the loss of weight to overwork. But now even the laity are beginning to recognize those symptoms as suspicious of pulmonary tuberculosis. Tuberculosis of the kidney is even more insidious in its onset than tuberculosis of the lungs; it may persist for months without symptoms.

The early symptoms are usually those of a cystitis, and only when the disease is moderately advanced is it obvious that the kidney is involved. We are too prone to think of a case of tuberculosis of the kidney as one with retention of pus, hematuria, pain, emaciation or perinephritic abscess. Unfortunately these symptoms do exist in many cases when first seen by the surgeon, but they are the manifestations of an advanced stage. When it becomes generally recognized that a "cystitis" which does not respond to the ordinary treatment is suspicious of tuberculosis; that tuberculosis of the bladder is seldom primary, usually secondary to the kidney in women, and to the kidney and genitalia in men; that persistent acid pyuria points strongly to tuberculosis; that the presence of a large amount of albumin out of proportion to the amount of pus usually indicates renal rather than vesical origin; when these few facts are sufficiently emphasized that they will be known to every physician, then, and not until then, will the results be different.

We have a great advantage over the internist in that we can first remove the focus of infection, and then put our patient under the same climatic, dietetic and hygienic treatment which has proved so beneficial in pulmonary cases. But I wish to emphasize again that we must get the cases early, and there is no other renal disease in which the cystoscope is of greater value than in the diagnosis of incipient renal tuberculosis. It is just as necessary for the detection of an early lesion as is the stethoscope in the examination of early pulmonary tuberculosis. It not only enables us to make the examinations mentioned at the beginning of this paper, but also to obtain urine from both kidneys to search for the tubercle bacilli and for animal inoculation.

NEPHROPTOSIS

The use of the cystoscope in nephroptosis or movable kidney is chiefly in diagnosis and in the selection of cases for nephrorrhaphy.

I will give a few figures which I have published in a previous article,[1] but which have a direct bearing on the subject. In an examination of over 2,000 cases in the gynecologic dispensary of the Johns Hopkins Hospital, I found that in approximately 20 per cent. of white women, over half of the kidney could be felt. The right kidney was movable about twice as frequently as the left. In colored women I found movable kidney in about 8 per cent., and examination of a small number of men showed it in about 4 per cent. In the first 13,338 gynecologic patients admitted to the Johns Hopkins Hospital, the right kidney was suspended 127 times. It was suspended alone in seventy-two cases, with the left kidney in ten cases, and with other operations in forty-five cases. The left kidney was suspended in thirty-eight cases, in twenty-eight of which there was no other operation, while in the other ten cases the right kidney was also suspended. Of the 13,338 cases admitted, approximately 8,000 were white patients, showing that of all white patients admitted to the gynecologic service, less than 2 per cent. were operated on for movable kidney.

As mentioned previously, statistics carefully taken, with reference to movable kidney among gynecologic patients, indicate that it occurs in 20 per cent. or more of all cases. Thus we see that less than 10 per cent. of all cases of movable kidney in white women are operated on, showing how foolish it would be to advise radical treatment simply because the kidney was in an abnormal position. When then a patient with movable kidney consults a physician because of abdominal symptoms, the question arises, are the symptoms due to movable kidney, or are they due to some other abdominal condition, the movable kidney being merely a coincidence which is not causing trouble?

By far, the best single test for differential diagnosis is artificial injection of the renal pelvis. A renal catheter sufficiently large to fill the ureter is run into the kidney and a known amount of sterile water colored with methylene-blue is forced into the kidney with a syringe. The distention of the kidney pelvis will cause pain, and the patient will usually voluntarily state whether or not the pain is of the same character and in the same location as the pain from which she has been suffering. It has been shown that when the patient can positively identify the pain, we are justified in concluding that the kidney is at fault. At the onset of the artificial pain, the syringe is disconnected from the catheter, and the injected fluid recovered, thus measuring the capacity of the renal pelvis. If during the injection a glass catheter is left in the bladder, any reflux which might occur around the renal catheter would immediately appear externally.

NEPHROLITHIASIS

In this condition the cystoscope is of especial value in corroborating the findings of the x-ray, in determining the presence of infection, and in estimating the absolute and relative ability of the two kidneys. Once in a while a scratch-mark can be obtained by a wax-tipped catheter (made by inserting the end of a catheter in a mixture of equal parts of beeswax and olive oil), where the x-ray has failed to show a stone. Cabot, of Boston, stated in a recent article that in fifty cases of stone in the kidney, taken from the records of the Massachusetts General Hospital and from his own practice, over 25 per cent. had been previously subjected to an unnecessary operation because of error in diagnosis.

As a rule, it is neither difficult nor dangerous to catheterize a kidney, and if resorted to as routine in doubtful cases, it will materially lessen our errors in diagnosis. The following case well illustrates this point:

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[1] Chapter on Movable Kidney, Kelly's Medical Gynecology.

Patient.—Miss H. S., aged 37, was referred to me in September, 1911, for obscure left-sided abdominal pain. When an infant she had some spinal trouble which left her a semi-invalid for twenty-five years. In March, 1911, she began to have dull pain over the left side of the abdomen but not in kidney region. There were no urinary symptoms, nausea or vomiting. The pain gradually got worse and, although not severe enough to cause her to go to bed, she was practically incapacitated part of each day. She had only one acute attack of pain which lasted for a few minutes.

Examination.—Sept. 20, 1911, showed an undersized woman, greatly deformed from kyphosis and scoliosis. Neither kidney was movable. Abdominal and gynecologic examination was negative. Cystoscopic examination showed that the bladder was normal. Catheterization of the kidneys showed that both were secreting exactly the same in amount and that both urines were normal with one exception. In the left kidney urine there was microscopic blood. The left kidney pelvis held 8.5 c.c. Injection reproduced the exact pain of which she had suffered. The wax-tipped catheter failed to show a scratch-mark. Owing to the great deformity it was very difficult to get a good *x*-ray plate, but after several attempts one was obtained which showed a shadow suspicious of stone. Operation revealed a stone, the removal of which has given her relief.

There are many other pathologic conditions such as pyogenic infections, malignant growths and cystic kidneys, which I should like to discuss, but which would be simply a tiresome repetition. We owe it to our patients and to ourselves to make use of every available method of diagnosis; and in cystoscopy and renal catheterization we have a most valuable method which I fear we are not fully utilizing.

78 Patton Avenue.

ACUTE LYMPHATIC LEUKEMIA

REPORT OF THREE CASES *

W. H. BODENSTAB, M.D.
BISMARCK, N. D.

Leukemia, from the Greek *leukos*, white and *haima*, blood, meaning white blood, is a disease of undetermined cause, characterized by a marked anemia, an increase in the leukocytes, a decided decrease in the red blood-cells and hemoglobin, and lesions in the spleen, lymph-nodes or bone-marrow. Clinically we are able to recognize two distinct varieties: the splenomedullary and the lymphatic type. Splenomedullary leukemia manifests itself by an enlarged spleen and an increase in the polymorphonuclear or granular elements of the blood, together with the presence of a large percentage of myelocytes; while in lymphatic leukemia there is enlargement of the lymph-nodes and an increase in the lymphocytes or nongranular cells. The former is the most common and occurs most frequently in adult life, between the ages of 20 and 40. Enlargement of the spleen is usually the most conspicuous phenomenon and the latter may extend entirely across the abdomen. The lymphatic form is a more rare disease and although it is an affection of the lymphatic system, it is usually associated with a more or less marked enlargement of the spleen. The discrimination between the two forms can only be made by the blood-examination.

Cases of lymphatic leukemia occur, especially in children, in which there is a diminution in the red cells and hemoglobin and a marked poikilocytosis. Nucleated red cells are present and a marked increase in the white cells, which consist almost entirely of large mononuclear elements without granulation. There is usually fever and the cases run a course very similar to an acute infectious disease. This form of leukemia is characterized by its short course and the severity of its symptoms, by the frequency of hemorrhagic diatheses and the rapidly developing cachexia, which soon ends in death. To this class belong three cases which have come under my observation within the last year with the following histories.

Case 1.—*Patient.*—G. A., a boy aged 10, whose father and mother are living and well; four brothers and three sisters also living and well. Patient had always been healthy until April, 1911, when he had measles and since then had been ailing. He complained of being tired and weak and occasionally had headaches and pain in the upper abdomen.

He was first seen at his home in the latter part of June, when he complained of the above symptoms, and although he was anemic and had lost some weight, no definite diagnosis was made. The blood showed no leukocytosis, although the lymphocyte count was somewhat high.

Examination.—July 19, he was again seen. He had had nose-bleed several days before, which had been hard to control. The patient looked pale, mucous membranes were anemic, the chest was negative, the temperature 100 F. at 5 p. m. The liver was much enlarged, extending to the umbilicus, tender on pressure, its margin smooth and hard. The spleen was also enlarged and extended 1 inch below the costal margin; it was hard and smooth and the notch could be plainly palpated. The lymph-nodes in the neck, axilla and groin were not markedly enlarged. The urine contained a trace of albumin. The examination of the blood showed hemoglobin 55 per cent., red blood-corpuscles 2,500,000, white blood-corpuscles 21,000. Differential count as follows: polymorphonuclears 4 per cent., large mononuclears 66 per cent., small mononuclears 20 per cent. No eosinophils were found. The coagulation-time was much prolonged, so that solution of ferric subsulphate had to be applied to stop the bleeding from the ear. Patient gradually failed and on July 29 the blood was as follows: hemoglobin 45 per cent., red blood-corpuscles 1,500,000, white blood-corpuscles 45,000, differential count: polymorphonuclear 6 per cent., large mononuclears 80 per cent., small mononuclears 13 per cent., myelocytes 1 per cent. Numerous nucleated red cells were also found.

Course.—July 30 the patient had severe epistaxis and his nares had to be tamponed, but without success, there being constant oozing through the tampon. His temperature rose to 103 F. Patient now became very restless and the next day was unconscious. In this condition he lay for twenty-four hours, when he died from apparent toxemia.

Case 2.—*Patient.*—M. E., a young girl of 16, of Jewish parentage, whose family history was negative, had always been well until two years previously. Tonsillectomy at that time without complications. A little over a year ago patient developed a hard indurated brawny swelling in the region of left submaxillary gland. A bad tooth was extracted and an abscess drained externally. One month later a similar condition was found on the right side. In April, 1911, the patient was brought into hospital with severe nose-bleed, and was at that time quite anemic. The blood-picture showed nothing abnormal outside of a secondary anemia. She was fairly well all summer but admitted having had frequent headaches and swollen ankles, and occasional attacks of nose-bleed which, however, were stopped by applying household remedies. The present illness began three weeks before admission, when patient started to menstruate. She had flowed continuously ever since so that on her admission to the hospital at this time she presented the following picture:

Examination.—Patient very pale, dyspneic, blood-vessels in neck pulsating violently, about 140 to the minute. Chest negative, liver negative, spleen could just be felt on inspiration, abdomen otherwise negative. Glands were not markedly enlarged.

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* Read before the Sixth District Medical Society, North Dakota, Dec. 14, 1911.

Blood-examination showed hemoglobin 20 per cent., red blood-corpuscles 320,000, white blood-corpuscles 58,000; differential count: polymorphonuclears 13 per cent., large mononuclears 75 per cent., small mononuclears 10 per cent., eosinophils 2 per cent. A high grade of poikilocytosis was present, and a great many nucleated red cells were found. The blood was very light colored and barely coagulated. The uterine hemorrhage was promptly controlled but patient died two days later, apparently of weakness.

Case 3.—*Patient.*—O. J., a boy of 11, was first seen June 24, 1911. His family history was negative. He had been in good health until the previous May, when patient seemed to have no ambition. He had no pain but complained of a feeling of fulness in stomach. He frequently bled at the nose, but since the other children had nose-bleed, the parents thought nothing of it. The boy was getting paler, however, until finally the father brought him to the hospital on June 24.

Examination.—Patient was a very pale and emaciated-looking boy, temperature 101 F., pulse 140. The chest was negative, except for a soft blowing systolic murmur over the left heart. The abdomen was much distended, the liver reaching down to the umbilicus while the spleen extended six inches beyond the costal margin; both were smooth and hard. The lymph-nodes of the axilla and groin were slightly enlarged and rather hard. The urine showed albumin and casts. The father insisted on taking the boy home so only one blood-examination could be made which was as follows: hemoglobin 35 per cent., red blood-corpuscles 375,000, white blood-corpuscles 125,000. Differential count: polymorphonuclears 3 per cent.; large mononuclears 90 per cent., small mononuclears 7 per cent. A few normoblasts were found but no megaloblasts.

A bad prognosis was given and the patient went home, where he died a few weeks later. The nature of his death I was not able to get.

The history in Case 1 is at first somewhat puzzling. Following closely on an attack of measles, the condition might have suggested a tuberculous infection. The normal white count with relatively high lymphocyte count and without any definite physical signs were quite suggestive of tuberculosis. The rather sudden increase in the large mononuclear non-granular type of cells together with the consequent decrease in the number of red cells, and the tendency to hemorrhages and the appearance of nucleated reds made the diagnosis of acute lymphatic leukemia the only plausible one. The ratio of the white cells to the red cells necessary to distinguish leukemia from leukocytosis differs according to different authors, some including all in which it is 1 to 50 or lower, others excluding those in which the ratio is 1 to 20 or higher. In this case the ratio on July 19 was 1 to 115, but within ten days it dropped to 1 to 33. This circumstance, together with the nature of the white cell increase, and the rapidly developing toxemia and death leave no question in my mind as to the correctness of the diagnosis.

Case 2 presents another type of the same condition. When the patient was first admitted to the hospital nothing was found indicating disease of the blood-making organs, unless the infection in the submaxillary glands could be interpreted as being of hematogenous origin. On her second admission, after a profuse hemorrhage from the nose, the blood showed evidence only of a secondary anemia. Hemophilia was thought of, but practically excluded because the patient did not bleed much when the abscesses were opened. Then followed the third admission with a practically clear blood-picture six months later. The red blood-cells were very pale and irregular in this case and very nearly approached the type of pernicious anemia. The white blood-cells presented a great many different forms, among them polymorphonuclear cells without granules and unripe and very young lymphocytes of the large variety. The nucleus took a very faint stain and in some of them could be seen nucleoli. Some nuclei were oval and some notched. The cell-body in many of the cells was irregular and marked degeneration could be seen.

In Case 3 we have a very characteristic blood-picture which shows practically only one form of lymphocytes. These are very uniform in size, shape and staining qualities, and although the ratio between the white and red cells is only 1 to 3, we have more mature cells and a less acute case than in Case 2. The enormously large spleen and liver are very interesting and would lead one to think more of myelogenous leukemia, but for the blood-examinations.

We have here three cases of undoubted acute lymphatic leukemia, all the patients dying within thirty days from the time the disease was diagnosed, and although the symptoms and blood-findings in all three were in a general way similar, there existed a marked difference individually.

THE PHENOLSULPHONEPHTHALEIN TEST OF RENAL SUFFICIENCY

James L. Whitney, M.D., San Francisco

In employing the above-named useful test all observers have encountered a difficulty which makes accuracy of reading impossible, namely, the yellowish color of the diluted urine as compared with the standard solution. To obviate this difficulty Cabot[1] suggests using the patient's urine in proper amount in preparing the standard solution. A simpler method which will be found perfectly satisfactory is to interpose a piece of fairly vivid yellow glass between the eye and the solutions to be compared, since viewed through such glass urine and clear water are almost indistinguishable. This applies, of course, both to Cabot's system of test-tubes and to any more complicated colorimeter (Geraghty-Rowntree).[2]

240 Stockton Street.

Therapeutics

TREATMENT OF PNEUMONIA

Progress in therapeutics is essentially slow. While a half century brings to light some remarkable changes in the conception and treatment of such a disease as pneumonia a comparison of the measures advocated in two editions of Osler's "Practice of Medicine" at an interval of half a decade shows comparatively little change. The intelligent application of the principles appearing in the 1905 edition would give much the same result as would be gained from following the latest edition. A review of the latest treatment of this disease leads to some interesting reflections.

How poor a basis for therapeutics is given by mere subjective symptoms is shown by the frequent occurrence of abdominal pain in pneumonia when no abdominal organ is at fault.

Thus in the 1905 edition Osler said:

> The pain may be altogether abdominal, either central or in the right iliac fossa. Crozier Griffith reports eight cases of

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[1] Cabot and Young: Boston Med. and Surg. Jour., Oct. 12, 1911, p. 549.

[2] Geraghty and Rowntree: The Journal A. M. A., Sept. 2, 1911, p. 811.

this simulation of appendicitis by pneumonia and has collected thirty-four cases from the literature, many in adults. The operation for appendicitis has been performed.

In 1911 Osler adds to this:

> A catarrhal form of appendicitis may occur coincident with the pneumonia. In other instances the pain may be in the region of the pancreas, associated with meteorism and high fever, so that acute hemorrhagic pancreatitis may be assumed as in one of Halsted's cases in 1905. All the symptoms were abdominal and the apex pneumonia was not discovered.

Such symptoms indicate with what care all parts of the body should be examined to avoid serious mistakes.

Before beginning the treatment of so serious a disease as pneumonia one should have not only an exact diagnosis of physical and vital conditions, but a clear conception of the nature of the process and the sources from which danger threatens. In pneumonia we have a local obstruction in the lungs combined with a poison circulating in the blood; both may be sources of danger, but, as Osler repeats, "death is most frequently due to the action of the poisons on the vasomotor centers with progressive lowering of the blood-pressure; rarely to direct obstruction in the lungs."

This source of danger is met by the stimulant action of cold in hydrotherapy, which is best practiced by cold sponging, applied limb by limb, in which form Osler regards it as refreshing and beneficial. It not only cleanses and stimulates the skin, but gives tone to the vasomotors, counteracting the depressing effect of the toxins. As additional stimulants of the peripheral blood-vessels, Osler recommends digitalin, hypodermatically in doses of from 0.0015 to 0.003 gm. (1/40 to 1/20 gr.), and strychnin in doses of from 0.0005 to 0.001 gm. (1/130 to 1/60 gr.), as the most satisfactory drugs. Camphor, caffein and musk are also of value. The effect of epinephrin even when given intravenously is too transient to be of value.

The danger from the lowering of the blood-pressure should indicate caution in the use of cardiac and vascular depressants even in the early stage of the attack. Even at the first appearance of consolidation the toxemia may be very pronounced and the use of a heart depressant may be distinctly contra-indicated. Among these cardiac depressants may be placed alcohol, and nitroglycerin. With regard to alcohol, Osler says that it does not seem to raise the blood-pressure in fever or seem to be of much value in progressive vasomotor collapse. F. S. Meara, in Hare's Modern Treatment (Vol. I, p. 717), is more pronounced in his opposition to alcohol and nitroglycerin. He says:

> Alcohol has been used in pneumonia, I believe, without justification. I believe it is never a true stimulant. I believe that its chemical structure, its pharmacologic action, and its clinical effects stamp it as a depressant. There are periods of excitation in pneumonia, constituting the so-called typhoid state, when alcohol apparently does good, but it does it as any other depressant or sedative, as morphin, would do it. In the delirium of alcoholic pneumonia it seems to do good, quieting, as the restoration of a drug does for the time being to a drug habitué, or acting as a sedative, as paraldehyd will do. If then it does good under such circumstances, it should not be looked on as a stimulant to be administered in conditions of circulatory failure. Indeed, I believe there are few cases in which the patient would not be better off without than with the alcohol. The arguments for its use as a food should be met by arguments for more rational dietaries in pneumonia. . . .
>
> The use of nitroglycerin is absolutely contra-indicated, for it is a depressant to the vasomotor center, and yet it is a common thing to see this drug given in pneumonia as if it were a stimulant of the highest value.

It is natural to ask, What can be done to arrest or diminish the development of toxemia? Aside from general eliminative measures we can do little if anything. The use of serums has not been successful. Osler says that "recent analyses do not give a very favorable impression of the serums at present in use. Even with Römer's polyvalent serum four of Curschmann's twenty-four patients died." The possibility, however, of an increase of the toxemia and of mechanical obstruction from putrefactive conditions in the digestive tract should be borne in mind. Milk has been quite usually recommended as the sole or the most important article of diet. In a very recent text-book on therapeutics, however (Musser and Kelly's Practical Treatment, Vol. II), H. A. Hare dissents from this exclusive use of milk. He points out that to obtain the needful number of calories or heat units in twenty-four hours, a patient must take between 3½ and 4 quarts of milk, an amount which not only distends the stomach, but overwhelms the kidneys in their effort to excrete this large quantity of fluid. There is nothing so harmful for a patient ill of this malady as to have the stomach disturbed and overloaded. Again, milk is a form of food well qualified to cause flatulence, and tympanites is a complication much to be dreaded. For these and other reasons it is evident that, although milk is a valuable article of diet, it is not to be depended on alone, but used as an adjuvant. Somewhat similar objections hold true in regard to animal broths, which possess, in addition, extractives of animal tissues, which in a nearly related form the system is endeavoring to eliminate as a result of the fever. Moreover, the broths contain a very small amount of solids for the bulk of fluid which must be swallowed to get the proper proportion of nutriment. Broths must not be depended on to any great extent, yet they fill an important rôle in the care of the patient. Hare recommends in place of these articles of diet, carefully cooked, well-seasoned and partly predigested gruels made of rice, barley, wheat and, rarely, oatmeal. If the patient is fed every two hours with a small cup of milk, broth or gruel, his circulation is at no time hindered by a full stomach, he receives an adequate quantity of support and is not disgusted by constant sameness of diet, which finally becomes nauseating. By careful attention to the diet the occurrence of tympanites should be avoided. The amount of liquid given should be sufficient to maintain the action of the skin and kidneys, but excess should be avoided in order that the heart may not be embarrassed by the necessity of propelling too great an amount of fluid through the blood-vessels.

Considerable doubt is cast on the value of the administration of oxygen by inhalation and the view is expressed by Osler that it is not entirely harmless.

A practice to be carefully avoided is the indiscriminate use of expectorants. Of these Hare says the use of expectorants in pneumonia is in the great majority of cases entirely useless and often harmful. F. S. Meara says:

> I object to the so-called expectorants, first, because I fear the disturbance to the stomach that may ensue, with impairment of appetite and nutrition, and second, because I am skeptical as to the accomplishment of what they are supposed to do. There are so many able clinicians opposed to my views, however, that I will mention ammonium chlorid as the drug most commonly recommended, which may be used in 3-grain doses every two or three hours.

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[*For other information see second page following reading matter*]

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MENTAL DISORDERS AND IMMIGRATION

Disorders of the mind may not be a necessary accompaniment of progress in civilization; but modern society feels, as ancient society never did, a responsibility for the care of mental defectives as well as an obligation to protect itself from the increase and spread of such conditions. This fact explains the wide and increasing interest displayed in the relation of immigration to insanity and the increase of mental defectives — an interest manifest alike in medical circles and in the current popular literature. The decision of Solicitor Earl of the Department of Commerce and Labor, referred to in The Journal recently,[1] concerning the deportation of aliens who become insane within three years of landing, makes a discussion of this question peculiarly pertinent.

While the influence of immigration on the increase of mental disorders is of most vital significance to New York State, it has also a very definite concern for the country at large. This is apparent from the figures presented by T. W. Salmon[2] of the New York State Board of Alienists, who states that New York receives 26 per cent. of all immigrants coming into the United States and is the destination of more than 80 per cent. of the immigrants found on arrival to be insane or mentally defective. More than eight thousand aliens were found in the New York State Hospitals.

The report[3] of the New York State Lunacy Commission to the legislature on Feb. 14, 1912, showed that there were 33,311 committed insane patients in state institutions. Of these, 31,051 were in state hospitals. According to Salmon's figures, over 25 per cent. of these are aliens, who have come as immigrants very largely through Ellis Island. The Lunacy Commission reported 5,573 new patients committed during the year, and 1,383 relapsed patients requiring recommitment. The capacity of the state institutions was exceeded by 3,043.

Of almost equal importance with the group of the insane is that group of mental defectives embraced under the headings of feeble-minded, imbeciles and idiots. The New York Society for the Prevention of Cruelty to Children has investigated these conditions among children of school age, and reports[4] that there are about 7,000 distinctly feeble-minded children in New York, or about 1 per cent. of the school population. This is in addition to an equal number of idiots and imbeciles, and does not include border-line cases or morally defective children. Census statistics show that 30 per cent. of the feeble-minded children in the general population of the United States are the progeny of aliens or naturalized citizens. According to this, at least 3,000 of the feeble-minded children of New York are the offspring of the 9,000,000 immigrants of the past decade.

The last annual report[5] of William Williams, Commissioner of Immigration for the Port of New York, lays particular emphasis on the fact that present methods of inspection are entirely inadequate for the detection of feeble-mindedness. One reason for this Mr. Williams believes to be the insufficient time and facilities for thorough examination as to mental condition. So far is this true that the law is practically a dead letter.

The dangers to the community from this large alien addition to our mental defective class are well known. The probability is that all will become public charges, but the mischief by no means stops with this. There is the more serious danger of feeble-minded or mentally unbalanced offspring, as well as the large contribution made to the criminal element.

Insane aliens as a rule are more easily detected at the Ellis Island inspection than are the feeble-minded, but even here conditions are far from satisfactory. A large proportion of the feeble-minded are children, and time and facilities are lacking for proper examination to detect this condition. The present medical inspection is conducted by the Public Health and Marine-Hospital Service and is efficient except in mental cases. Here the medical officers are hampered by many conditions. Congress has persistently refused the appropriations asked for by the Commissioner of Immigration to enlarge and improve the medical division at Ellis Island. The medical officers there are most seriously handicapped in their work by an insufficient number of interpreters. It is childish to expect the very best-qualified alienist to detect insanity or feeble-mindedness when he cannot converse with the persons he is examining.

Further, the number of medical officers at Ellis Island is much too small for work of the highest efficiency. The number should be increased and should include several who have had the opportunity of special instruction and study in hospitals for the insane. Men who have had such training and who have experience in the actual routine examination of immigrants are the ones who can best work out a satisfactory scheme for detecting a much higher percentage of insane and mental defectives than is done at present, and the whole country will profit by their labors.

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[1] Editorial, The Journal, March 23, 1912.

[2] Salmon, T. W.: Insanity and the Immigration Law, New York State Hosp. Bull., November, 1911.

[3] Ann. Rep. New York Board of Alienists, embodied in the Ann. Rep. of the State Commissioner of Lunacy to the Legislature, Feb. 14, 1912.

[4] Report of the Special Committee to the Board of Directors of the Soc. for Preven. of Cruelty to Children, New York, Feb. 13, 1912.

[5] Williams, William: Ann. Rep. for the fiscal year ended June 30, 1911; commented on editorially in The Journal A. M. A., Dec. 30, 1911, p. 2142.

Finally, immigrants cannot be held a sufficient length of time for observation of their mental condition. The influential interests of the steamship companies play a determining part in this, because all immigrants detained for any cause are kept at the expense of the companies.

WHO DISCOVERED THE FUNCTIONS OF THE MOTOR AND SENSORY NERVES?

The promulgation of claims of priority is certainly nothing unusual in the literature of medical science. Ordinarily the reader is inclined to neglect the polemical diatribes of the current journals and turn his attention to the more attractive contributions which a horde of untiring investigators are continually adding to our stores of knowledge. But there are occasions when the merits of some startling announcement are called into question or the credit for a classic discovery is disputed. Then we must pause, in the interests of scientific justice, to examine the claims and form a personal estimate.

Few epoch-making discoveries are credited to uncertain agents, though history has scattered illustrations of the division of great honors between different candidates. Now and then one reads of some forerunner of Harvey as the discoverer of the circulation, precisely as the Baconian attempts to impeach the glory of Shakespeare now and then emerge from behind the veil of obscurity. No one takes these incidents seriously. When, however, an enlightened scientist earnestly debates the deserts of an eminent name in medicine there is reason for reflection. The case at hand is that of Sir Charles Bell.[1] Every student of the nervous system is familiar with Bell's law, which is ordinarily formulated to state that the anterior roots of the spinal nerves are motor in function, the posterior sensory. Physiology, pathology and psychology have incorporated the essence of this time-honored discovery into the routine of their teachings and practices.

Professor Augustus D. Waller of London has called into question the validity of Bell's claim to fame in this connection. By a critical examination of the English anatomist's writings he aims to show that the glory of the far-reaching discovery that "the nervous impulses controlling our conscious and unconscious life flow by separate channels from world to brain and from brain to world" belongs unquestionably to Magendie. Bell's claim to the discovery that motor impulses pass by the anterior, sensory impulses by the posterior spinal roots is based on a publication of the date 1811. Magendie clearly demonstrated the facts in 1822[2] when, as the leading physiologist of France, he was at the zenith of his powers. The unbiased reader must admit that at best Bell inferred that "the anterior or 'cerebral' roots serve to govern vital actions." According to Waller, immediately after the announcement of Magendie's clear-cut experiments these "discoveries" were elaborated from 1823 to 1839 by Bell himself and by his two devoted brothers-in-law, John and Alexander Shaw.

A cursory examination of the more prominent textbooks on the nervous system will show an occasional, if not frequent, admission of the contribution of the French investigator. The phenomena in question are sometimes described under the caption "Bell-Magendie law." This is not the place to review the evidence in detail, but we may give the words of one who challenges even the partial deserts of Bell. Speaking of the altered assertions of Bell after the announcements by Magendie, Waller says: "Now so far all this is very human and quite pardonable. A man who has thought round and about something is apt to deceive himself when another man puts his finger on the spot and picks out the plum; he may be forgiven for exclaiming, 'But that's my plum; I found it long ago and showed it to that fellow who says he found it.' A claim of this sort may be good or bad; the claimant may be entitled to credit—all or some or none—according to the evidence that he may have to offer; but he is certainly entitled to nothing but discredit if he sets to work to improve a poor claim by tampering with his own evidence; this, as we shall see, is precisely what Bell did in 1824, when he republished his papers of the three preceding years."

A great discovery deserves a human time-mark. Who was the discoverer of what Galen imagined two thousand years ago? Shall we continue to temporize in our award, or shall we conclude with Waller that "there is no escape from the conclusion that Bell's claim as a discoverer was a carefully fabricated claim and that the discovery of the distinction between motor and sensory nerves belongs entirely to Magendie"?

A RECENT FOOD AND DRUG REPORT

The question is frequently raised whether or not the enormous activity in recent years in the direction of pure food and drug legislation and inspection has been productive of any marked and measurable benefits to the public. Owing to the fact that in most cases those whose duty it is to determine the facts and supply the expert evidence have no power of prosecution, the impression has at times been gained that no useful results follow the mere examination of the products and the publication of the findings. Furthermore, the fact that in a large number of the actual prosecutions the fines imposed have been too small to be, in themselves, serious hindrances to the continuance of illegal methods, has also given the impression of a possible failure of the campaign for reform.

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[1] Waller, A. D.: The Part Played by Sir Charles Bell in the Discovery of the Functions of Motor and Sensory Nerves (1822), Science Progress, 1911, vi, 78.

[2] Magendie: Expériences sur les fonctions des racines des nerfs rachidiens, Jour. de physiol., 1822, ii, 276.

A careful study of the changing character of the products offered for sale from year to year leaves no doubt, however, of the decided progress which has been made in the face of these apparent hindrances. Publicity and education have quietly, though slowly, brought reform. This is shown, for example, in the comparisons of the repeated annual experiences of the prominent analytical laboratories of the country. In illustration we quote from the recent report of the Connecticut Agricultural Experiment Station at New Haven,[1] one of the pioneer institutions in this work in the United States. Of eighteen samples of tincture of iodin from druggists whose product had in previous years been found below standard, no sample showed less than 90 per cent. U. S. P. strength in 1911. What this means is indicated by the figures of 7.03 grams of iodin per 100 c.c. in 1911, in contrast with 4.22 grams of iodin in 1908 or 1909 as an average of all data reported. Similar improvements were found in the lime-water and camphor liniment sold. Such facts speak for the usefulness of consistent drug inspection in a state where intelligent vigilance can be exercised.

The Connecticut report presents a wealth of details which are deserving of consideration on the part of physicians. Among them is an elaborate study of the commercial cod-liver oil preparations. "Cod-liver oil" has long been a name to conjure with in medicine, and no one has done more to invest it with hypothetical virtues than the practitioner himself. Until it shall be demonstrated that cod-liver products have some efficiency other than that presented by any easily digestible fat we must hesitate to look on them as anything more than available foods. The quality of the emulsions dispensed is, as a whole, reasonably satisfactory, especially where they are sold as of U. S. P. strength. Father John's Medicine, though not claimed to be a cod-liver oil emulsion, essentially is one and thus finds its way into this group. But the obvious therapeutic frauds, those products which often under the guise of a legally formulated label, give the impression of containing some subtle virtue of the cod liver other than its oil—"wines of the extract of cod-liver oil"—call for special condemnation.[2] In this group come the familiar names of Hagee's Cordial, with its saccharin and salicylic acid, Narco Wine, and the "tasteless" brands which combine the virtues (?) of cod-liver extract "without any of the disagreeable oily properties"! All contained alcohol, and not the merest trace of oil was found in any of the samples examined. Quoting the Connecticut report: "These data indicate that none of the samples is entitled to be called a cod-liver oil preparation, as none contains either oil or fatty acids and only the merest traces of saponified fat. Hagee's does not even contain this trace. Furthermore (the Pettenkofer test giving negative results for bile products in every case), none of the samples is entitled to be called a cod-liver product, for no appreciable amount of cod-liver extractive is present in any sample. We are thus obliged to condemn the use of the names under which most of these preparations are sold."

The review of the analyses of proprietary "compound extracts of sarsaparilla" (which will be more fully discussed later in our Therapeutics Department) furnished a story which would be amusing if it were not of such serious import to an unsuspecting public. Here comes the A.D.S. "vegetable" preparation containing 7.5 grains of potassium iodid to each fluidounce; Callahan's "king of all purifiers," with 4 per cent. more alcohol than claimed, and virtues which would seem to depend on alcohol and potassium iodid; the Rexall Tonic with 22.5 per cent. of alcohol not declared on the label; and Wilson's Compound, which contains more alcohol than beer, is rich in molasses, and is sold with a caution to patients against the use, even in small quantities, of beer and alcoholic stimulants, as "calculated to produce the very diseases they wish to cure."

The propaganda is winning its way. With the unremitting zeal of such stations as that of Connecticut, whose chemical laboratories have furnished Winton's valuable exposure of the gluten flour frauds and Street's investigation of American meat extracts, honest commercial progress is bound to ensue.

A NEW ARSENICAL DANGER

Several years ago the occurrence in England of a noteworthy epidemic of peripheral neuritis attributable to the consumption of beer produced in certain establishments led to the interesting association of this pathologic phenomenon with the unintentional introduction of arsenic into the fermented beverage. This toxic element was traced to the raw materials employed in the manufacture of glucose which was used as an adjuvant in the brewery processes, the arsenic starting as a contamination of the acid used to hydrolyze starch in the production of glucose from it. The unfortunate experience served to emphasize the necessity of a careful control of all crude materials used in the preparation of foods and drinks intended for human or even animal consumption; and it likewise indicated the ever-present danger of toxic agencies which may lurk unsuspected in sophisticated products. In many cases, we believe, these possibilities are being carefully and conscientiously guarded against.

Arsenic is a probable contamination of certain anilin dyes the manufacture of which entirely free from the element requires great technical skill and constant care. For certain purposes the presence of arsenic is unobjectionable; but if perchance the coloring substance is introduced into food products it should obviously be beyond criticism in respect to its purity and non-toxicity. There has been marked improvement, we believe, in the direction of eliminating questionable food colors.

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[1] Sixteenth Report on Food Products and Fourth Report on Drug Products, Conn. Agric. Exper. Sta., 1911, Part II.

[2] The Journal A. M. A., Oct. 13, 1906, p. 1207.

No sooner has a source of danger been disposed of or successfully combated than some other unsuspected menace looms up on the horizon. This time we refer to the arsenic content of shellac and the contamination of foods from this source. Shellac is used as a coating for certain food products such as some kinds of cheap confectionery and bakers' goods and also as a varnish on receptacles and containers of various kinds in many lines of food manufacture. In the brewing industry, for example, the products are often kept in shellac-lined containers from the time they leave the brew kettle until they are dispensed. According to information from the Bureau of Chemistry,[1] orpiment, the yellow sulphid of arsenic, is very generally added to shellac in India for the purpose of rendering the product opaque and at the same time producing the light straw-color characteristic of the higher grades. Examination of a large number of samples of shellac showed that all contained arsenic. The manufacturer may thus unwittingly introduce this poison into the processes which he employs in food manipulation. Many beer-tanks and casks, for instance, are commonly shellacked; and while, as the government chemist remarks, "the amount of arsenic imparted to the fermented beverages from this source is undoubtedly small, this easily avoidable trace is added to any that may be present from the materials of the brew, and it should be remembered that arsenic is a cumulative poison and that the beer-drinker consumes liberal quantities at not infrequent intervals." The addition of orpiment to shellac appears to be wholly unjustifiable, working both deception and danger. The timely warning is welcome; shellac can in some cases be dispensed with entirely and in others replaced by other unobjectionable substances possessing comparable physical properties.

THE CONSERVATION OF CHOLESTEROL IN THE ORGANISM

Physiologic chemists have in recent years devoted much attention to the wide-spread distribution of the so-called lipoids in living cells and tissues. The constant occurrence of these heterogeneous compounds in practically every type of active organism bespeaks some important rôle for them in the economy. The immunologist has begun to relate them to the interaction of the various "immune bodies"; the chemist associates them as possible co-ferments with enzyme reactions; the pathologist finds cholesterol as the conspicuous component of the troublesome gall-stone; the physiologist is inclined to attribute to lecithins and cholesterol some regulative influence on the selective permeability of cell membranes and hemolysis. Everywhere there is a tendency to exploit the lipoids scientifically; yet the problem of their origin and destiny is practically unsolved.

The studies of Gardner and others[1] at the University of London have made it appear likely in regard to cholesterol that it is not commonly formed in abundance in the animal organism. When given with food it may be absorbed and find its way into the blood-stream, so that an increase of both free cholesterol and cholesterol esters takes place in the blood. Ellis and Gardner[2] some time ago put forth the working hypothesis that cholesterol is a constituent constantly present in all cells, and when these cells are broken down in the life processes the cholesterol is not excreted as a waste product, but is utilized in the formation of new cells. A function of the liver is to break down dead cells, e. g., blood corpuscles, and eliminate their cholesterol in the bile. After this secretion has been poured into the intestine in the processes of digestion, the cholesterol is reabsorbed along with the bile-salts and carried in the blood-stream to the various centers and tissues for reincorporation into the constitution of new cells. Evidence in support of this view has lately been obtained by a study of the cholesterol content of the various organs and tissues of the body in the case of animals fed on diets containing varying amounts of cholesterol or kept in a state of inanition.[3]

The apparent conservation of a substance once looked on solely as an excretory product will surely elicit further investigation. Incidentally we may remark that the bile, with which cholesterol has long been associated, can no longer be regarded as a mere waste product. Twenty years ago a text-book contained the statement that "one of the most remarkable facts concerning the bile is its apparently small importance." This cannot be said now.

NATIONAL MENTAL HYGIENE

It is asserted that the number of insane persons in proportion to the population is rapidly increasing, particularly in some of the older and more populous states. This may be, and probably is, true, but we do not know positively. Until recent years no reliable statistics were available as to the exact number of insane persons in any state. Through the development of humanitarian methods of placing insane persons in institutions for care and treatment, the number of these patients has apparently increased largely. Formerly, on account of lack of hospital facilities and for other reasons, many were cared for at home who are now cared for in institutions. In any event, the number of insane in proportion to the population is appalling, and the question has become one of the important ones to be dealt with.

The National Committee on Mental Hygiene was formed for the purpose of studying the causes of

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[1] Smith, B. H.: The Arsenic Content of Shellac and the Contamination of Foods from This Source, Circular 91, U. S. Dept Agric., Bureau of Chemistry, Washington, 1912.

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[1] See various papers in the Proceedings of the Royal Society of London, B. 1908, and subsequently.

[2] The Origin and Destiny of Cholesterol in the Organism, Proc. Roy. Soc. London, B., 1908, lxxxi, 110.

[3] Ellis and Gardner: The Cholesterol Content of the Liver of Rabbits Under Various Diets and During Inanition, Proc. Roy. Soc. London, B., 1912, lxxxiv, 461.

insanity, and to take stock of the nation's facilities for the commitment and care of the insane; to study carefully the needs of the insane, both before commitment and afterward, and at close range; to determine, if possible, how far local conditions must affect standards of care; to examine and compare different methods of care and treatment and to encourage the formation of other societies having similar aims. One important object is to provide a standard for methods of treatment such as obtains in the treatment of tuberculous patients, which is practically the same in all sanatoriums and resorts where tuberculous patients are received. Collection of information on this subject and standardization of methods will save much effort and will improve the care of these patients.

In some states the insane are confined in jails after trial by jury. Indifference on the part of the public and defective methods of commitment permit large numbers of insane to remain in their homes until perhaps they commit some act of violence, and then, depending on the sentiment of the community, they may be treated either as criminals, or as sick people to be cared for in a hospital. Correct and uniform methods of handling and care of these patients are needed. Plans are often given a trial in one state without ascertaining whether they have failed in another. Methods of great value are in successful operation in some hospitals and are unknown in others. A careful study of this question in all its relations, as proposed by the National Committee on Mental Hygiene, constitutes a movement of great importance and one that should be encouraged and assisted. As stated in our news columns, a large fund is to be raised for carrying on this work and already an anonymous donor has given a large sum toward it.

ANNUAL REPORT OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE

The government printing office has issued the report of the Surgeon-General of the Public Health and Marine-Hospital Service for the fiscal year 1911.[1] As the service constitutes the sole national agency operating to combat epidemic disease and to promote public hygiene and sanitation, the report presents much of interest to the physician, no matter to what branch of medicine his activity may be devoted.

Reviewing the scientific work of the service, mention is made of the work done at the Hygienic Laboratory in the investigation of hookworm disease, infantile paralysis, amebic dysentery and typhoid fever. One of the most notable scientific achievements of the laboratory was the transmission of measles from human beings to monkeys for the first time, opening the way for a determination of the infective agent, as well as of a preventive and cure for the disease.

Experimental work has also been conducted on the growth of animal tissues outside the body; the longevity of typhoid bacilli on vegetables; the rôle of oysters in the propagation of typhoid; the influence of poisonous gases on health, and the disposal of night-soil. Study of this last subject has resulted in the devising of a sanitary privy, especially suitable for isolated houses and rural communities, in which septic action is utilized to destroy fecal matter. Studies in embalming have resulted in the composition of an embalming fluid with a new method for its use by which bodies are not only sterilized, but also preserved under extreme conditions of tropical temperature.

Officers of the Hygienic Laboratory have assisted the Bureau of Chemistry of the Agricultural Department in investigating certain food products and in giving testimony in trials under the Food and Drugs Act. Also nearly a hundred proprietary medicines were examined as to strength, composition and action. Other related studies have been made on the pharmacology of drugs and their standardization. Antirabic treatment was successfully administered to 128 persons, and 777 treatments were sent to the health officers of fourteen states.

Field investigations were also conducted, officers being detailed at the request of various state authorities to investigate epidemics of typhoid, infantile paralysis, cerebrospinal meningitis, Rocky Mountain tick fever, and to make a sanitary survey of the towns bordering on Lake Erie and the Niagara River. This work is being extended to include the Great Lakes, particularly with reference to typhoid contamination, but also in respect to the prevention of sewage pollution of the lakes and to secure pure water for those cities whose water-supply is drawn from them.

Pellagra has been a subject for study, not alone in the laboratory, but also in the Marine Hospital at Savannah, Ga., where patients having this disease are admitted for observation. Similar work on hookworm and other intestinal parasites is carried out in the Marine Hospital at Wilmington, N. C. Two officers from the laboratory have been detailed with the mine rescue car of the Bureau of Mines to study hookworm disease among miners of southern states and lung diseases among Colorado miners and to report on the general sanitation and hygiene of mines.

The usual supervising inspection and licensing of viruses, serums and toxins has been maintained.

The Federal Plague Laboratory at San Francisco has continued its work of examining rodents for plague infection, and a plague-like disease has been discovered among rats. Other subjects studied here were the penetrating power of disinfecting gases used on ships, rat leprosy and the rôle of fleas in plague transmission. At the Leprosy Investigation Station, Hawaii, the successful cultivation of lepra bacilli on artificial mediums has been accomplished, and monkeys have been inoculated with human leprosy, both being important forward steps in the knowledge of this disease.

At the forty-four service quarantine stations in the United States over 8,000 vessels were inspected and 420

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1. Treasury Department Document 2635.

were disinfected. The usual quarantine stations have also been maintained at eight points each in Hawaii, the Philippines and Porto Rico. The service cooperated with the New York quarantine officers in the measures which so successfully excluded cholera from that port last summer. Over a million immigrants were examined during the year by the service officers and 27,000 were certified for physical or mental disability.[2]

The service operates twenty-three marine hospitals and 120 other relief stations throughout the country for the benefit of sailors of the American merchant marine. In these, 52,209 patients were treated, of whom 15,144 received hospital care. At the tuberculosis sanatorium at Fort Stanton, N. Mex., 322 patients were cared for during the year. Physical examinations were also made of 4,610 persons connected with the Revenue Cutter, Life Saving, Steamboat Inspection, Immigration and Light House Services.

Among the objects for which the Surgeon-General requests special appropriations are the study of pellagra, an enlarged epidemic fund, and a new building for the Hygienic Laboratory. He also invites particular attention to the "personnel bill," designed to make the pay of Marine-Hospital Service officers equal to that of the Army and Navy Medical Corps. This bill has been passed by the Senate, and reported favorably and unchanged to the House by the Committee on Interstate and Foreign Commerce. It is now No. 64 on the union calendar and every argument strongly favors its passage. As stated in the report of the Senate Committee on Public Health and National Quarantine,[3] when the bill now before the House was reported to the Senate, "in the opinion of the committee, there exists no such difference in the character of the duties performed and responsibilities assumed, the hazards to which the officers are exposed, or the professional and scientific attainments required in the several services, as to warrant the existing disparity in compensation." It will be a misfortune to the medical profession, as well as to the country at large, if partisan influences are allowed to defeat the passage of this bill in the House.

Current Comment

PROGRESS OF WORKMEN'S COMPENSATION LEGISLATION

Notwithstanding the apparent set-back given to the promotion of employers' liability and workmen's compensation laws by the decision of the highest court of New York, such legislation is making considerable progress in the other states. The decision of the Supreme Court of the United States, which was contrary to that of the New York court, has left the other states open for legislation on this subject. In New York, however, it would seem that it will require an amendment to the constitution to permit the enactment of legislation of this character. At present California, Illinois, Kansas, Maryland, Nevada, New Hampshire, New Jersey and Wisconsin have compensation laws protecting workingmen in the industries. Washington, Ohio and Massachusetts have state insurance laws, which cover the matter of injuries to workingmen, but in another way. The governor of Michigan has recently called an extra session of the legislature for the purpose of considering a new primary law and an employers' liability and workmen's compensation act. The attitude of progressive, thinking public officials and other public-spirited individuals is expressed by the governor in his message calling the legislature together when he says that the arguments for the proposed law are irrefutable and that it means a juster, wiser and happier distribution of the hazard of industrial employment, with a saving to employers, employees and courts, and the avoidance of the bitter enmities of suits at law.

THE "BLUE SKY" LAW AND MEDICAL FRAUDS

According to estimates by credit-rating concerns and the postoffice authorities, the people of the United States lose more than one hundred million dollars a year through fake and wildcat securities. Kansas is the only state, so far as we know, that has attempted to protect its people against this class of swindling. That state has a law which is popularly known as the "blue sky" law. It is estimated to save Kansas investors two million dollars a year. But it simply covers one line of business, that of stock-selling in its broad sense; it does not cover the multitude of other fake schemes such as those of the swindling "patent" medicine fakers. It protects only people who have money to invest and who might be considered well-to-do or even rich. Commendable as it is, it does not protect the people who need protection most — those who are sick, or think they are sick, and who are more likely to be influenced by misrepresentation than any other class of people. The admirable Kansas law should be extended to protect people from the most vicious form of swindling. If the people of the United States are swindled out of a hundred million dollars annually by stock jobbers and similar concerns, it would not be a reckless statement to make that they are swindled out of twice that sum by those who prey on the sick — the "patent-medicine" swindlers and quacks, especially if the mail-order fakes are included. Should the people not be protected also against this more damnable and dangerous form of swindling?

A NEW DANGER IN MILK?

A recent announcement from the Bureau of Animal Industry in the Department of Agriculture at Washington brings information not only of great interest to the live stock industry, but also of possible moment to the public health. It is generally recognized that the etiologic factor in the contagious abortion of cattle is the *Bacillus abortus*, which has now been found to occur with a high degree of frequency in market milk.[1] Through investigations of Drs. Mohler and Traum and of Drs. Schroeder and Cotton of the government service it has been ascertained that the bacillus isolated from milk and the bacillus of contagious abortion produce similar lesions in guinea-pigs; and the identity of the organisms has further been established by the complement-fixation test. Although nothing is at present known regarding the action of this newly recognized milk bacillus on human beings, the possibility of danger from it is at once suggested, especially in view of the progressive lesions of serious character produced by the organism in experimental animals. Attention has lately been directed to the situation by others also.[2] Dr. Melvin of the Bureau of Animal Industry states that the organism was found in eight samples of market milk among seventy-seven samples tested, and in milk distributed by six among thirty-one dairies (over 19 per cent.). There is a suggestion of ominous import in these facts which cannot be ignored even in the absence of positive knowledge. The departmental circular has uttered the warning: the bacillus is another of the long series of facts that unmistakably indicate the proper pasteurization of all milk before it is used as food, as a measure essentially necessary for the protection of public health. And, lest we forget, let it be said as a reminder that we owe this hint in common with untold others, to the beneficent warnings of animal experimentation.

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[2] Medical Aspects of Immigration, THE JOURNAL A. M. A., Dec. 30, 1911, p. 2142.

[3] Senate Report 61, Sixty-Second Congress, First Session.

[1] Circular 198, Bureau of Animal Industry, U. S. Dept. Agric., March 2, 1912.

Medical News

COLORADO

New Tuberculosis Colony.—A tuberculosis colony is to be built a mile west of Glenwood Springs by Bud Carberry, formerly of Denver. The colony is to be known as "Cottage Homes Colony." The site covers nine acres and 40 three- and four-room cottages are to be erected as rapidly as possible.

Personal.—Dr. G. Walker Holden, superintendent of the Agnes Memorial Sanatorium, Montclair, and Dr. Gerald B. Webb, Colorado Springs, will represent the American Association for Control of Tuberculosis at the international congress, to be held in Rome next month.——Dr. A. S. Wilson, Pueblo, fell on the ice while acting as camp physician at Cokedale and fractured his left leg.——Dr. S. M. Oppenheim, Denver, is suffering from appendicitis.——Dr. F. W. Kenney has been elected president and Dr. J. C. Hutchinson, secretary of the staff of Mercy Hospital, Denver.——Dr. Robinson Bosworth of the Agnes Memorial Sanatorium, Montclair, has been elected assistant superintendent of the Arkansas Tuberculosis Sanatorium, Booneville.

DISTRICT OF COLUMBIA

Personal.—Dr. Henry W. Jaeger, Washington, resident physician at Casualty Hospital, has resigned to become a member of the staff of the German Hospital, Brooklyn, N. Y., and Dr. C. C. Craft has been appointed his successor.

Veteran Medical Association Dinner.—At the annual dinner of the Veteran Medical Association of George Washington University, February 26, forty-eight members were present. Dr. James W. Norris was chairman of the committee of arrangements.

Need Money for Congress.—Dr. J. W. Schereschewsky, U. S P. H. and M.-H. Service, and Dr. John S. Fulton, Baltimore, appeared before a joint committee of the board of trade and chamber of commerce of Washington and outlined plans for the entertainment of the International Congress on Hygiene and Demography and the American Public Health Association, which meet in Washington in September, and asked the associations to raise about $10,000 for this purpose.

Public Instruction in Medical Matters.—The Medical Society of the District of Columbia has provided for a permanent committee on public instruction in medical matters, of which Dr. Tom A. Williams is chairman, and Dr. Elnora C. Folkmar, secretary. This committee is conducting two lines of work: the providing of illustrated lectures at the auditorium of the public library, and the publishing of medical articles in the Sunday issues of three of the daily papers. Thus far four public lectures have been given by men in the Bureau of Chemistry and the Hygienic Laboratory of the Deptrtments of Agriculture and of the Interior. The public lecture work and the publishing of medical articles was begun by the Woman's Clinic in November last. The Woman's Clinic is still conducting the public health lectures for the normal schools, the parents' associations and other particular organizations. More than fifty such lectures have been given to audiences aggregating over 4,000 persons. The lectures given by the medical society are for the general public and are given by men not engaged in practice in Washington. Those given by the Woman's Clinic are by the physicians of Washington. Ten signed articles on matters of public health were published in the *Washington Post* by the Woman's Clinic. They have since been published under the heading "Contributed by the Medical Society of the District of Columbia," edited by Dr. William J. Mallory, a member of the committee. The Woman's Clinic in cooperation with the district chapter of the Red Cross is conducting classes in "First Aid in Emergencies." Persons attending eight or more of these lectures are eligible for examination leading to a certificate of the American Red Cross. The educational department of the Woman's Clinic is conducted by a committee of which Dr. D. S. Lamb is chairman, and Dr. Elnora C. Folkmar is secertary and executive officer. All this public health educational work of the District of Columbia is an expression of the work outlined by the committee on public health education among women of the American Medical Association, of which Dr. Eleanor S. Everhard of Dayton, O., is chairman.

ILLINOIS

Sanatorium to Be Built.—The contract has been let for the construction of the Dr. Katherine E. James Sanitarium at Corey's Bluff, Rockford. The new building will accommodate thirty patients and will represent an investment of more than $15,000.

State Society Meeting.—The sixty-second annual meeting of the Illinois State Medical Society will be held in Springfield, May 21 to 23. The Leland Hotel will be general headquarters. The Leland banquet hall and the Y. M. C. A. gymnasium will be used as section meeting places and in the latter the general sessions will be held. A theater party is planned for Wednesday afternoon for the visiting women, followed by a musicale at the Leland.

Personal.—Dr. Anna Weld leaves Rockford for Europe, May 16.——Dr. Louis Van Patten, St. Charles, was thrown from a carriage in a runaway accident at Elgin, March 18, and sustained severe lacerations and bruises.——Dr. Frank E. Baldwin, Peoria, who has been ill, has recovered and resumed practice.——Dr. Russell Broughton, Rockford, is reported to be seriously ill with pneumonia.——Dr. Fenton B. Turck, Chicago, who is traveling in Europe, is reported as having left England and as now being in Spain.

Chicago

Hospital Cornerstone Laid.—The cornerstone of the new German Hospital, Grant Place and Hamilton Court, was laid with impressive ceremonies, March 24, by Count J. H. von Bernstorff, ambassador of Germany to the United States.

Medical Certificate Necessary for Marriage.—Rev. W. T. Sumner, dean of the Episcopal Cathedral of SS. Peter and Paul, and chairman of the Chicago Vice Commission, in a sermon March 24, announced that "beginning with next Easter, April 7, no persons will be married at the cathedral without first presenting physician's certificates as to their normal soundness of mind and stating that they have no incurable or communicable disease."

Meetings on Social Hygiene.—The Chicago Medical Society and the Society of Social Hygiene will hold joint meetings, April 3 and 4. On the first day will be held a symposium on social evil, with introductory remarks by Dr. J. M. Patton, president of the Chicago Medical Society, and papers on "The Great Need of Education on Matters of Sex," by Dr. Rachelle Yarros; "Some Observations of the Vice Commission," by Dean Sumner; "Economic Phases of the Venereal Diseases," by Dr. William L. Baum; and "The Attitude of the Municipality Toward Sexual Vice," by J. L. Hamery, commissioner of public safety, Des Moines, Ia. At this meeting Professor C. R. Henderson will preside. On the evening of April 4, Dr. J. M. Patton will be in the chair and a symposium will be held on social service, with introductory remarks by Professor Henderson and papers by Dr. Henry B. Favill on the "Rôle of the Physician in Social Service"; by Dr. William T. Belfield, on "The Procreation of the Feeble-Minded"; by Dr. John N. Hurty, Indianapolis, secretary of the Indiana State Board of Health, on "Requirements for a Marriage License"; and by Clara' P. Seipel, president of the Frances Juvenile Home, on "Venereal Diseases in Children."

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[2] Smith, Theobald, and Fabyan, Marshall: Centralbl. f. Bakteriol., lxi, No. 7.

INDIANA

New Officers.—Society of Physicians of Linton: president, Dr. M. N. Thayer; secretary, Dr. E. R. Cravens.

Leper is Dead.—The only leper in Indianapolis, an old colored woman, who has been under quarantine for several weeks, died March 18. Her case was described by Dr. Brayton in THE JOURNAL, March 9, 1912, p. 690.

Hospitals Merged.—The Ward Sanatorium and the Sisters of Charity Hospital, Indianapolis, have been merged and will be under the control of Dr. Joseph H. Ward.

Child's Welfare Exhibit.—The City Board of Health, in conjunction with the Children's Aid Association of Indianapolis, expects to hold a child's welfare exhibit April 1-6.

Laboratory for South Bend.—Drs. Roscoe L. Sensenich, R. C. Shanklin, C. C. Terry, Hugh M. Miller and W. H. Baker have incorporated the South Bend Medical Laboratory, with a capital stock of $3,000.

Plans for New Hospital Approved.—In the competitive contest for designs for the new hospital for Indianapolis to cost $1,000,000, the plans of Mr. Adolph Scherer were accepted. At the present time $330,000 are available for the building. The board of health has decided to erect a nurses' home, with accommodation for one hundred nurses.

New Hospital Wing Soon to Be Completed.—The new wing of the Methodist Episcopal Hospital, Indianapolis, will, it is reported, be completed May 1, and will cost $150,000. One floor of the wing is to be devoted to the care of children, and one to obstetrics. There will be an emergency ward and also a roof garden for convalescent patients.

Tuberculosis Statistics.—The State Board of Health has compiled statistics of tuberculosis for ten years, which show that Crawford County, on the Ohio River, has an annual death-rate of 272.4 per 100,000 from the disease, and that Benton County, in the northern part of the state, has the lowest annual rate, namely, 71.8 per 100,000. Farmers show a higher mortality rate from tuberculosis than individuals in any other occupation.

Personal.—Dr. Severance Burrage has resigned as professor of sanitary science in Purdue University, Lafayette, and will spend several months in Europe, after which he will take charge of the biologic and serum department for an Indianapolis drug house.——Dr. Gustave A. Petersdorf, Indianapolis, was thrown out of his buggy and badly bruised in a runaway accident recently.——Dr. J. C. Watson, Tolleston, was struck by an automobile, March 15, and sustained severe bruises.——Dr. James A. Work, Elkhart, slipped and fell on the ice, March 13, suffering an impacted fracture of the upper end of the humerus, with a dislocation of the shoulder.——Dr. Robert Harris, South Bend, celebrated his eighty-ninth birthday anniversary, March 14.——Dr. W. J. Hurt, Waynetown, has been under treatment in the Deaconess Hospital in Indianapolis for septicemia, due to an operation wound.——Dr. Carleton B. McCulloch, Indianapolis, sailed for Europe, March 23.

MARYLAND

Vital Statistics Bill Returned to Committee.—By a vote of 49 to 43, the house refused, on March 13, to adopt a favorable report of the judiciary committee, of the State Board of Health bill, requiring the state-wide registration of births and deaths, and instead referred the bill to the ways and means committee.

Baltimore

Medical Students' Society Organized.—The Charles W. Mitchell Medical Society, named in honor of the professor of the practice of medicine in the University of Maryland, was organized by the students of that institution, March 13.

Epidemic of Septic Sore Throat.—A very serious form of sore throat, said to be due to streptococcus infection, is prevalent in Baltimore. Many cases have been reported, with a number of deaths. It is believed to be due to infection from milk and the boiling of all milk is advised.

Medical Museum Favored.—Dr. William H. Welch, in an address before the Baltimore City Medical Society, spoke of the advantages to be derived from having a permanent medical museum, where pathologic specimens could be exhibited and studied. A committee was appointed, with Dr. W. R. Stokes as chairman, to devise plans for such a museum, to be submitted at a subsequent meeting.

Personal.—Dr. Samuel Amberg, of the Department of Pediatrics at Johns Hopkins Medical School, has been appointed a member of the research staff of the Otho S. A. Sprague Memorial Institute, Chicago.——Dr. Bernard E. Browne is said to be suffering from septicemia, due to an operation wound.——Dr. Compton Reily has been appointed orthopedic surgeon at the Church Home and Infirmary.——Dr. Joseph Blum has retired from practice and will reside in New York City.——Dr. Hiram Woods was the guest of honor at a dinner of the Nu Sigma Nu Fraternity of the University of Maryland, March 15. Dr. John C. Hemmeter was toastmaster.——Dr George W. Dobbin was operated on for appendicitis, March 15, and is reported to be doing well.——Dr. C. E. Downes, health warden, is reported to be ill with septicemia, due to operation wound.

MASSACHUSETTS

Active Campaign for Hospital.—A nine days' campaign to add $53,000 to the $47,000 now on hand and thus complete the $100,000 building fund for the Melrose Hospital, began March 20.

Consulting Staff Resigns.—The consulting staff of physicians of the Municipal Hospital for Tuberculosis, Lawrence, has resigned, to take effect coincidently with the acceptance of the resignations of the board of trustees of the hospital.

Strength of Antivaccination Influence.—A bill to appoint a commission to investigate the value of vaccination was refused consideration by the senate, by a vote of only 32 to 29, a fact significant of the strength of the antivaccination influence in the state.

District Society to Meet.—The Essex North District Medical Society has accepted the invitation of the management and staff of the Lawrence General Hospital to hold its annual meeting at the hospital, May 8. The members will be afforded an opportunity to inspect the hospital and to see such medical and surgical clinics as can be provided.

Cutter Lecture.—The first of the annual series of lectures given under the Cutter bequest at Harvard Medical School, March 13, by Dr. William H. Park, Director of Research Laboratories of the Department of Health of New York City, on "Observations on Dosage and Methods of Injecting Antitoxin in the Treatment and Prevention of Diphtheria and Tetanus."

Hospital to Move.—St. Elizabeth Hospital, East Brookline Street, Boston, is to be transferred to Brighton. The selected site is on a hill side, at the corner of Cambridge and Washington Streets. The building will be of modern construction, with a main central building and two wings; fire-proof, with floors of concrete and roof of tile. Each wing will accommodate fifty patients, while the central building, after housing the administrative officers, will also have fifty beds.

Personal.—Drs. Edward H. Bradford, professor of orthopedic surgery, and James Jackson Putnam, professor of diseases of the nervous system in Harvard Medical School, have retired from active service and will be made professors emeritus.——The Lawrence Board of Health has appointed Dr. Harry H. Nevers acting city bacteriologist; Dr. William J. Sullivan, assistant city physician, and Drs. John H. Bannon and Myer Schwartz, third and fourth city physicians, respectively.

Change in Form of Examination.—The report of President Lowell of Harvard University just issued speaks of a new departure in the process of examination for the medical degree. Two examinations are proposed, partly practical, partly oral and partly written and designed to measure the scope of the students' comprehension, judgment and skill, rather than to test his detailed information. The first examination covers the laboratory subject in the first year and a half and the second covers the clinical courses taken later. Examinations in special courses will be of importance only as qualifying the students to take these general examinations.

MICHIGAN

Honor Dr. Hochstein.—The Kalamazoo Academy of Medicine held a banquet, March 26, in honor of Dr. Adolph Hochstein, who has been a faitful attendant and worker in the academy ever since its organization. Dr. W. A. Stone was chairman of the committee in charge.

Personal.—Dr. Lydia M. DeWitt, Ann Arbor, formerly of the department of anatomy in the University of Michigan, Ann Arbor, and more recently an official of the health department of St. Louis, has been appointed a member of the research staff of the Otho S. A. Sprague Memorial Institute, Chicago.——Dr. Harry B. Britton, Ypsilanti, was operated on in Ann Arbor for appendicitis, March 10.——Dr. C. A. Leonard, Sherwood, had his shoulder dislocated in a runaway accident, March 6.——Dr. George M. Kline, superintendent of the psychopathic ward of the University of Michigan, has accepted the superintendency of the Massachusetts State Hospital for the Insane, Danvers.

MINNESOTA

Staff for Aid Society.—The Charitable Aid Society of Minneapolis has retained the services of five physicians as a staff, which will be on call from March 15 to June 15.

Personal.—Dr. L. O. Clement, Lamberton, sailed for Europe, March 6.——Dr. O. T. Batcheller, Brainerd, who goes east to do postgraduate work before locating in the west, was given a dinner by the physicians of Brainerd, March 2.——Dr. W. M. Sweney, Red Wing, fell on an icy walk, March 1, and sprained his wrist.

Typhoid Situation at Two Harbors.—Up to March 11, 150 cases of typhoid have been reported at Two Harbors, the majority of which are not severe.——The Duluth and Iron Range Railroad Company, in order to safeguard the health of its employees, is endeavoring to educate them regarding the precautions to be taken when typhoid is present and how to avoid infection.

Leprosy.—In the case of the Brodeen children at Cove, Mille Lacs County, who are excluded from school because their brother is a leper, notwithstanding the fact that he is isolated from them, the assistant attorney-general has given an opinion to the effect that a parent of children excluded from school because another member of the family has leprosy, has no recourse except by bringing suit against the members of the school board.

MISSOURI

Hospital Closed.—The Samaritan Hospital, Kansas City, is said to have been closed by the Kansas City Board of Health, February 28, as the result of information of nurses who testified at an inquest on the previous day that many criminal operations on women had been performed there.

Personal.—Dr. I. H. Miller has been appointed city physician of Louisiana.——Dr. H. J. Ruyle, Springfield, is convalescent at St. John's Hospital, after a serious illness.——Dr. G. W. Petty, Nevada, slipped and fell on the ice, March 8, fracturing his right femur.——Dr. George J. Musgrave, Clarence, is reported to be seriously ill.

Endowment Needed for Hospital.—The Mercy Club, Kansas City, whose object is to secure an income of $20,000 for Mercy Hospital, has appointed a committee of two hundred, each member of which is expected to obtain ten memberships to the club. The financial condition of the hospital is said to be such that it must close if help is not immediately forthcoming.

St. Louis

Board of Health Moves.—The board of health moved March 12 into its new quarters in the municipal courts building.

Reserve Corps Banquet.—The St. Louis members of the Medical Reserve Corps, U. S. Army, held their first annual banquet, March 18. Lieutenant W. G. Kirchner, vice-president, acted as toastmaster.

NEW YORK

New Officers.—Utica Medical Club, March 14: president, Dr. R. L. Baker; secretary-treasurer, Dr. J. E. Gage.

Personal.—Dr. C. J. Patterson, Yonkers, has succeeded Dr. Hiram Elliott as superintendent of the Marshall Sanitarium, Troy.——Dr. W. M. Wells, Fulton, is reported to be seriously ill, as a result of a fall six weeks ago.——Dr. Austin T. Fink, Freedom Plains, is reported to be seriously ill with pneumonia.——Dr. Frederick Peterson, New York City, has been appointed a trustee of the Craig Colony for Epileptics.——Dr. Charles Stover, Amsterdam, has been named as manager of the Tuberculosis Hospital, Ray Brook.

Chiropodists Urge Reforms.—The Pedic Society of New York is trying to have a bill enacted requiring that every candidate seeking a chiropodist's license must have an academic education satisfactory to the Board of Regents, who are to take over the examining power from the Board of Examiners of the Pedic Society. The bill further requires that in the future candidates must attend at least one full course of lectures on chiropody and maintain a standard acceptable to the Board of Regents, and that the examination of candidates must be placed in the hands of the State Board of Medical Examiners.

State Society Meeting.—The one hundred and sixth annual meeting of the Medical Society of the State of New York will be held in Albany, April 16-18. The scientific work will be divided into five sections: Section on Medicine, Dr. Henry L. Elsner, chairman, Syracuse, Dr. Harold Barclay, secretary, New York City; Section on Surgery: Dr. Parker Syms, chairman, New York City, Dr. James N. Vander Veer, secretary, Albany; Section on Diseases of the Eye, Ear, Nose and Throat: Dr. Edward Bradford Dench, chairman, New York City, Dr. James Francis McCaw, secretary, Watertown; Section on Mental and Nervous Diseases, Eugenics and Medical Expert Testimony: Dr. Albert Warren Ferris, chairman, Watkins, Dr. Edward L. Hanes, secretary, Rochester; Section on Public Health and Preventive Medicine: Dr. Joshua M. Van Cott, chairman, Brooklyn, Dr. Allen Arthur Jones, secretary, Buffalo. This list of names means that the society has secured for each section men who are eminent in the line of work over which they preside. In working up the program many men prominent throughout the country in addition to the members of the state society will contribute papers. In the Section on Medicine the following out-of-town guests will read papers: Drs. William F. Braasch, Rochester, Minn.; Alfred Stengel, Philadelphia; Solomon Solis Cohen, Philadelphia; Edward C. Rosenow, Chicago, and William C. MacCarty, Rochester, Minn. In that of surgery: Surgeon-Generals George H. Torney, U. S. Army, and Charles F. Stokes, U. S. Navy, and Drs. Emil G. Beck, Chicago, and John B. Deaver, Philadelphia. In the Section on Diseases of the Eye, Ear, Nose and Throat, Dr. Truman W. Brophy, Chicago. In the Section on Mental and Nervous Diseases, Eugenics and Medical Expert Testimony, Charles B. Davenport, Ph.D., secretary American Breeders' Association, Cold Spring Harbor, L. I.; William A. Purrington, New York City; Hon. Randall J. Le Boeuf, Albany, former justice of the Supreme Court of New York; and in the Section on Public Health and Preventive Medicine: Hon. Robert W. Hebberd, secretary, State Board of Charities, Theodore Horton, C.E., chief sanitary engineer. The Public Health Section will be open to the public and the intention is to create interest in the various subjects which are to be discussed. With this end in view a number of men who are interested in public health matters and who are not doctors will read papers. The State Board of Health will also open its laboratories to the physicians and there will be an exhibit by Miss Tracy on the "Invalid Occupations." These exhibits will be held in the Sunday school rooms of the Emmanuel Baptist Church.

New York City

Tenth Baby Dies From Poisoning.—The tenth death in the Brooklyn Nursery and Infants' Home occurred March 20. The nurse who is alleged to have administered the poison has been indicted for murder in the first degree.

Reunion.—On April 3 a reunion and banquet of the class of 1892 of the Medical Department of the State of New York will be held at the Hotel Martinique, 56 West Thirty-Third Street. Dr. J. Emmet Tower is chairman of the committee of arrangements, and all members of the class are invited to be present.

The Teaching of Obstetrics.—At a meeting of the Section of Obstetrics and Gynecology of the New York Academy of Medicine to be held April 25, Dr. J. Whitridge Williams, Baltimore, is to read a paper on "What Can Be Done to Improve the Teaching of Obstetrics in this Country." The paper will be followed by a discussion participated in by Drs. William M. Polk, E. B. Cragin, J. C. Edgar, J. W. Markoe and Austin Flint, Jr.

Personal.—Dr. John J. McAllister, consulting surgeon of the New York Central Railroad, is seriously ill with blood-poisoning as the result of a slight cut at the Mount Sinai Hospital. His thumb has been amputated.——Dr. George T. Stewart sailed for Europe on March 15.——Surgeon-General Blue made his first official visit to Ellis Island on March 22 and expressed himself as well pleased with the condition of things there. He announced that he would probably add two doctors and an alienist to the medical staff.

Acute Indigestion as a Cause of Death.—The *Times* in a recent editorial, commenting on the large number of deaths of prominent persons which have occurred recently, and have been attributed to acute indigestion, arraigns physicians for making slipshod diagnoses under this name, which means no more than the term "heart failure" would under the same conditions. The bureau of the census is also arraigned for having "acute indigestion" mentioned as a cause of death. It says further that the coroner or health officer who accepts a death certificate so worded is culpable, for there exists no demonstrable evidence that acute indigestion, pure and simple, has ever caused death. Autopsies are urged in these cases for both legal and scientific reasons.

Advisory Board Appointed.—Dr. Joseph J. O'Connell, Brooklyn, health officer of the port of New York, has obtained the cooperation of an advisory board consisting of Drs. James Ewing, professor of pathology in Cornell University Medical College; Dr. John H. Larkin, associate professor of pathology in the College of Physicians and Surgeons; Dr. Joshua M. Van Cott, professor of pathology and bacteriology in Long Island College Hospital, and Dr. Francis Carter Wood, head of the department of clinical pathology in the College of Physicians and Surgeons. This advisory board will be in complete control of the bacteriologic and pathologic department of the port, on which the safety of the port against epidemic diseases depends to so large an extent.

New Move in War on Tuberculosis.—The New York Association for the Improvement of the Condition of the Poor has undertaken an experiment to demonstrate if it is possible to wipe out centers of tuberculosis infection in tenement districts of New York. An entire section of the Vanderbilt Tenements, recently built as homes for families having members afflicted with tuberculosis, has been leased for a period of three years and has been converted into a home-hospital. Into each of the twenty-four apartments a family, which has become dependent because of tuberculosis in one of its members, has been moved, and for the next three years an effort will be made to determine whether the spread of tuberculosis can be checked and cures effected under medical direction, aided by competent nursing, adequate relief, freedom from worry, fresh air and sunshine. Equal attention will be paid to the social and medical phases of the question and all patients will be forbidden to work before recovery. Where cures are effected, the families will be moved into suitable homes and the supervision continued until the cure has been demonstrated to be permanent. Dr. Linsly R. Williams is chairman of the committee in charge of this work and it is thought that the experiment will be one of national importance.

PENNSYLVANIA

Medical Society Library.—At the March meeting of the Delaware County Medical Society the president appointed Drs. E. W. Bing, H. M. Armitage and Frank Nothnagle a committee to consider the question of the establishment of a medical library.

Personal.—Dr. J. Winfield Good, Spring City, is seriously ill, after an operation for appendicitis, in the Pottstown Hospital.——Dr. W. R. Patterson, Lloydell, while making a professional call, March 12, fell, fracturing his right leg near the ankle.——Dr. C. P. Seip, Pittsburgh, has been appointed a member of the Bureau of Medical Education and Licensure, vice Dr. Gustave A. Mueller, Pittsburgh, deceased.——Drs. F. B. Pringle, Punxsutawney, and S. M. Free, Du Bois, are convalescent after attacks of septicemia.

White Haven Report.—The report of the board of managers of White Haven Sanatorium, shows that the increased cost of living and the increase in the severity of the cases entered, is responsible for a waiting list for the first time in the history of the sanitarium. The average cost for maintaining one patient per diem is $1.31. There are now twenty-five nurses and fourteen visiting physicians at White Haven. Legacies amounting to $26,000 have been received. There were 732 patients cared for, and of these, 500 were discharged cured. Only fifty-nine deaths occurred and 60 per cent. of the admitted cases were persons in the advanced stages of the disease. The hospital purchased 218,855 quarts of milk and 150,564 eggs, besides those produced on the farm.

State Medical Board Plans to Stop Fraud.—In order to determine absolutely the identity of each applicant, the Bureau of Medical Education and Licensure will require every applicant for license to practice medicine in Pennsylvania, to file with his papers two unmounted photographs of himself, one of which must be presented when he appears for his first examination. This provision, together with the system of assigning each a number, will, it is believed, prevent fraud. The first examination under the new bureau will be held in Philadelphia, Pittsburgh and Harrisburg, June 24 to 27, and the first examination of two-year medical students will be determined by the bureau at its meeting on April 1. As under the law all physicians in the state must be registered at the Department of Public Instruction, plans are now being made whereby cards will be issued to all practitioners, so that they may furnish name, address, college and date of graduation by mail without the necessity of going to Harrisburg to comply with the law. The department expects to have every man engaged in the practice of medicine registered within the next year.

Philadelphia

Assistant Medical Inspectors Appointed.—Dr. Joseph S. Neff, director of public health and charities, has made the following appointments as assistant supervising medical inspectors for the public schools: Drs. Albert F. Moxey, Walter W. Roach, J. M. Hincken, Bernard Kohn and Ralph H. Spangler.

Weir Mitchell Lectures.—The fifth of the Weir Mitchell lectures of the College of Physicians was delivered March 29 in Mitchell Hall, by Dr. William H. Howell of Johns Hopkins University, on "The Factors Concerned in the Coagulation of Blood and Their Variations Under Pathologic Conditions."

Hospital News.—Plans are being considered for an addition to the roof garden of the Jefferson Medical College Hospital.——A three-story laboratory building is being planned for the Samaritan Hospital.——The contract has been awarded for a new hospital building for the Woman's Medical College Hospital. The first story and basement of the building have already been erected and this contract is for five additional stories and a roof garden. The building will be a fireproof structure of the most modern hospital type and will cost about $52,000.——A new dispensary under the management of the Philadelphia Beneficial Association, was opened March 19, at 131 Race Street, for the treatment of accident, minor surgical and medical cases in that section. The institution, under the supervision of Dr. Samuel S. Barr, will be non-sectarian and all services will be given free. Special attention will be paid to diseases of the eye, throat, nose and ear. A nurse will be supplied to the recreation pier at the foot of Race Street, during the summer months, to instruct mothers in the care of babies.

GENERAL

Dinner to Chief Surgeon.—The medical officers of the Army stationed in the Department of the East gave a dinner in honor of Colonel and Mrs. John Van Rensselaer Hoff, March 16. Col. Hoff, chief surgeon of the department, is about to retire from active service and will reside in Washington.

Purity Federation.—The World's Purity Federation, an organization which has been working for ten years in an organized effort to eradicate the traffic in women, the annihilation of public vice, and the giving of instruction to the young in sex hygiene, announces that a new campaign will be inaugurated next month, when a number of expert workers will hold conferences in the leading cities in Eastern Canada, the Atlantic coast states and the south. The tour will begin at Toronto, April 9, and will end in Louisville, Ky., early in May.

Gift to the National Committee for Mental Hygiene.—It is announced that a gift of $50,000 has been made by a donor who desires his name withheld for the purpose of furthering the work of the National Committee for Mental Hygiene. The same individual has agreed to give $50,000 more, on condition that the sum of $200,000 additional be secured. The purpose for which the committee was formed is the study of all matters connected with the commitment, care and after-treatment of the insane. Plans for the study of this subject have been carefully prepared, and it is intended to encourage the formation in the various states of allied but independent societies with similar aims to those of the national committee. A special subcommittee, of which Dr. William L. Russell, superintendent of the Bloomingdale Hospital, is chairman, has been formed to begin the work outlined, and an office has been opened in the Germania Life Building, New York City. Dr. Thomas W. Salmon of the United States Public Health and Marine-Hospital Service has been granted leave of absence by the government to undertake this work and has been engaged to conduct the studies outlined by the committee. The newly elected officers are: president, Dr. Llewellys F. Barker of Johns Hopkins University; vice-presidents, Dr. William H. Welch of Johns Hopkins Medical School, Dr. Charles P. Bancroft, superintendent of the New Hampshire State Hospital, Concord, N.H.; treasurer, Otto T. Bannard, president of the New York Trust Company; chairman of the executive committee, Dr. George Blumer, dean of Yale Medical School; chairman of the finance committee, Prof. Russell H. Chittenden, director of Sheffield

Scientific School of Yale University; secretary, Clifford W. Beers, organizer of the National Committee for Mental Hygiene.

Professor Ehrlich Announces a New Salvarsan.—Reference has been made to the fact that Professor Ehrlich has been working on a new salvarsan. It is here referred to as a matter of news, of interest to our readers, but it is to be remembered that the new product is still in an experimental state. Salvarsan itself has not yet subsided into the niche in the list of medicaments that it will probably occupy after it has been thoroughly tested out and the results, both favorable and unfavorable, soberly classified. Dr. B. C. Corbus, Chicago, one of a number of Dr. Ehrlich's co-workers in this country, submits the following statement of Neo-Salvarsan and its method of use: "Neo-Salvarsan is prepared from the old salvarsan by the action of the sulphoxylates. It is an easily water-soluble form of salvarsan and can be readily put in solution with a neutral reaction by simply using water. It must be dissolved in cold, freshly distilled sterile water, or, if this is not possible, in boiled water that has been cooled. This solution should be used at once after being prepared as it rapidly deteriorates on standing. Dissolving the drug in normal saline is forbidden, as it becomes more toxic. It is not necessary to neutralize it with sodium hydroxid because its action is already neutral. The technic is the same as with the old salvarsan. To prepare the dose, 0.15 gm. is dissolved in 20 c.c. of water and 1.5 gm. in 200 c.c. of water. The intermediate doses are given in corresponding amounts of water. The largest dose that has been given to a man is 1.5 gm., which equals 1 gm of the old salvarsan. In women, 1.2 gm. and in children, according to the age, from 0.15 gm. to 0.35 gm. have been given. Professor Schreiber of the Städtischen Krankenhaus Sudenburg in Magdeburg has carried on the preliminary experiments. He has been using the preparation since October, 1911, has treated 269 patients, and considers that the patients stand the new preparation better than the old. Neurorecurrences have not been observed. For the intramuscular injection, 0.9 gm., which corresponds with 0.6 gm. of the old salvarsan, is dissolved in 30 c.c. of water. A little novocain is injected through the same syringe, the needle remaining *in situ*, and after a few minutes the injection is passed deeply into the muscle. Whether the intravenous is superior to the intramuscular injection is not yet settled."

FOREIGN

Deaths in the Profession Abroad.—Besides those mentioned elsewhere, the profession has lost recently: Sir Francis R. Cruise, D.L., M.D., G.S.G., of Dublin, knighted in 1895, honorary physician in Ireland to King Edward VII and King George V, who died at his home in Dublin, February 26, aged 78.——P. M. Giuria, M.D., professor of stomatology at the university of Genoa.——F. Oloriz, M.D., professor of anatomy and embryology at the university of Madrid and author of numerous works on anthropology and anatomy, especially on the cephalic index in Spain and on dactylography.——A. H. Young, emeritus professor of anatomy in the University of Manchester, who died February 22.

LONDON LETTER

(From Our Regular Correspondent)

London, March 16, 1912.

The Report of the Royal Commission on Vivisection

At the instigation of the small but exceedingly active body of antivivisectionists in this country the government appointed in 1906 a commission, consisting principally of eminent doctors and lawyers, to inquire into and report on the law relating to vivisection and its administration and whether any, and if so, what changes were desirable. More than seventy meetings have been held at which a large number of witnesses have been examined. The commission was freely accessible to all persons who were or fancied themselves to be in a position to criticize the practice of vivisection. All the allegations of the antivivisectionists were brought before the commission. Numerous papers from various official, medical, scientific and other sources, bearing on the subject, were also received. Thus the commissioners were informed of every class of opinion. After so much delay, a report has at last been issued. First place is given to various allegations made from time to time by Mr. Stephen Coleridge, the protagonist of the antivivisectionists. As the outcome of ten years' investigation of the Vivisection Act, he has made twelve charges against its administration, none of which is sustained by the commissioners. Another prominent antivivisectionist spoken of is Miss Lind-af-Hageby, who makes charges of cruelty in a well-known book, "The Shambles of Science." The commissioners say that her assertions are "founded on a misapprehension" and have come to the conclusion that other witnesses have "either misapprehended or inaccurately described the facts of the experiments." So far as the commissioners can judge, they believe that the holders of licenses and certificates for vivisection, with rare exceptions, have endeavored with loyalty and good faith to conform to the provisions of the law. They further state that the harrowing descriptions and illustrations which are freely circulated of operations inflicted on animals, are in many cases calculated to mislead the public, so far as they suggest that the animals are not under an anesthetic. The next twenty-five pages of the report are devoted to the recent history of the progress of medical science in connection with experiments on animals, and to the question whether or not these give valuable results in relation to the prevention and cure of disease. The commissioners point out that in recent years the value of the experimental method has largely been recognized by the public, as well as by various public bodies, as is shown by the foundation of schools of tropical medicine and the appointment of research expeditions to investigate on the spot various tropical diseases, the foundation of an imperial research fund for the purpose of investigating cancer, and the appointment of a royal commission to investigate tuberculosis by experimental methods. Evidence was received from persons eminent in physiologic, pathologic and sanitary science who testified that knowledge had been acquired with regard to the vital functions, the causes of diseases, and the means for their prevention and cure which could not otherwise have been acquired. On the other hand, many witnesses were heard, some of whom were physicians, who contended that this was not true. But the great preponderance of medical and scientific authority was against the opponents of vivisection. This was more markedly so than at the previous Royal Commission on Vivisection which sat in 1875.

THE MORAL QUESTION

On the question of the morality of vivisection several eminent moralists, as well as men of science, were heard. After full consideration, the commissioners are led to the conclusion that experiments on animals, adequately safeguarded by law and faithfully administered, are morally justifiable. As regards the different classes of animals used and the possibility of making discriminations between them, this is declared to be a delicate question of relative ethics. The general sense of civilized mankind would be prepared to make such differentiation and would regard with quite a different degree of reprobation the like treatment of one of the domestic animals and of a cold-blooded or verminous or destructive animal. The higher apes, the dog and the cat present claims for special consideration.

RECOMMENDATIONS

A number of recommendations are made, with which the antivivisectionists express some satisfaction: (1) further limitation with regard to the use of curare, during the use of which it is recommended that an inspector should be present, and should satisfy himself that the animal is in a state of complete anesthesia; (2) stricter provision as to the definition and practice of pithing, which should be performed only by a licensed person and under an adequate anesthetic; (3) additional restrictions regulating the painless destruction of animals which show signs of suffering after experiments; (4) the keeping of special records by experimenters in certain cases; (5) an inspector should have the power to order the painless destruction of any animal after experiment which shows signs of obvious suffering even though the object of the experiment has not been attained. A minority report is made by three of the commissioners, one of whom is Sir William Collins, eminent both in the profession and in public life. They recommend that the administration of an anesthetic shall be obligatory in all experiments likely to cause pain, or, if the nature of the investigation render this impossible, then, on the supervention of real or obvious suffering, the animal shall be forthwith painlessly killed.

Radium in the Waters of Bath

The waters of Bath have been famous for their therapeutic powers for many generations and this has long been a puzzle to physicians and chemists. At last an explanation seems to have been found. Radium was discovered in them in 1903. For long no particular notice was taken of this, but with the progress of radiotherapy, increasing numbers of patients have thronged to this famous city. The city council determined to obtain the highest scientific advice on the subject and requested the eminent scientist, Sir William Ramsay, to investigate it. Before a crowded and distinguished audience, including the city council and many physicians, he gave his results. He stated that the recorded analyses of the Bath waters showed in the main merely ordinary constituents, most of which were present in many drinking-waters. The only unusual constituents, so far as was indicated by the analysis made at the *Lancet* laboratory, were small quantities of strontium and lithium with a trace of bromin. But the fact that mineral waters all over Europe had for ages been used for curative purposes, combined with present knowledge that such waters while not unusual in "chemical" composition all agreed in yielding helium made it interesting to examine the Bath waters for radium and for niton, the emanation of radium. In twenty-four hours the King's Well gave off 4.927 liters of gas containing in 10.000 parts 360 of carbon dioxid and 9.640 of nitrogen, including 73.63 parts of argon, 23.34 of neon and 2.97 of helium. In the waters of the King's Well there were 0.1387 mg. of radium per million liters. Thus there were 188 times as much neon in the gas from the King's Well as is contained in atmospheric air. In conjunction with Dr. Stevenson, of the medical school of University College, experiments were made, in which mice were fed with bread and cheese soaked in a solution of niton. These showed that niton was thrown off chiefly by the lungs and in three hours. When a patient took a bath the skin might absorb some niton and some undoubtedly entered the lungs, since it was always given off from the surface of the hot water. Skin absorption might be increased in the following way: Niton in disintegrating continuously discharges electrons, or in the older phraseology loses negative electricity and becomes positively charged. Hence it would be attracted by a negatively charged body. If, therefore, the patient in the bath were connected with the negative pole of a battery at a potential of 100 volts or even more, and the other electrode were placed in the water, the niton would probably reach the skin and probably enter the system by so-called ionization. In this way, a considerable dose might be given. Naturally, caution would be required in experimenting on these lines. Another method by which still stronger doses might be administered would be by directing a spray of the gas against the patient's skin or making the patient breathe the spray.

PARIS LETTER

(From Our Regular Correspondent)

Paris, March 8, 1912.

The Morbidity in the French Army

About ten years ago a sensation was made in France by a question asked by a senator of the minister of war in regard to the sanitary condition of the French army. It appeared from the debates following that at that time the mortality in the French army was very high, especially by comparison with the great military power, Germany. It seems doubtful whether things have changed since then. At any rate, Dr. Binet-Sanglé, chief of the service of medical statistics of the army, has just drawn attention to the high morbidity in the French army. According to comparative statistics for the five-year period from 1903 to 1907, France occupies the first place for measles, scarlet fever, mumps, diphtheria, dysentery and acute articular rheumatism; the second place for tuberculosis and cerebrospinal meningitis; and third place for typhoid fever and influenza. During the same five-year period there were in the German army about half as many cases of influenza, diphtheria and cerebrospinal meningitis; one-fifth as many cases of scarlet fever; one-sixth as many of typhoid fever; one-sixteenth as many of dysentery: one-twenty-first as many of measles; and one-twenty-second as many of mumps as in the French army. Dr. Binet-Sanglé does not believe that these defects are the fault of the sanitary service of the army or of the minister of war. But at present the government is almost helpless against the civil epidemics. The law of 1902 regarding the protection of the public health is not applied. Physicians do not report contagious diseases, or, at least, they do not report against the wishes of their patients, and the latter very often, especially in commercial life, exact professional secrecy of their physicians. It therefore happens that municipalities themselves endeavor to conceal epidemics in order not to frighten away travelers and to upset business. Dr. Binet-Sanglé believes that to remedy the situation, it would be necessary to complete the law of 1902 by obliging heads of families, hotel-keepers and lodging-house keepers to be responsible along with the physicians for reporting contagious diseases. It would likewise be necessary to replace the municipal health officers by officers paid by the general government and place them under its authority. It may well be questioned, however, if these measures will be really helpful while the services of disinfection are inadequate. What is especially necessary is a service of automobile disinfecters which could go into the smaller villages to check epidemics.

Syphilitic Ulcerous Chancriform Lesions and Salvarsan

On March 1, Dr. Ravant showed before the Societé médicale des hôpitaux de Paris a patient with ulcerous syphilids, who, in March, 1911, received three injections of 0.6 gm. of salvarsan. During last January this patient presented a chancriform indurated lesion of the gland with inguinal adenopathy. A syphilitic reinfection might have been suspected, but the absence of spirochetes on the surface and in the tissues of the lesion, the absence of chancre histologic lesions, shown by biopsy, as well as the absence of secondary lesions from four to seven days after the beginning of the chancriform lesion, eliminate this diagnosis. Moreover, the appearance of new chancriform lesions was observed thirty and forty days after the first. It was possible to reproduce these by inoculations of the arm.

Dr. Thibierge showed a man, aged 31, who after having received three injections, last January, of 0.3, 0.4 and 0.3 gm. of salvarsan respectively, for a syphilitic chancre at the base of the penis, had a phagedenic ulcer which resembled an infectious chancre, and which appeared at the same level as the scar of the initial chancre. Below this ulceration two other smaller ones, without phagedenic tendencies, were observed. On the surface of this ulceration no spirochetes could be found. The patient having had no sexual relation since the beginning of the lesion, a syphilitic reinfection could not be suspected.

Dr. Jeanselme remarks how much the two cases reported by Drs. Ravant and Thibierge demand reserve in the interpretation of lesions appearing in syphilitics treated by salvarsan during the primary period. Nevertheless, the possibility of a syphilitic reinfection after a treatment by salvarsan cannot be denied. Dr. Jeanselme had observed two cases, the authenticity of which could not be doubted, for they were characterized by the existence of an erosive, parchment-like lesion, with spirochetes, Wassermann reaction negative on the twelfth day with the change to a positive on the twenty-fourth day, and appearance of an roseola at the end of five or six weeks.

Deaths

Dr. Debrie, médecin principal of the first class, former director of the sanitary service of the troops at Morocco, has just died, aged 53.

The death of Dr. Paul Triaire of Tours, national correspondent of the Académie de médecine de Paris, is reported. He was a very learned man. He has written two books, one, on Recamier and her contemporaries, the other, on Bretonneau and his correspondents (Trousseau and Velpeau).

The Horace Wells Prize

There will be awarded in 1915 a prize of 300 francs to the author of the best memoir on the improvement of present anesthetic processes, or to the author of a discovery of an anesthesia considered worthy of the attention of the jury, or to the inventors of apparatus, processes or methods markedly facilitating anesthesia. The memoirs may be addressed to M. Quincerot, président du Comité Horace Wells, 28, rue de Moscou, Paris. The memoirs must be written in French. A device should accompany the manuscript, also a sealed envelope bearing on the outside the device and containing the name and address of the candidates.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, March 8, 1912.

Personals

Professor Opitz, director of the gynecologic clinic at the academy for practical medicine at Düsseldorf, has accepted the call to Giessen. Professor Sellheim of Tübingen has been called in his place.

Professor Sobotta of Würzburg has been appointed a professor extraordinary to lecture on topographic anatomy.

Professor Schütze, director of the bacteriologic department of the Berlin municipal hospital, Moabit, who had gone to the seat of war at Tripoli as a member of the expedition of the German Red Cross, died in the Turkish main camp from typhoid. Schütze was for a number of years assistant at the institute for infectious diseases under Robert Koch. He has published various well known works on bacteriology and biology, and was a member of the expedition of the German Red Cross in the Russo-Japanese war in Manchuria. He was 40 years old.

The death is reported from Constantinople of the privy counsellor for sanitation, Geheimer Sanitätsrat Dr. Mordtmann, for many years physician to the German embassy, aged 76. He worked there for many years in the German hospital and had won for himself by his medical activity the confidence and favor of the best circles of Constantinople society. His literary work extended not only to medicine but also to history, philology, and especially to the topography of ancient Byzantium.

Professor Czerny, the noted Heidelberg surgeon, has resigned from the sanitary corps, to which he belonged as surgeon-general of the reserves. According to statements in the daily papers a voluntary resignation was suggested to him for political reasons. Czerny before the election expressed himself in a political journal as opposed to the conservatives and in favor of a union of the parties of the left, and in this recommendation of a combination with the social democrats the authorities are said to have seen an offense which warranted them in advising the resignation of Czerny from the sanitary corps.

No authentic statement has yet been given of Czerny's side of the matter and there is still reason for question whether the reason assigned is the real one. I cannot regard it as probable because in the first place the government of Baden is of a very liberal disposition and not so distinctly opposed to the social democrats as in other states. Besides Czerny is in his seventieth year and it is very easy to understand that he may have resigned from the army on account of his advanced age.

Extension of the Imperial Insurance Law

A supplement to the imperial insurance law is being prepared by the government in the form of a law for the insurance of firemen and nurses. The bill will not come to discussion in the legislative bodies until autumn.

A New Children's Hospital

The city of Berlin contemplates the building of a new municipal hospital for children under 3 years of age, with 220 beds. The building is urgently needed for Berlin as the departments for children in the present hospitals are quite insufficient for the increasing demands on them. There exists so far only a single children's hospital, the Kaiser- und Kaiserin-Freidrich Kinderkrankenhaus, conducted by Professor Baginsky. In the other municipal hospitals only small wards are provided for children and as a rule none for infants.

Demonstration of Swiss Students Against a German Professor

A few days ago some hundreds of the Berne medical students got up a demonstration against Professor Kolle, the present director of the local institute for the investigation of infectious diseases and for many years assistant of Robert Koch, by conducting a serenade of so-called *Katzenmusik* (cat music) in front of his residence. How far in this matter national, that is to say anti-Prussian tendencies, were displayed remains to be determined. The ostensible cause was the failure of certain students to pass the state's examination in hygiene, on account of insufficient knowledge. It is true that there had previously been some occasional opposition to Professor Kolle, who is of a somewhat rough disposition, and in his lectures may have treated his hearers many times somewhat too harshly. In Switzerland, as is well known, every citizen regards himself a free lord (*fühlt sich als freier Herr*), as is apt to be the case in democratic states, and so it is easy to understand that the ill will of the students made itself particularly felt against a foreign professor. That there is no general opposition to Professor Kolle is shown by the fact that the medical faculty of Berne as well as many prominent persons of other circles in society, have expressed their regrets to Kolle on account of this scene and have tendered him the assurance of their high esteem. However, these occurrences will not make Professor Kolle's life in Berne any pleasanter, and he will strive so much the more hereafter to secure at the first opportunity a call to his native country to a German professorship of hygiene.

Medical Study Tour to America

The German central committee for medical study tours is planning an expedition to Washington in connection with the international congress of hygiene in September, as already described in The Journal, page 206. The participation is very lively so that there are only forty places vacant on the Hamburg-American steamer Cincinnati, which was chartered by the committee. The excursion sails September 7 from Hamburg and returns from New York October 10 on the Victoria-Luise. Visits to New York, Philadelphia, Atlantic City, Baltimore, Washington, Chicago, Niagara Falls, Montreal, Albany and Boston are contemplated.

Wholesale Poisoning in a Military School

A few days ago 187 men in a school for non-commissioned officers at Potsdam took sick within twenty-four hours with a febrile gastro-intestinal affection. The germ of meat poisoning was detected in the stools. The suspicion that the disease was occasioned by partaking of dinner was thus confirmed. The course of the disease was favorable in all cases. After a few days the patients could leave their beds.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, March 4, 1912.

Action Against the Scarcity of Lodgings

For a couple of years, there has been a decided scarcity of middle-sized lodgings in this city, as numerous old houses still in good condition were pulled down, to make place for new flat buildings for the sake of higher profits. This has become a real calamity; rents have gone up from 30 to 50 per cent. with disastrous results to the poorer classes of the population, as the sum available for nourishment is thus considerably lowered. The *Krankenkassen* have now devoted part of their reserve funds, a little over $200,000, to the erection within one year in Vienna and its outskirts of houses with altogether 2,000 lodgings. The government has undertaken to guarantee this action, so the erection is ensured. They will be let only to members of the *Krankenkassen,* people who belong to the wage-earning class with an income of less than $600 (3,000 kronen) a year and who have suffered most under the recent paucity of lodgings. Furthermore, they will obtain under this scheme healthy lodgings, hitherto not easily to be had, as gardens will be provided for as well as all modern hygienic arrangements. Naturally, this action of the *Krankenkassen* will improve the health of their members.

Health Conditions in Vienna in 1912

Up to March 1 the year 1912 has been fairly satisfactory as regards public health in Vienna, for nearly all infectious diseases, except influenza, were markedly less frequent than during the previous year. No new case of small-pox, dysentery, epidemic cerebrospinal meningitis, puerperal fever or trachoma was reported to the board of health; there were 2,460 cases of measles, 510 cases of scarlet fever and twenty of typhoid (the latter all imported); the figures for diphtheria were 316 (4 per cent. mortality) parotitis 258, and 217 for erysipelas. The general mortality in Vienna was 16 per cent. Only influenza was frequent, owing to the very changeable weather, with frosts and warm weather alternating. The year's type of the disease was characterized by mild complications of the ear and the nasal sinuses. Thus the practitioners were fairly busy up till now, contrary to the conditions last fall and in the beginning of winter.

Number of Physicians in Austria

The official figures relating to the number and distribution of medical men for the end of 1911 are now published. There is quite an interesting difference between this year and the one preceding it (see The Journal, April 29, 1911, p. 1275). The increase in number as compared to that shown at the end of 1910 was 62, or 0.47 per cent., for we now have 13,264 practicing or qualified doctors of medicine on the register. This increase is very small compared with the previous rates of increase (from 4 to 6 per cent. a year for the last ten years). This is readily explained by the fall in numbers of medical students within the last sixteen years up to 1906, but the outlook is still worse, for since 1906 that number has clearly more than doubled; although the population increases in this country by a little over 2 per cent. yearly, the doctor's diplomas will within the next few years increase much more rapidly. Especially the large towns and cities attract physicians, while the country is often very poorly supplied. In our cities the proportion of physicians per ten thousand of population is in Innsbruck 24, Olmütz 27, Cracow 21.6, Lemberg 19.8, Graz 19.6, Vienna 14.9. The latter two cities show only a very slight proportionate increase, while the other towns have from 5 to 8 per cent. more physicians than a year ago. The country, however, shows a decrease of from 2 to 3 per cent., and the distribution for the whole empire is shown by the figure of 4.60 per ten thousand of population. As regards the towns, specialization is increasing. Thus 34 per cent. of the total number prefer to be considered specialists, while only 37 per cent. are general practitioners. The remainder are assistants in hospitals or are engaged in purely theoretical work such that they cannot practice privately. Therefore there were 199 appointments vacant in the country districts, mostly because they were untenable without a substantial fixed salary, and this the local authorities were unwilling or unable to pay. The number of female doctors was just 100, or twenty more than a year ago. They are 7.5 per cent. of the total number of physicians and are mostly employed by organizations or municipalities and are chiefly specialists for diseases of women and children. The overproduction of doctors in towns has been, for some time, seriously commented on and endeavors by the state and by medical organizations to induce young doctors to settle in the country have been futile up to the present. There is one means of attaining the desired object, but this entails an expenditure of money—*hinc illæ lacrimæ*. Meanwhile, in small municipalities new hospitals are being erected offering new opportunities for specialization.

Sale of the Gastein Radio-Active Springs

The famous springs of Gastein, hitherto private property of the Austrian dynasty, have been sold to the two municipalities forming the community of Gastein. This transacton will enable the waters of the springs—the strongest radio-active springs in Europe, perhaps in the world—to be used for medical purposes in a more extensive way. The price was about $200,000.

The "Pollard" System in Austria

The Pollard system (named after Judge Pollard of St. Louis), which postpones the punishment of a culprit who violates the law when intoxicated and makes him promise to abstain from alcohol under the penalty of having the first punishment exacted, is now being given here an extensive trial. We have here now special juvenile courts (*Jugend Gerichtshof*). Here the moral educative side of the law is brought more to the foreground, and as restriction from the alcohol pest is an important feature of these actions, it will be interesting to observe what good will actually be done. The age limit is here 18 years; older persons fall under the jurisdiction of the ordinary law.

Marriages

Charles Augustus Carpenter, M.D., Irvington-on-Hudson, N.Y., to Miss Maude Cecile Tucker of St. Paul, Minn., in New York City, March 12.

Frederick Carlyle Hyatt, M.D., Greensboro, N. C., to Miss Myrtle Anna Cook of Harrisburg, Pa., at Asheville, N. C., Dec. 23, 1911.

Robert Campbell, M.D., Jamaica, New York City, to Emma Merce Morrison of New York City, February 7.

J. Guy Strohm, M.D., Portland, Ore., to Miss Helen Mitchell of Chicago, in Portland, March 20.

Deaths

James Rufus Tryon, M.D. University of Pennsylvania, Philadelphia, 1860; surgeon-general U. S. Navy, retired; a member of the Association of Military Surgeons of the United States; died in the United States Naval Hospital, Brooklyn, March 21, aged 75. He entered the Navy as assistant surgeon in 1863, served through the Civil War and, after passing through all grades, was appointed surgeon-general in 1893, and was retired Sept. 24, 1899, on attaining the age of 62 years, with the rank of rear admiral.

James Calvin King, M.D. New York University, New York City, 1865; a member of the Medical Society of the State of Pennsylvania and a charter member, vice-president and president of the Jefferson County Medical Society; died at his home in Reynoldsville, March 11, from cerebral hemorrhage, aged 70.

Frederick Henry Colton, M.D. Long Island College Hospital, 1864; visiting physician to Long Island College and St. John's hospitals, Brooklyn, for more than twenty-five years; acting assistant surgeon U. S. Army from 1863 to 1865; sanitary inspector of the Metropolitan and Brooklyn boards of health from 1866 to 1873; for seven years demonstrator of anatomy in his alma mater and for nineteen years secretary and director of the Brooklyn Eye and Ear Hospital; died at his home in Brooklyn, March 16, from arteriosclerosis, aged 72.

Alexander Hadden, M.D. College of Physicians and Surgeons, New York City, 1859; of New York City; formerly physician to the Nursery and Child's Hospital and attending physician to the Presbyterian Hospital; founder and president of the board of trustees of, and consulting physician to, the Northeastern Dispensary; died suddenly March 16 on a train between Rocky Mount, N. C., and Richmond, Va., from heart disease, aged 78.

Robert Rasmussen Rome, M.D. Hahnemann Medical College, Chicago, 1891; University of Minnesota College of Homeopathic Medicine and Surgery, 1892; formerly a member of the American Medical Association; a member of the Minnesota State Medical Association; a member of the medical staff of Asbury, the Swedish and Deaconess hospitals, and the City Hospital, Minneapolis; died at his home in Minneapolis, March 12, aged 48.

Alexander E. Garceau, M.D. University of Vermont, Burlington, 1881; for seventeen years a practitioner of Chicago and for four years prior to that time a post-graduate student in Paris; dermatologist to the Telegraph Hill Polyclinic, San Francisco, and consulting dermatologist to the San Francisco Maternity Hospital; died in the Adler Sanatorium, San Francisco, March 14, two days after an abdominal operation, aged 57.

Samuel Catlin, M.D. Yale University, New Haven, Conn., 1851; said to be the oldest alumnus of that institution; formerly a member of the American Medical Association; for many years an active, and later an honorary member of the Michigan State and the Lenawee County medical societies; a surgeon of Volunteers during the Civil War; died at his home in Tecumseh, March 14, from senile debility, aged 86.

John Guy Hollyday, M.D. University of Maryland, Baltimore, 1868; a member of the Medical and Chirurgical Faculty of Maryland and a Confederate veteran; for many years attending physician to St. Joseph's Monastery, St. Mary's Industrial School and Mount St. Joseph's College; for forty-two years a practitioner of southwest Baltimore; died at his office, March 15, from pneumonia, aged 66.

Daniel J. Coleman, M.D. Medical College of Virginia, Richmond, 1884; a member of the American Medical Association; since 1904 professor of obstetrics and diseases of the puerperal state in his alma mater; and for many years connected in various teaching capacities with that institution; one of the most prominent practitioners of Richmond, died at his home, March 17, from pneumonia, aged 45.

Thomas Kelly, M.D. McGill University, Montreal, 1873; M.R.C.S., Eng., 1881; assistant surgeon of the Burlington and Union Pacific systems at South Omaha, Neb.; for several years in the British Colonial Service in South Africa and India, and for four years surgeon in the Royal Navy; since 1879 a resident of South Omaha; died at his home March 11, from cerebral hemorrhage, aged 60.

Carlos Phillips Tucker, M.D. College of Physicians and Surgeons, New York City, 1849; formerly a member of the American Medical Association, and one of the charter members of the New York Academy of Medicine; for several years attending surgeon to Trinity Hospital, New York City; died at his home in Mount Vernon, N. Y., March 10, from senile debility, aged 89.

Joshua T. Purcell, M.D. Indiana Medical College; College of Physicians and Surgeons, Indianapolis, 1877; a pioneer practitioner of Champaign County, Ill.; a veteran of the Civil War; for thirty-six years a practitioner of St. Joseph; died at his home, March 10, from pneumonia, aged 67. At his funeral addresses were made by representatives of the Champaign County Medical Society.

Andrew Henderson Whitridge, M.D. Johns Hopkins Medical School, Baltimore, 1898; a member of the American Medical Association and for several years medical director of the Maryland Life Insurance Company; died in the Union Protestant Infirmary, Baltimore, March 19, five days after a surgical operation on the stomach, aged 40.

Ludwig Schroeter, M.D. University of Berne, Switzerland, 1889; a member of the American Medical Association; for more than twenty years a practitioner of Buffalo and consulting physician to the Maternity and General hospitals and attending physician to the German Hospital; died recently in Capri, Italy, where he had gone in search of health, aged 51.

George Ralph Schuster, M.D. Miami Medical College, Cincinnati, 1897; a member of the American Medical Association; coroner of Montgomery County, O., from 1907 to 1909; for a time assistant physician at the Dayton State Hospital; died at his home in Dayton, March 13, from pneumonia, aged 37.

George Kelly Allison, M.D. Jefferson Medical College, 1911; of West Newton, Pa.; house surgeon in the Charity Hospital, Cleveland, O., who was operated on for appendicitis in that institution early in February; died at the home of his aunt in Girard, O., March 7, from spinal meningitis, aged 25.

Thomas Nehemiah Eastman, M.D. Jefferson Medical College, 1881; a member of the American Medical Association; of Uniontown, Pa.; once a member of the borough council and of the board of health; died suddenly March 14, while making a professional call at Dalsinger, Pa., aged 55.

Edmund K. Goldsborough, M.D. Medical College of Virginia, Richmond, 1864; a widely known practitioner of the Eastern Shore of Maryland, and Washington; surgeon in the Confederate service during the Civil War; died at his home in Washington, March 14, from heart disease, aged 68.

Hamilton Rickaby, M.D. New York University, New York City, 1867; a member of the staff of the Metropolitan and Hahnemann hospitals, New York City, and for twenty years superintendent of the West Homeopathic Dispensary; died at his home in New York City, March 10, aged 69.

Hannah T. Croasdale, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1870; professor and emeritus professor of gynecology in her alma mater; for many years a practitioner of Philadelphia; died at the home of her daughter in Syracuse, N. Y., March 15, aged 77.

William E. Sprenger, M.D. University of Basle, Switzerland, 1871; surgeon in the German service during the Franco-Prussian war; a specialist in *x*-ray work; died at the home of his daughter in New Haven, Conn., March 13, from the effects of an *x*-ray burn, aged 63.

Albert Merrill Webster, M.D. Cleveland (Ohio) College of Physicians and Surgeons, 1900; a member of the Ohio State Medical Association; an enthusiastic athlete and well-known practitioner of Lorain; died at his home, March 14, from pneumonia, aged 37.

Oscar Redd Colbert, M.D. College of Physicians and Surgeons, Baltimore, 1885; a member of the Medical Society of Virginia, and a practitioner and dentist of Warrenton; died at his home, February 1, from epithelioma of the ear and jaw, aged 68.

David Thomas Bowden, M.D. University of Maryland, Baltimore, 1889; a member of the American Medical Association; chief surgeon of the Orthopedic Department of the Paterson (N. J.) General Hospital; died at his home in Paterson, March 18, aged 46.

Mark Lyton Pettit, M.D. Cooper Medical College, San Francisco, 1893; of Visalia; a member of the Medical Society of the State of California; died in St. Francis Hospital, San Francisco, March 12, from acute ascending diffuse myelitis, aged 44.

Alexander Perry, M.D. College of Physicians and Surgeons, New York City, 1844; a veteran of the Mexican War and formerly collector of the port of La Paz, Cal.; died at his home in New York City, March 13, from senile debility, aged 88.

William C. Eichler, M.D. Minneapolis College of Physicians and Surgeons, 1908; formerly of St. Paul, and Underwood, N. Dak., who recently established an office at Fergus Falls, Minn., died in that city, March 11, from pneumonia, aged 26.

Jessup David Bell, M.D. Pulte Medical College, Cincinnati, 1893; a member of the American Medical Association; died at his home in San Antonio, Tex., March 10, from pneumonia, contracted while in Mexico three weeks before, aged 44.

David C. Bowen, M.D. University of Louisville, Ky., 1889; a member of the Kentucky State Medical Association and Muldraugh Hill Medical Society; died at his home in Elizabethtown, March 16, from tuberculosis, aged 51.

Nelson Scott Blue, M.D. Medical College of Ohio, Cincinnati, 1891; of Defiance, O.; a member of the Ohio State Medical Association; died at his old home in Ayersville, O., March 13, from cerebral hemorrhage, aged 50.

Ellen Marie Oviatt, M.D. Hahnemann Medical College, Chicago, 1896; Gross Medical College, Denver, Colo., 1902; for two years a practitioner of Benton Harbor, Mich., and thereafter engaged in the practice of medicine, and sociologic and psychologic research in Denver; died in Okolona, Ark., March 11, from nephritis, aged 39.

Charles F. Stewart, M.D. Eclectic Medical Institute, Cincinnati, 1864; acting assistant surgeon, U. S. Army throughout the Civil War; superintendent of the Nebraska Hospital for the Insane for five years; a pioneer practitioner of Nemaha County; died at his home in South Auburn, March 15, aged 79.

Sidney Franklin Rogers, M.D. Albany (N. Y.) Medical College, 1882; for one term coroner of Rensselaer County, N. Y.; a practitioner of Troy till 1897; died at his home in Cohoes, March 7, from nephritis, aged 64.

Edwin Solomon Breyfogle, M.D. Hahnemann Medical College, Philadelphia, 1875; formerly of Columbus, O., but for several years a practitioner of San Francisco; died at his home in Palo Alto, Cal., March 14, aged 57.

John Miller Kennedy, M.D. College of Physicians and Surgeons, New York City, 1887; of New York City; died in Bellevue Hospital, March 11, from pneumonia following an attack of influenza, aged 49.

George Stanton Hamilton, M.D. Jefferson Medical College, 1851; one of the most prominent practitioners of Culpeper County, Va.; died at his home in Lakota, March 3, from cerebral hemorrhage, aged 82.

Charles Frederic Patton, M.D. Trinity Medical College, Toronto, Ont., 1873; for thirty-five years a practitioner of Bannister, Mich.; died at the home of his brother in Detroit, March 12, from carcinoma.

William Vincent Dee, M.D., Long Island College Hospital, Brooklyn, 1893; a member of the Medical Society of the State of New York; died suddenly at his home in Brooklyn, from myocarditis, aged 47.

Charles Perry Martin, M.D. University Medical College of Kansas City, Mo., 1883; of Jameson, Mo.; died in Ensworth Hospital, St. Joseph, March 15, four days after an operation for appendicitis, aged 50.

Augustus Harper Raiguel Guiley, M.D. Jefferson Medical College, 1877; a member of the Medical Society of the State of Pennsylvania; died at his home in Easton, March 9, from heart disease, aged 56.

George A. Harker, M.D. University of California, San Francisco, 1904; a member of the American Medical Association; died at his home in Mill Valley, Cal., March 9, from heart disease, aged 35.

Hans Christian Johnson, M.D. University of Missouri, Columbia, 1898; of Meadville; a member of the American Medical Association; died in a sanatorium in Santa Fe, N. Mex., March 12, aged 35.

Thomas Gilluly, M.D. Rush Medical College, 1871; a member of the State Medical Society of Wisconsin; died at his home in Union Center, March 6, from cerebral hemorrhage, aged 71.

Anna Ruth Copeland, M.D. Baltimore University School of Medicine, 1903; a practitioner of medicine and dentistry of Baltimore; died in a sanatorium in that city, March 9, aged 28.

William H. Galbreth, M.D. University of Louisville, Ky., 1893; a member of the American Medical Association; died at his home in Rockfield, Ind., March 12, from carcinoma, aged 44.

Joseph William Perry, M.D. Jefferson Medical College, 1856; formerly a practitioner of Texas; died at his home in Pauls Valley, Okla., February 15, from senile debility, aged 81.

Edward D. Thomas, M.D. Starling Medical College, Columbus, O., 1874; died at his home in Garnett, Kan., March 12, from tuberculosis, aged 66.

Mary Frances Butterworth, M.D. Tufts College Medical School, Boston, 1895; died at her home in Revere, Mass., March 14, aged 66.

William I. Rouse, M.D. Jefferson Medical College, 1909; of Ogontz, Pa.; died at Stamford, Conn., March 10, from pneumonia, aged 27.

John W. Valpey (license, Illinois, years of practice, 1880); died at his home in Chicago, March 13, from senile debility, aged 79.

David B. Plumlee, M.D. University of Nashville, Tenn., 1886; died at his home in Butlers Landing, Tenn., March 9, aged 62.

Francis P. Langfitt (license, Allegheny County, Pa., 1881); died at his home in Pittsburgh, March 10.

The Propaganda for Reform

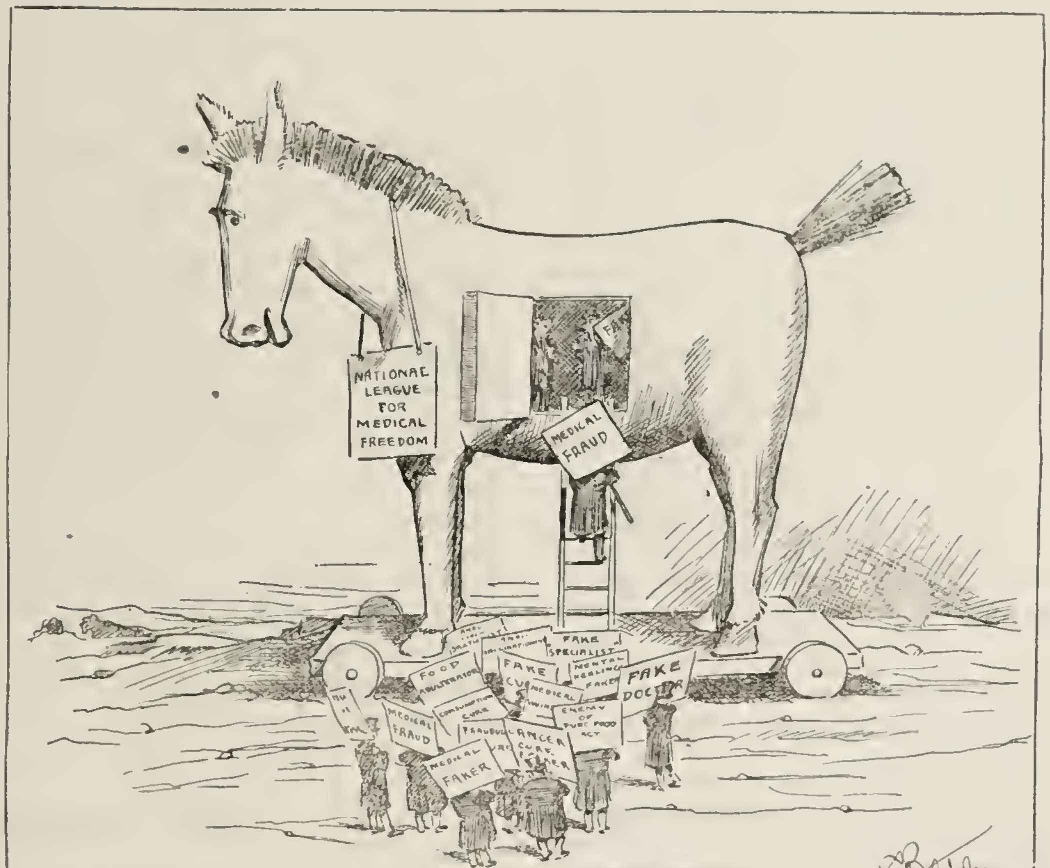
In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

NATURE'S CREATION

A Peep Behind the Scenes

"When thieves fall out, honest men get their dues"; when "patent medicine" fakers fall out, the general public is given an insight into this disreputable business which is instructive if not edifying. Nature's Creation is a cruel consumption cure fraud that has been exposed at various times[1] in The Journal. It was first sold, as will be remembered, as a cure for syphilis; later its commercial possibilities as a "consumption cure" seemed to have occurred to the exploiters of this humbug and it blossomed forth in its new guise. It is claimed that Nature's Creation was "discovered" by a Mrs. J. M. Reynolds. It was first put on the market—as a syphilis cure—by the H. W. Campbell Co. of Chicago. Later, the concern was transferred to Columbus, O., and the name of the company changed to Nature's Creation Co. At this time the metamorphosis of Nature's Creation from a syphilis "cure" to a consumption "cure" occurred.

The stuff was analyzed in the Association's laboratory and while the advertisements stated that it was "made entirely from vegetable matter," it was found to be essentially a solution of potassium iodid in water and alcohol with small quantities of inorganic salts and flavoring matter with vegetable extractives. It was sold at $5 a bottle.



AMERICAN MEDICAL ASSOCIATION CARTOON SERIES MORE SPARTAN GENEROSITY

The motive power behind the Nature's Creation concern was H. W. Campbell; Mrs. Reynolds was largely a figurehead. Now it seems that this couple are no longer friends, for, two or three weeks ago, Campbell filed suit against Mrs. Reynolds (who, by the way, is now a Mrs. Cohen) to recover $28,000 of which he alleges she has defrauded him.

The petition filed in this case is interesting. In it, Campbell declares under oath that Nature's Creation, which is sold at $5 for a twelve-ounce bottle, costs but 2 cents an ounce to make. This does not mean that Campbell's conscience is hurting him because the indigent consumptives and others who have bought this worthless stuff have been robbed! Not at all! He is merely angry because he considers that he has not received his full share of the "swag." It appears from the petition that Mrs. Cohen (Reynolds) has been "holding out" on Campbell. It seems, if we are to believe Campbell's sworn statement, that Mrs. Reynolds was telling fortunes in a Chicago basement when he "discovered" her. When these two decided to float Nature's Creation, Mrs. Reynolds, evidently believing that a man who would engage in such a disreputable business was not to be trusted, kept the secret of the "formula" of this potassium iodid mixture and charged Campbell 25 cents an ounce as the cost price of the ingredients; later she lowered the rate to 10 cents an ounce. But Campbell swears that the cost of making it has never been more than 2 cents an ounce or 24 cents a bottle.

Nor is this all. Campbell further complains that Mrs. Cohen (Reynolds) called a special meeting of the directors of the company and ousted him without cause from his position of secretary and treasurer. And, worse than that! Campbell, believing that the stock in the company had depreciated from par to 10 cents on the dollar, sold it at that rate when he had an opportunity, as he believed, to "get out from under." Having found that the stuff costs only 2 cents an ounce to make instead of 10 cents or 25 cents an ounce, Campbell realizes that the profits in this form of scoundrelism were much greater than he supposed and he is convinced that the stock was easily worth par and that in selling his shares for 10 cents on the dollar, he has lost thousands of dollars. Campbell is particularly mortified, moreover, to find—what he did not know at the time—that the individual to whom he sold his stock was Mrs. Cohen herself. In consequence of these alleged deceptions, Campbell claims that Mrs. Cohen owes him more than $28,000 and he is appealing to the courts in the hopes of getting it.

A sordid business? Yes, but the sale of a fraudulent consumption cure can scarcely be anything else. We can only express the hope that the publicity thus given to the details of the exploitation of this cruel fraud will prove the *coup de grâce* for Nature's Creation. We trust, too, that the courts will hold that Campbell, having been engaged in a disreputable and fraudulent business, cannot receive the protection of the law, but that he stands condemned as a self-confessed faker who has defrauded the helpless sick for his personal gain.

OBJECTIONABLE PROPRIETARY NAMES

The following circular letter is being sent out by the Council:

To Manufacturers of and Dealers in Medicinal Products:

Gentlemen:—The Council on Pharmacy and Chemistry of the American Medical Association, since its organization, has been obliged to refuse recognition to a number of otherwise unobjectionable preparations, because their names were considered detrimental to the best interests of the public and the medical profession. In the hope that in the future those who introduce new remedies may see their way clear to adopt names which will not be open to objection, the Council has decided to issue this explanatory statement to the manufacturers of medicinal substances.

The trade names of pharmaceutical preparations or mixtures should be so framed as to indicate the most potent ingredients. An article whose name gives a false impression in regard to its identity or origin or which is in other ways misleading would not be acceptable for New and Nonofficial Remedies. An article will not be acceptable if its name suggests to the laity the diseases or conditions in which it is said to be indicated.

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[1] The Journal A. M. A., March 5, 1910, and Feb. 4, 1911. Reprinted in pamphlet form, price 4 cents; also appears in "Nostrums and Quackery."

After Dec. 31, 1912, recognition will be refused also to names so framed as to indicate even to physicians the diseases or conditions for which the article is to be used. The Council will make no objection to articles submitted to it before Dec. 31, 1912, on the ground that the name is suggestive to the physician, provided that the name is already in use at the time of submission and also provided that the name is so framed as not to be liable, in the judgment of the Council, to lead to self-medication on the part of the public.

Medicine, in common with other branches of knowledge, requires that the subjects with which it deals be provided with a rational, descriptive nomenclature. The Council holds it desirable and important not only that the medicaments official in the pharmacopeias should be provided with scientific names, but that those of a proprietary character should also have names which are descriptive of their composition. Further, the Council believes that the interests of both the manufacturer and the consumer, the physician and his patient, can be sufficiently safeguarded if to the descriptive name of an article there be appended a distinctive word, syllable, initial or sign that shall identify its manufacturer. In substantiation of this it may be stated that such designations have permitted manufacturers to build up almost world-wide reputations for their products. Reference need only be made to chloral hydrate, Schering; chloroform, Squibb; phenacetin, Bayer; quinin sulphate, P.W.R.; sodium salicylate, Merck, etc. In view of these considerations, the Council offers its endorsement and cooperation to any effective movement toward the establishment of a rational, and if possible, international system for the naming of medicaments.

However, the Council recognizes that trade conditions make difficult or infeasible, at this time, the adoption of such a rational system of nomenclature. But, on the other hand, experience has shown it possible to give names to new remedies which at least shall indicate their principal constituents. Thus among the articles described in "New and Nonofficial Remedies" appear such names as arsenoferratin, an organic compound of iron and arsenic; bornyval, a valeric acid ester of borneol; brovalol, a bornyl bromvalerate; carbosant, a carbonate of santalol; guaiacodein, a compound of codein and guaiacol; tannismuth, a tannate of bismuth. Therefore the Council recommends that all remedies be given names which shall at least be suggestive of their most characteristic or potent constituents. The Council gives the fullest recognition to the principle that a discoverer has the right to name his discovery and interposes no restriction in the naming of new substances, provided that such names shall not be detrimental to the progress of medicine and thereby work against the welfare and health of the people.

Names which are suggestive of the diseases or conditions in which the remedy is said to be indicated are objectionable because the layman becomes familiar with the names of such remedies and their uses through physicians' prescriptions and is thus led to use them in indiscriminate and harmful self-medication. The many cases of harmful self-medication with such remedies as migrainin, diabetin, purgen, antikamnia, antitussin, which preparations at first were exploited to medical men only, are sufficient to show that such names should be forbidden.

But even if the name of a remedy does not disclose its proposed use to the laity, it is still objectionable if it suggests to the medical man the diseases or conditions in which the remedy is to be used. This for the reason that the thoughtless physician will base his use of the remedy on the name without giving due consideration to the condition and symptoms of the patient.

Recognizing that some therapeutically suggestive names have been applied without any intention of appealing to the laity thereby, and further recognizing the difficulty of changing a name once established, the Council has decided to make no objection to names that are now in use if they are therapeutically suggestive to physicians only. Such articles, if on the market and submitted prior to Dec. 31, 1912, will be considered acceptable in so far as their names are concerned.

The following rules apply to the names of articles proposed for inclusion with New and Nonofficial Remedies:

1. The names of pharmaceutical preparations or mixtures must indicate the most potent ingredients.
2. Names which are in any way misleading will not be accepted.
3. Names which suggest diseases, pathologic conditions, or therapeutic conditions will not be admitted, except as provided under 4.
4. An exception is made for established names of synthetic substances, active principles, and other new substances: For these if submitted prior to Dec. 31, 1912, therapeutically suggestive names may be admitted, provided that the name has been in actual use prior to Dec. 31, 1912, and provided further, that the name is not likely to foster self-medication by the laity.

W. A. Puckner, Secretary.

WINSLOW'S SOOTHING SYRUP BARRED IN AUSTRALIA

The board of health of New South Wales has prohibited the advertising and sale in that commonwealth of Mrs. Winslow's Soothing Syrup, as being injurious to life. The decision has been advertised in the Sydney papers so that the public, the newspapers, the druggists and the manufacturers may know what has been done. We are optimistic enough to believe that the time will come, in a not far distant future, when a similar prohibition for this and similar dangerous nostrums will be operative in this country. The indiscriminate sale of such dangerous opium-laden products is a disgrace to any civilized community that permits it.

INSTABILITY OF DIASTASE PREPARATIONS

In a discussion on malt preparations at the November meeting of the Société de Thérapeutique de Paris,[1] Chevalier reports that the diastasic power of malt, of malt extracts and of malt flours deteriorates rapidly. The most durable preparations are the dry extracts or pastes which have been prepared at low temperatures. Malt-extracts should not be employed in making gluten bread, since whatever diastasic power may be present tends to convert the starches into soluble sugars. Linossier confirms these statements and states further that he has examined a number of pharmaceutic specialties which are claimed to contain malt, pepsin, pancreatin, etc., and that most of them possessed no diastasic power whatever. In others the hydrolyzing power was so attenuated as to be practically *nil*. He calls attention to the necessity of using only recently-made malt preparations in therapeutics if the enzyme action be desired, as at best these preparations are not very stable.

Correspondence

A Protest Against Dr. Wiley's Resignation

To the Editor:—The forced resignation of H. W. Wiley calls for energetic and universal protests from the medical profession. The investigation of the Moss committee shows precisely where the focus of iniquity is located and whence is spread the infectious virus which permeates the entire department under which Wiley worked. This department is in need of complete regeneration from top to bottom. This will be done only through force of enlightened public opinion.

Every physician should send a protest to the senators from his state and the congressman from his district, stating briefly and clearly his position as regards the proper enforcement of the pure food and drugs law, and endorse in positive terms the work done by H. W. Wiley. Our county societies should bestir themselves and pass resolutions to the same effect, copies of which should be forwarded to the President and to every United States senator and congressman.

This work should be done at once while the matter is fresh in the public mind. Let The Journal continue its good work and let us all cooperate with it and all other journals and organizations which favor this nation-wide endorsement for sanitary foods and pure honest drugs.—Julius Noer, Stoughton, Wis.

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[1] Jour. de pharm. et de chim., 1912, v, 92.

A Nomination of a Successor to Dr. Wiley: Professor Ladd of North Dakota

To the Editor:—Having read, like thousands of others, your editorials on Dr. Wiley, I take the liberty of suggesting that North Dakota has a man who has taught and enforced rules of sanitation for shops, stores and transportation as I have not seen them elsewhere and has made the state of North Dakota particularly hot for fraudulent food and drug dealers and manufacturers. That man is Prof. E. F. Ladd, food commissioner of North Dakota. After nine years' residence in the state, during which the monthly bulletin of his department (a regular treat) kept me as well as the rest of the medical profession and the people at large posted, I feel that he stands at the head of his class as a pure food expert and that there are few in that class.

All forms of food, drugs and beverages must be and are correctly labeled in North Dakota or they become a source of trouble to their venders as well as manufacturers; and "North Dakota Series" is the label found on more than one brand of goods that show the manufacturers had to obey the laws of that state and that they do not make a general practice of producing the same product for shipment to other states.

This is surely the time to turn the lime-light on Prof. E. F. Ladd. For indefatigable energy, implacable courage and honesty, aside from his technical ability and executive experience he is certainly, if chosen, the man to continue the good work of Dr. Wiley. A fearless exponent of what is right, he is a regular Nemesis to misbranders and adulterators of foods.

M. A. Lee, Superior, Wis.

After-Effects of Athletics

To the Editor:—As an old hygienist, I was delighted with your editorial "Muscular Development and Physical Exercise" in The Journal (March 9, p. 703). People are beginning to pay some attention to what concerns them most, viz., their health; and scientific publications, not to mention the daily papers, are cheerfully giving more and more space to this, the most important of all topics. I want to commend highly your demand that the physical education of children shall be undertaken and carried out with the same care and attention that is devoted to the intellectual side of their development. Perhaps we shall hark back to the fine old formula by which the ancient Greeks regulated the education of children. They divided the time spent on it each day into three equal periods, which were taken up with study, exercise (including games and contests) and music, with the result that they produced men and women whose equals physically and intellectually the world has not seen since. While I heartily approve of the editorial and the fair and scientific spirit in which it was written, I want to call attention to one small portion of it which may mislead some of your readers. I refer to the reference to the "report of the Surgeon-General of the Army" (which, by the way, is an evident misprint, the report of the Surgeon-General of the Navy being meant). I read this report with marked disapproval some time ago and am sorry to note that so excellent a journal as yours appears to have been misled by the statements it contained. As I remember General Stokes' report it was a case of special pleading and presentation of one side only in support of his presumed prejudice against athletic sports. For instance, the report says "The prolonged rigorous course of physical exercises necessary to excellence in physical sports is believed to be dangerous in its after-effects on those who indulge." Such statements are not proof of anything; what is wanted is the truth proved and established by scientifically ascertained facts. The report goes on and gives some figures showing the disabilities, deaths, retirements and so on, of officers who had indulged in athletic sports while at the naval academy. These are not contrasted with similar figures deduced from the records of non-athletes, at least not in the extracts of the report which I have; but even if the subsequent life-histories of the non-athletes had been given and had proved, in some or all respects, more favorable than those of the athletes, they would by no means prove anything in regard to the desirability of athletic exercise for students, unless we know the subsequent habits of both classes of men. Many ex-athletes possessed of what is called "the insolence of health" fall early victims to diabetes, Bright's disease, arteriosclerosis and the other diseases of gluttony, intemperance and venery.

In my ten years in the Army I found that the strong and athletic officers were more apt to be dissipated than their weaker and more domestically inclined colleagues. The dull routine of garrison life was more irksome to the strong and enterprising than to the weak and undeveloped. It was commonly understood that the best fighters and most gallant officers were apt to be the freest livers and the hardest drinkers. The dull life on shipboard must have a similar effect, and the athletic men are perhaps the more dissipated. No one can keep well long and lead an improper life. Consequently, until we know what sort of men the Surgeon-General of the Navy is writing about, his report is of little scientific value.

The reports of Dr. Anderson of Yale and Dr. Sargent of Harvard tell quite a different story. College graduates being, let us assume, less prone to alcohol and venery in excess than naval officers as a class, are distinctly benefited in after life by athletic exercises in college as the reports of their physical directors show. I am not defending athletic contests. I am merely arguing from what I know and have seen to be true. If football and rowing are hurting our young men and cutting them off prematurely let these sports be stopped at once. But let us not judge such an important question on hearsay or one-sided testimony.

Indeed, the obvious means of settling some of these questions at the present moment is a thorough, careful and unbiased investigation of the entire life-history of athletes of all sorts and degrees. In this way probably the questions which still harass us regarding the ultimate fate of the strong youth could be solved and certain definite rules of life and conduct, not to mention regulations for the physical education of children, might be evolved.

Is not this matter quite as important and quite as worthy of the attention of an enlightened people as investigations of the money trust, the boll weevil, hog cholera and similar topics on which our government cheerfully spends millions whenever sufficiently urged to do so?

Richard Cole Newton, Montclair, N. J.

Sunlight in Therapeutics

To the Editor:—It will be remembered that some ten years ago the Boulder Lodge Sanitarium followed up Finsen's work with sunlight and, particularly, demonstrated the great depths to which the chemical rays of light could be made to penetrate. Subsequently we used the light in the treatment of pulmonary tuberculosis. In following Finsen's experiments some peculiar effects have been noted on the properties of sunlight to which attention has not yet been called.

Direct sunlight falling on the nude body produces erythema solare, marked by extreme redness, swelling and great tenderness, with subsequent peeling of the skin. There is some tendency to the formation of blisters on the surface. Sunlight, concentrated by large reflecting mirrors and passed through blue glass, thus securing the maximum effect of the chemical rays, shows a very great tendency to blister the skin, but there is little redness and swelling and practically no pain. Focusing direct sunlight through a convex lens of plain glass produces destruction of the skin and, if used with great intensity, gases form beneath the outer layers of the skin and small explosions occur. This method of using is very efficacious in the removal of warts, superficial moles and small non-malignant growths.

If the light be reflected by a concave mirror and thus be focused, the formation of gases has not been noted, even though used with great intensity. Blistering is thus readily produced. If, after the light is focused in either of the two ways last mentioned, it be passed through blue glass before falling on the skin, blistering is produced without destruction of the deeper layers of the skin. Formerly we used these various methods in the treatment of lupus and other lesions of the skin but they have all given place to the following: At one time, being unable to obtain plain blue glass in the local market, we substituted a wavy, opalescent glass instead, and we found that after the sunlight was reflected with a large condensing mirror, 10 feet in diameter, and passed through the opalescent glass, neither blistering nor destruction of the skin took place, but a blanching, as in frozen specimens, occurred. The light used in this manner is very effective in lupus and in vascular nevi, even of very large extent.

Just what the properties of the light may be that effect these various results has not been determined. It would appear, however, that some of the rays are absorbed by the reflecting mirror and others by the variously colored glasses. The wavy glass transmits the light in an irregular manner and produces results widely different, and more effective, in the class of cases mentioned, from the glass with even surface.

J. W. Kime, Fort Dodge, Ia.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SELF-TREATMENT NOT WISE

To the Editor:—Please inform me, under Queries and Minor Notes, as to the proper course to follow. Having had hydrocele for the past ten years, and having had this tapped several times, I was operated on and the sac removed. Before the operation the testicle was swollen to twice its normal size. An abscess of the testicle was found at the time of the operation and was removed, as I desired to take a chance of its turning out all right. Since the operation the swelling has gone down somewhat, but there are severe pains in it at times. Is there any course open now to bring it to its normal condition without loss of the testicle?

Kindly publish formula to apply on same in the reduction of the swollen testicle. Not being one of the profession and not knowing the medical terms to use herein, but being a constant reader of The Journal, I take this liberty to gain such knowledge for my own good. I have gone to considerable expense with an operation and hospital fees and do not care to seek the advice of other physicians. I thought that I might obtain such information through your valuable paper. I have no fault to find with my physician in this case, though I do not believe each one would treat the same case in the same way. A. L. X.

Answer.—It is not the purpose of our Queries and Minor Notes Department to take the place of a physician in his dealing with patients. When we get letters such as the above the writer is usually advised to consult a physician. Our answers are often couched in general terms, so that they may be of help to others as well as the one who writes, and almost any advice that we give needs to be interpreted, according to the local conditions, by the physician in charge of the case. We would not want to recommend anything to be used in the treatment by a patient, because a treatment which would be advisable in one case would be unsafe or unadvisable in another.

TREATMENT OF OXYURIS VERMICULARIS—DANGERS OF PHENOL ENEMAS

To the Editor:—Please give me information in regard to the treatment, prophylactic and curative, for *Oxyuris vermicularis*. The case in mind was very persistent and resisted, for ten days, quassia enemas, santonin by mouth, saline and turpentine enemas. What percentage of phenol for enemas would you advise? X. Y. Z.

Answer.—1. Prophylaxis: This worm lives in the large intestine, sometimes as high as the cecum, where the females probably become impregnated. Before laying their eggs, however, they descend to the rectum and emerge from the anus and deposit their eggs just outside the margin of the anus. By the irritation caused by the presence of the worms, itching and scratching are excited and the patient soils his fingers with material containing the ova. These ova, in the case of children or uncleanly adults, are transferred to the mouth and the patient is in this way self-infected. Of course, occasional infection from one patient to another may occur. Eggs may also reach the mouth on vegetables and fruit or in drinking-water. Prophylaxis therefore requires cleanliness of the perianal region and scrupulous care as to the contamination of the food or mouth after touching the irritated parts. Unguentum hydrargyri may be applied to the region of the anus. Or it may be washed with a 1-to-10,000 bichlorid solution.

2. The treatment consists in the use of santonin to poison the worms in the intestine and calomel or a saline to secure the evacuation of the worms. Locally an enema of salt solution, or of quassia infusion should be used.

3. The use of phenol in enemas is not advisable. Repeated cases of serious and even fatal poisoning have resulted from the use of phenol in this way. Convulsions and speedy death result from strong solutions but the dilute solutions are also dangerous, as the drug is rapidly absorbed and may lead to serious systemic poisoning. A tablespoonful of a 5 per cent. solution would contain 0.75 gm., 12 grains, which is nearly four times the dose that has proved fatal to a child of 8.

USE OF LATIN IN MEDICAL WRITING ABROAD

To the Editor:—In The Journal, March 2, p. 674, is the title "Attempted Abortion. (Tentamen abortus provocandi deficiente graviditate.) F. v. Neugebauer" (Warsaw). I should be much interested to know: 1. Is the whole article in Latin? 2. Is Latin frequently used to-day abroad in certain universities (or towns or specialties)? H. Gray, Boston.

Answer.—1. No. Merely the title is in Latin; the article is in German.

2. Not in the medical press or publications except occasionally in titles and then mostly by writers in eastern Europe. The Latin anatomic terms for muscles, bones, nerves, etc., are universally used in medical literature abroad, and this is a great aid in eliminating chance for error in translating from the various European languages. G. Baccelli, the Italian medical statesman, professor of clinical medicine at the University of Rome, has occasionally written an address in Latin for presentation at international medical congresses, and articles for publication in a German periodical, as at the time Koch's sixtieth birthday was being celebrated.

ALCOHOLISM AND SURGERY

To the Editor:—In reply to J. H. Bush in Queries and Minor Notes (The Journal, March 9, p. 722), I would say that I did a suprapubic prostatectomy, under ether, on a man, aged 58, who had been "in the gutter" for eight or ten days out of every sixty, for years, ten to my knowledge, and who, after his recovery, was nauseated by the smell of whisky and could not be induced to take it. He was under observation for two years following his operation. I attributed his reformation to the ether debauch.

Frank B. Kistner, Portland, Ore.

The Public Service

Medical Department, U. S. Army

Changes for the week ended March 23, 1912.

Powell, William E., captain, March 13, designated for duty with troops to and at the Yosemite National Park, Wyoming, during the season.

Manly, Clarence J., major, March 16, sick leave of absence extended thirty days.

Wolven, F. Homer, dental surgeon, March 10, reported for temporary duty at Fort Stevens, Ore.

Davis, William R., captain, March 18, left West Point, N. Y., on thirty days' leave of absence.

Johnstone, E. K., M.R.C., March 15, reported arrival at San Francisco from Schofield Barracks, H. T., on thirty days' leave of absence.

Stone, Frank P., dental surgeon, March 20, left Fort McPherson, Ga., en route to Fort Morgan, Ala., for temporary duty.

Medical Corps, U. S. Navy

Changes for the week ended March 23, 1912.

Valz, E. V., P. A. surgeon, detached from the *South Dakota* and ordered to the *West Virginia*.

Allen, A. H., P. A. surgeon, detached from the *Washington* and ordered to the *Hannibal*.

Stuart, D. D. V., asst. surgeon, detached from the *Hannibal* and ordered to the naval hospital, Washington, D. C., for treatment.

Cuthbertson, Roy, asst. surgeon, detached from the *West Virginia* and ordered to the *South Dakota*.

Valz, E. V., P. A. surgeon, detached from the *West Virginia* and ordered to the *St. Louis*.

Halton, E. P., asst. surgeon, detached from the naval station, Marianas, and ordered to Las Animas hospital for treatment.

Cuthbertson, Roy, asst. surgeon, orders of March 8 revoked.

Butts, Heber, P. A. surgeon, detached from the naval medical school and ordered to the naval hospital, Canacao, P. I.

Wright, B. L., surgeon, detached from the *Nebraska* and ordered to the *Georgia*.

Fiske, C. N., surgeon, detached from the *Georgia* and ordered to the *Nebraska*.

Murphy, J. F., surgeon, commissioned surgeon from July, 1911.

Chambers, William, P. A. surgeon, detached from the *Glacier* and ordered home to await orders.

George, C. M., asst. surgeon, detached from the naval medical school, Washington, D. C., and ordered to the *Glacier*.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

COMBINED OFFICE AND RESIDENCE AN IDEAL PLAN

C. W. Bales, M.D.
KELSO, WASH.

Complying with the request of Dr. H. M. Ferguson[1] for plans for residence and office combined, I submit a plan of the ground floor of my new property which I have occupied for about eighteen months and which, as far as my experience goes, can hardly be improved on. The residence portion is 26 by 32 feet, the office rooms each being 14 feet square, the drug room and phone booth each 4 feet, the rear porch 7 feet wide, front office porch 5 feet and the front porch of residence 8 feet. After an experience of twelve years as a physician in a small country town I consider the combined office and residence ideal.

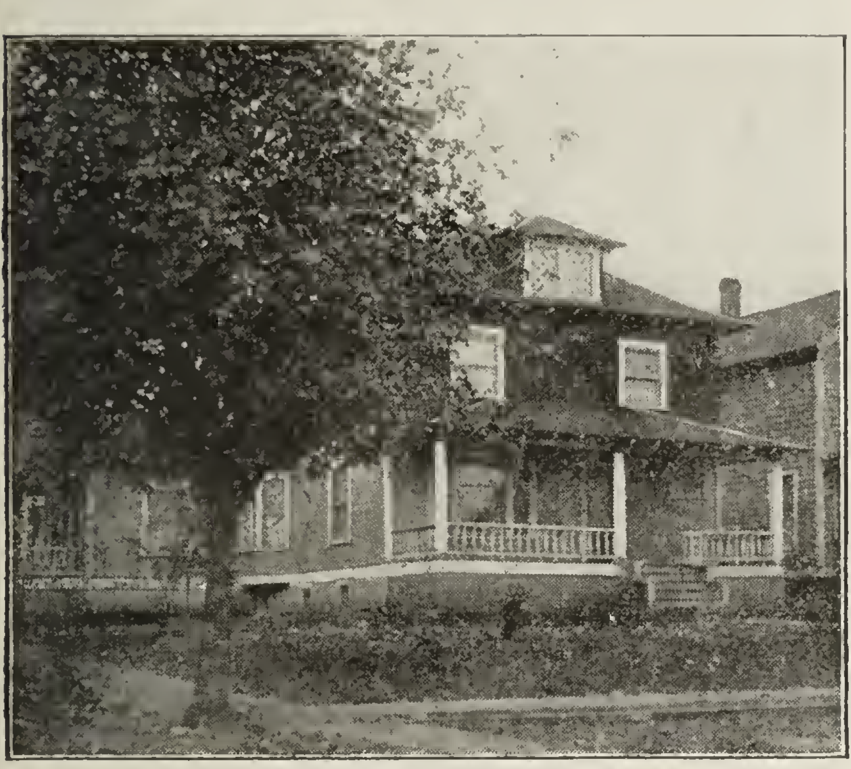

Fig. 1.—Combined office and residence of Dr. C. W. Bales, Kelso, Wash.

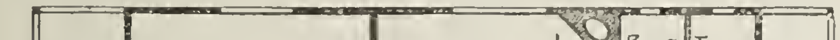

Fig. 2.—Plan of ground floor.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Eighth Month—Second Weekly Meeting

ACUTE GASTRITIS

PATHOLOGY: (a) Catarrhal gastritis. (b) Ulcerative gastritis. (c) Membranous gastritis. (d) Corrosive gastritis.

SYMPTOMS: Usual onset. Persistence of symptoms. Physical examination. Follicular form marked by hemorrhage. Corrosive gastritis. Mouth and pharynx, pain, vomiting, collapse, intestinal symptoms. Prognosis.

TREATMENT: Gastric lavage. Medicinal treatment. Special indications in corrosive gastritis. Avoid lavage, use antidotes, bland drinks, opium.

CHRONIC GASTRIC INDIGESTION

SYMPTOMS: In Infants: Examination of stomach contents; mucus, reaction, rennet, pepsin, hydrochloric acid, fatty acids, motor function. Vomiting constant symptom; time, vomitus. Bowels. General symptoms. Course of disease.

In Older Children: Gastric and intestinal symptoms. General symptoms.

TREATMENT: Hygienic. Stomach washing; technic, results accomplished. Dietetic; wet nurse, modified milk,[1] diet of older children.

ACUTE INTESTINAL INDIGESTION

SYMPTOMS: In infants and older children. Pain, tympanites, diarrhea, constitutional symptoms. Stools: number, changes in color and character; reaction, bacteria. Course of disease.

TREATMENT: (a) Elimination. Therapeutic action of calomel, castor oil. (b) Rest. Dover's powder. (c) Dietetic.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, April 1-2. Sec., Dr. Ancil Martin.

CALIFORNIA: San Francisco, April 2. Sec., Dr. Charles L. Tisdale, 929 Butler Building.

COLORADO: State Capitol, Denver, April 2. Sec., Dr. David A. Strickler, 612 Empire Building.

IDAHO: Boise, April 2-3. Sec., Dr. O. J. Allen, Bellevue.

ILLINOIS: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

MINNESOTA: State University, Minneapolis, April 2. Sec., Dr. W. S. Fullerton, 248 Lowry Building, St. Paul.

MONTANA: The Capitol, Helena, April 3. Sec., Dr. W. C. Riddell.

NEW MEXICO: Santa Fé, April 8-9. Sec., Dr. J. A. Massie.

OKLAHOMA: Oklahoma City, April 9-11. Sec., Dr. John W. Duke, Guthrie.

RHODE ISLAND: Room 315, State House, Providence, April 4-5. Sec., Dr. Gardner T. Swarts, State House.

UTAH: County Building, Salt Lake City, April 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.

WEST VIRGINIA: Parkersburg, W. Va., April 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

Kansas February Report

Dr. H. A. Dykes, secretary of the Kansas Board of Medical Registration and Examination, reports the written examination held at Topeka, Feb. 13, 1912. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 9, of whom 3 passed and 6 failed. Four candidates were licensed through reciprocity. The following colleges were represented:

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[1] THE JOURNAL, Oct. 21, 1911, p. 1386; see also articles, with plans and views of houses, in THE JOURNAL, Feb. 10, 1912, p. 431; March 9, 1912, p. 728, and also next week, April 6, in the Automobile Section, pages 1055 to 1057

[1] Gilbert: Medical Record, Oct. 22, 1906. McAlister: Medical Record, July 11, 1908. Hare: Therapeutic Gazette, February and August, 1908. Freeman: THE JOURNAL A. M. A., Nov. 23, 1907. Clark: Am. Jour. Med. Sciences, June, 1909.

PASSED

College	Year Grad.	Per Cent.
Rush Medical College	(1911)	81
Kansas Medical College	(1910)	79
Medico-Chirurgical College, Philadelphia	(1901)	75

FAILED

University of Kansas	(1912)	..
Tufts College Medical School	(1907)	..
St. Louis College of Physicians and Surgeons	(1911, 2)	..
University of Tennessee	(1908, 2)	..

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern University Medical School	(1905)	Illinois
Kentucky School of Medicine	(1878)	Indiana
University of Maryland	(1911)	Nebraska
Central Medical College, St. Joseph	(1896)	Missouri

North Dakota January Report

Dr. G. M. Williamson, secretary of the North Dakota State Board of Medical Examiners, reports the written examination held at Grand Forks, January 2-5, 1912. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 12, of whom 9 passed and 3 failed. Three candidates were licensed through reciprocity and one was licensed under the exemption clause. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Louisville	(1910)	88.3
University of Minnesota, College of Med... (1895)*	(1911)	79.9
Washington University, St. Louis	(1894)	76.8
Creighton Medical College	(1911)	82.2
New York Homeo. Medical College and Hospital	(1910)	79.4, 81.5
Marquette University, Milwaukee	(1910)	75.5
McGill University, Montreal, Quebec	(1903)	77.5

FAILED

Hamline University	(1907)	73
Ensworth Medical College	(1909)	*
Cleveland Homeopathic Medical College	(1903)	52

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Chicago	(1910)	Illinois
Chicago College of Medicine and Surgery	(1910)	Illinois
University of Minnesota, College of Medicine	(1911)	Minnesota

EXEMPTION CLAUSE

College	Year Grad.
Northwestern University Medical School	(1907)

* No grade given.

The following questions were asked:

ANATOMY

Answer any eight questions. 1. Describe the muscles that move the eyeball, giving their nerve supply. 2. Give the origin, course and distribution of the left recurrent laryngeal nerve. 3. Describe the linea aspera and name the muscles which are attached to it. 4. Describe the internal annular ligament of the ankle. Name in order the structures which pass beneath it. 5. What are the relations of the brachial artery? Name its branches. 6. Name the structures that pass through the sphenoidal fissure, and the jugular foramen. 7. Name the structures severed in an amputation of the upper third of the leg. 8. Give the origin, course and distribution of the musculo-spiral nerve. 9. Give the origin and insertion of the following muscles: biceps, deltoid, supinator longus, gracilis and popliteus. 10. Describe the position and relations of the right kidney.

PATHOLOGY

1. What are the characters of the *Bacillus typhosus?* Describe how Widal's reaction should be carried out. 2. What are the causes of intestinal obstruction? Describe malignant stricture of the colon. 3. Describe minutely the changes which take place in the kidneys in chronic interstitial nephritis and give a short account of the disturbances of the circulation of the accompanying changes in other organs which are liable to follow. 4. What are the principal tumors of bone? Describe in detail the structure of a myeloid sarcoma. 5. What are the lesions commonly met with in gonorrhea? Give an account of the organisms which cause this disease.

CHEMISTRY

1. What is chemical affinity? 2. Define (a) gravitation, (b) porosity, (c) osmosis, (d) cohesion, (e) diffusion. 3. Mention the halogens. Why are they so called? Give the formula of three compounds each of which will contain a different halogen. 4. What is the range of the specific gravity of normal urine? State what diseased conditions produce (a) an abnormal high specific gravity of urine; (b) a low specific gravity of urine. 5. Give the chemical reaction of (a) saliva, (b) gastric juice, (c) tears, (d) bile, (e) blood. 6. Give the symbols of antimony, silver, gold, iron and zinc. 7. Give the treatment of carbolic acid poisoning. 8. Mention the secretion of the body that contains (a) cholesterin, (b) pepsin, (c) trypsin, (d) casein, (e) bilirubin.

PHYSIOLOGY

1. How would digestion be affected were the ductus communis choledochus obstructed? 2. Explain the physiologic circuit essential to a reflex action. 3. Describe (a) the normal pulse, (b) state the factors active in the maintenance and give average rate in infancy, youth and adult age. 4. What is the relation of the capillaries to the circulation? 5. Describe the process of osmosis and give an example in the human economy. 6. What kind of food would you recommend in cases of obesity? And why? 7. Name the ductless glands. 8. What is the effect of an excessive meat diet?

HISTOLOGY

1. Give the structure of mucous membrane. 2. Describe the uterus. 3. Give the histology of endothelium. State where it is found. 4. Give the structure of lung tissue. 5. Describe the development of bone.

BACTERIOLOGY

1. Give the classification of bacteria as to form, and give an example of each class. 2. Name five culture media. 3. What is phagocytosis? Is it of any importance? And why? 4. How do we determine whether a certain organism is or is not pathogenic? 5. Why do we stain bacteria? Describe a method of examining sputum supposed to contain tubercle bacilli.

PREVENTIVE MEDICINE

1. By what means may typhoid be contracted, and what methods would you adopt to prevent its spread? 2. Give your plan of handling a case of tuberculosis in a poor family. 3. What is impetigo, what parts are usually affected, and how prevent it? 4. Name all the diseases subject to quarantine in this state, and length of time for each. 5. What is ophthalmia neonatorum? What precautions must be taken in this disease? 6. How would you manage a case of diphtheria in a large family, with a view to prevent further cases developing? 7. Give the symptoms and diagnosis of small-pox, and your method of disinfecting the patient on his recovery and the house he occupied. 8. Differentiate between infectious and contagious diseases. How would you class pneumonia? What effect does cold have on the causation of this disease?

SURGERY

1. Give different varieties of dislocation of the hip-joint and describe method of reduction of one. How would you diagnose dislocation of the hip from fracture of the surgical neck of the femur? 2. Give differential diagnosis of gall-stones, duodenal ulcer, gastric ulcer and gastric cancer. 3. Give symptoms and treatment of acute osteomyelitis. 4. Describe your treatment of a case of talipes equinovarus in a patient 2 years of age. 5. What is cardiospasm? Give symptoms. How would you diagnose it from malignant disease? 6. Define hernia. Give different varieties of abdominal hernia. What are the symptoms of strangulation? 7. Give diagnostic points of hydrocele and describe fully different methods of treatment. 8. Define Meckel's diverticulum, Ludwig's angina, genu valgum, paraphimosis, embolus, thrombus.

MEDICAL JURISPRUDENCE

Answer five questions, including numbers 1 and 8. 1. How is the right acquired to practice medicine and surgery in this state? 2. Can an otherwise qualified physician without a license sue and recover for medical services, in this state? 3. What degree of skill is required by law of a medical practitioner? 4. State briefly the difference in appearance between wounds inflicted before and after death. 5. Being called on in court to testify as to whether a wound was self inflicted or not, state how you would form an opinion. 6. A new-born infant found dead in heap of ashes; ashes in esophagus and stomach; mouth and nose filled with mucus; lungs distended with air, emphysematous; subpleural ecchymoses; fluid blood in heart. Give opinion as to time and cause of death. 7. How would you determine in case of gunshot wound if weapon was discharged near at hand or at a distance? 8. Give a definition of insanity from a medicolegal view. 9. Define "delusion," "illusion," "hallucination." 10. When is the induction of abortion justifiable and legal?

TOXICOLOGY

Answer five questions, including number 1. 1. Define "toxicology," "poison," "antidote," "lethal." 2. What general principles would guide you in the professional care of a case of poisoning where the toxic agent was unknown? 3. In a criminal trial for murder by poisoning with hydrocyanic acid it was claimed by the defense that hydrocyanic acid could be formed in the stomach, post mortem, as a product of decomposition. What is your opinion of that theory? 4. What, in your opinion, is the best antidote against carbolic acid, and how would you expect it to act? 5. Called to see a patient who had swallowed water from a dish with "fly paper" in it, and who complained of severe burning pain in stomach, what would be your diagnosis and what would you do? 6. Differentiate between coma from opium poisoning and from apoplexy. 7. What official preparations of mercury would you class as poisons? 8. Describe a test for phosphorus in stomach contents. 9. What is the usual toxic agent in "knock-out drops" and what symptoms are produced by a lethal dose? 10. What is the usual duration of a fatal case of poisoning by aconite?

OBSTETRICS

Answer any eight questions. 1. Describe the fetal circulation. 2. Name the germ layers of the embryo and the tissues and organs formed from each. 3. Give the diagnosis of pregnancy. 4. Give the indications for and methods of terminating pregnancy prematurely. 5. Conduct a normal L. O. A. 6. Give the indications for the use of forceps. 7. Name and describe the germs causing puerperal infection. 8. Eclampsia: etiology, pathology and treatment. 9. Give the care of the new-born child. What is required by the law of our state of the physician attending a case of labor?

GYNECOLOGY AND DISEASES OF CHILDREN

1. Describe the operation of uterine curettage and give indications for its performance. 2. Gonorrheal vaginitis: give cause, symptoms, physical findings and treatment. 3. Name two operative procedures for correction of retrodisplacements of the uterus. Describe one of them. 4. What are the causes and symptoms of prolapsus uteri? What operative procedures may be performed to correct such condition? 5. Otitis media: give causes, symptoms, diagnosis and complications. What means would you employ to prevent com-

plications? 6. Define cholera infantum. Give etiology, course and prophylaxis. 7. Give the best substitute for mother's milk and describe in detail its administration.

PHYSICAL DIAGNOSIS

1. Give the etiology and the symptoms and describe briefly the course of an ordinary case of lobar pneumonia. 2. Give the etiology and the symptoms of acute glaucoma. 3. Name and describe briefly the standard methods used in physical diagnosis. 4. Describe the regions of the chest wall and name briefly the viscera within the contained areas. 5. Give the differential diagnosis between pericarditis and endocarditis. 6. Give the etiology, the symptoms and the physical findings of aortic regurgitation. 7. (a) Give the etiology and the symptoms of locomotor ataxia. (b) What would be your procedure for the prevention of this disease? 8. Give the differential diagnosis between multiple neuritis and poliomyelitis. 9. Give the etiology, the symptoms and the clinical findings of bronchial asthma. 10. Give the etiology, the stigmata and the accidents of hysteria.

Indiana January Report

Dr. W. T. Gott, secretary of the Indiana Board of Medical Registration and Examination, reports the written examination held at Indianapolis, January 9-11, 1912. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 23, of whom 20 passed, including 1 osteopath and 3 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Denver and Gross College of Medicine	(1904)	79.6
Northwestern University Medical School	(1911)	89.3
College of Physicians and Surgeons, Chicago	(1911)	90.8
Chicago College of Medicine and Surgery	(1911)	79.7
Medical College of Indiana	(1903)	87.1
Indiana University	(1911)	77.5
University of Louisville (1910) 79.6; (1911) 75, 76.4, 78.8.		
Harvard Medical School	(1910)	82.2
Beaumont Hospital Medical College	(1892)	89
Eclectic Medical College, Cincinnati	(1911)	78.1
Woman's Medical College of Pennsylvania	(1909)	90.6
Medico-Chirurgical College of Philadelphia	(1910)	80.9
Jefferson Medical College (1910) 91.5;	(1911)	89.7
Meharry Medical College	(1910)	78
Royal College of Phys. and Surgs., Dublin, Ireland	(1906)	85.6

FAILED

College	Year Grad.	Per Cent.
Central College of Physicians and Surgeons	(1905)	68.1
University of Louisville	(1908)	60.9
Louisville National Medical College	(1910)	64.6

Oklahoma January Report

Dr. John W. Duke, secretary of the Oklahoma State Board of Medical Examiners, reports the written examination held at Oklahoma City, January 9-11, 1912. The number of subjects examined in was 12; total number of questions asked, 100; percentage required to pass, 70. The total number of candidates examined was 24, of whom 15 passed and 9 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Southern University, Greensboro	(1874)	73.6
University of Arkansas	(1909)	77.9
Rush Medical College	(1901)	86
University of Louisville (1879) 79.8;	(1892)	74.6
Hospital College of Medicine, Louisville	(1896)	86
St. Louis College of Physicians and Surgeons	(1911)	75
University Medical College, Kansas City	(1906)	78.9
Long Island College Hospital	(1876)	76.8
New York University Medical College	(1889)	73.7
University of the South	(1909)	75.8
University of Nashville	(1910)	89
Memphis Hospital Medical College	(1911)	70.7, 76
University of Virginia	(1892)	93

FAILED

College	Year Grad.	Per Cent.
College of Physicians and Surgeons, Little Rock	(1911)	67.6
Howard University, Washington, D. C.	(1891)	67
Flint Medical College	(1910	*71
Meharry Medical College (1898) 65.9;	(1910)	*75
Memphis Hospital Medical College (1909) 60;	(1911)	61
University of West Tennessee (1907) 65.8;	(1911)	*70.5

* Fell below 50 per cent. in one or more branches.

Iowa January Reciprocity Report

Dr. Guilford H. Sumner, secretary of the Iowa State Board of Medical Examiners, reports that at the meeting held at Des Moines, January 10-12, 1912, twelve candidates were licensed through reciprocity. The following colleges were represented:

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Georgia	(1907)	Georgia
Rush Medical College	(1906)	Illinois
Hahnemann Med. College and Hospital, Chicago	(1911)	Illinois
Northwestern University Medical School	(1910)	Illinois
Chicago College of Medicine and Surgery (1907)	(1911)	Illinois
St. Louis University	(1906)	Illinois
Washington University, St. Louis	(1903)	Illinois
University Medical College, Kansas City	(1910)	Missouri
Barnes Medical College	(1909)	Illinois
St. Louis College of Physicians and Surgeons	(1908)	Missouri
University of Nebraska	(1911)	Nebraska

New Hampshire January Report

Mr. H. C. Morrison, Regent of the New Hampshire State Board of Medical Examiners, reports the written examination held at Concord, January 9-10, 1912. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 20, of whom 17 passed and 3 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Baltimore Medical College	(1908)	75
Medical School of Maine	(1910)	83
Harvard Medical School (1906) 85; (1907) 84;	(1910)	78
Tufts College Med. School (1908) 80; (1910) 78;	(1911)	86
Boston University (1899) 89;	(1911)	89
Woman's Medical College of Pennsylvania	(1903)	77
Jefferson Medical College	(1909)	80
University of Vermont (1908) 75;	(1910)	82
Laval University, Montreal, Quebec	(1911)	76
University of Athens, Greece (1908) 75;	(1911)	77

FAILED

College	Year Grad.	Per Cent.
Baltimore Medical College	(1909)	65
Dartmouth Medical School	(1910)	70
University of Athens, Greece	(1899)	60

South Dakota January Report

Dr. L. G. Hill, secretary of the South Dakota State Board of Medical Examiners, reports the written examination held at Huron, January 10-11. The number of subjects examined in was 13; total number of questions asked, 125; percentage required to pass, 75. The total number of candidates examined was 6, all of whom passed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Northwestern University Medical School	(1908)	86.3
Drake University	(1910)	82
Woman's Medical College of Baltimore	(1892)	75
University of Pennsylvania	(1902)	94.3
Hahnemann Med. Coll. and Hosp., Philadelphia	(1911)	87.3
Jefferson Medical College	(1901)	80.7

Vermont January Report

Dr. W. Scott Nay, secretary of the Vermont State Board of Medical Registration, reports the written examination held at Montpelier, January 9-11, 1912. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The number of candidates examined was 7, of whom 6 passed and 1 failed. The certificate of one candidate is withheld pending the securing of his diploma. Six candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Harvard Medical School	(1909)	89
Columbia University, College of Phys. and Surgs.	(1907)	88.7
Medico-Chirurgical College of Philadelphia	(1910)	88.8
University of Vermont (1904) 77.4;	(1911)	83.6

FAILED

College	Year Grad.	Per Cent.
Baltimore Medical College	(1911)	69.9

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Johns Hopkins University	(1911)	New Hamp.
Baltimore Medical College	(1901)	W. Virginia
Harvard Medical School	(1909)	New Hamp.
Dartmouth Medical School	(1909)	New Hamp.
Long Island College Hospital	(1910)	New Jersey
University of Vermont	(1908)	New Hamp.

Book Notices

An Army Officer on Leave in Japan. Including a Sketch of Manila and Environment, Philippine Insurrection of 1896-7, Dewey's Battle of Manila Bay and a Description of Formosa. By L. Mervin Maus, Colonel, United States Army. Cloth. Price, $1.50 net. Pp. 413, with illustrations. Chicago: A. C. McClurg & Co., 1911.

This book gives an account of the visit of the author to Japan and includes not only much useful information concerning the country and its institutions, points of interest, roads, routes and cost of travel, constituting a guide to the land of cherry blossoms, but also chapters on interesting periods of Japanese history, including the Russo-Japanese war. Much of the story of the book is supposed to be related by the two traveling companions of the visitor to Japan, the judge and the major, but this feature does not add materially to the interest of an otherwise entertaining book. There are numerous half-tone illustrations, and an appendix giving details of trips and cost of travel to Hawaii, Japan, China and the Philippines.

Clinical Diagnosis. A Manual of Laboratory Methods. By James Campbell Todd, Ph.B., M.D., Professor of Pathology, University of Colorado. Second Edition. Cloth. Price, $2.25 net. Pp. 469, with Illustrations. Philadelphia: W. B. Saunders Company, 1912.

This second edition has been brought fairly well up to date by the inclusion of some of the newer and better diagnostic methods. Thus, among other insertions, are found the antiformin method for tubercle bacilli, the formalin test for ammonia in urine, Benedict's test for sugar in the urine, Wright and Kinnicutt's method of counting the blood-plates, and a satisfactory, though brief, discussion of the Wassermann reaction. While these important additions have increased the value of the work, certain omissions have been noted, which should not have occurred. Thus, no mention is made of the phenolsulphonephthalein test for the functional activity of the kidney, the best of all tests for this purpose. Further, Todd advises the quantitative estimation of the chlorids, phosphates and sulphates of the urine by centrifugal methods. These are very inaccurate and have no value in the only place in which such determinations have a place, namely, in metabolic work. Also the method of determining urea is the old inaccurate one of Doremus, which is not to be relied on when urea is to be estimated with any idea of a reliable result. The use of the old von Fleischl hemoglobinometer is advised. This should be entirely replaced by the Miescher modification or cut out entirely, as the Sahli and the Dare instruments, both of which Todd discusses, are far more reliable.

The above criticisms are not made with the idea of depreciating the value of the book, but rather with the end in view of making it a better guide. The methods given are those which have been found reliable and the brief interpretation of results is, in the main, adequate. The style is clear and concise, and the illustrations are satisfactory. The book is to be commended, especially to the student and practitioner, as one which can be followed with entire assurance of reliable results.

The Way with the Nerves. Letters to a Neurologist on Various Modern Nervous Ailments, Real and Fancied, with Replies Thereto Telling of Their Nature and Treatment. By Joseph Collins, Physician to the Neurological Institute of New York. Cloth. Price, $1.50. Pp. 313. New York: G. P. Putnam's Sons, 1911.

Though it is still a mooted question whether the laity should be instructed in matters medical, yet of all books written for the public we know of none which sacrifices truth to epigram so little as this handy volume. In it the author's views are popularized in the form of answers written to patients' letters. The letters and answers are patterned after Oppenheim's letters to his patients. Collins' replies to his patients combine accuracy and charm of expression; in respect to the latter they remind one very strongly of Hamerton's "Intellectual Life." What he tells his patients is exactly what an experienced neurologist should say. It is quite doubtful, however, if the average patient will understand him. It appears certain that the general practitioner will learn much by a perusal of these letters; not only will they teach him what to say to his own patients, but they will also impress him with the importance of some elementary facts he himself should but may not know.

Minor Surgery. By Leonard A. Bidwell, F.R.C.S., Surgeon to the West London Hospital. Cloth. Price, $2. Pp. 265, with 88 illustrations. London: University of London Press, 1911.

This volume of the series of London Practitioners' Manuals deals with the various topics of minor surgery clearly and the personal element is evident. This is a good point, as the author states what he believes to be right, and does not give the ideas of various authors, leaving the reader to draw his own conclusions, without any idea as to the author's preference. Many of the illustrations are, as usual, of instruments and appliances from cuts furnished by instrument-makers. As an example of bookmaking, the volume does not do credit to the University of London Press. It is very flimsily bound and printed on paper so heavy and thick as to make the book cumbersome.

Anesthesia and Analgesia. By J. D. Mortimer, M.B. (Lond.), F.R.C.S. (Eng.), Anesthetist, Royal Waterloo Hospital. Cloth. Price, $2. Pp. 276. London: University of London Press, 1911.

The work is eminently practical, and deals with modern methods, but does not take up the nitrous oxid-ether anesthesia. The chapter on the medicolegal position of the anesthetist deals with these important questions clearly and succinctly and is one of the most valuable sections of the work. With reference to binding and paper the book is subject to the same criticism as that made on the volume reviewed above.

Chemistry of Food and Nutrition. By Henry C. Sherman, Ph.D., Professor in Columbia University. Cloth. Price, $1.50 net. Pp. 355. New York: The Macmillan Co., 1911.

This book, the author says, is the outgrowth of several years' experience in teaching to collegiate and technical students, the subject with which it deals. Its purpose is "to present the principles of the chemistry of food and nutrition with special reference to the food requirements of man and the considerations which should underlie our judgment of the nutritive values of food." As such, it discusses food, chiefly in its nutritive relations, and does not deal with individual foods in detail. For the field it is intended to cover, the book is an excellent one. The principal foodstuffs and the ways and methods by which they become available, their functions in the tissues and their ultimate metabolic fate are first described. Then are given the methods first, of determining the food requirements of the body under varying conditions, and second, of ascertaining "the functions of the individual chemical elements in nutrition and the quantities in which they should be supplied by the food." Finally, the author considers the criteria by which the nutritive value and economy of various foodstuffs should be judged. Three useful tables are given in the appendix in which lists of foods are given showing, respectively, first, the edible organic nutrients and fuel values; second, the ash constituents as percentages of the edible portion, and third, the ash constituents in grains per 100 calories of the edible portion.

Jahresbericht über die Königliche Psychiatrische Klinik in München für 1908 und 1909. Paper. Price, 3.60 marks. Pp. 187. Munich: J. F. Lehmann, 1911.

Rarely is an annual report sufficiently meritorious to deserve a review, most of them being dry recitals of figures of admission of patients, etc. This one emanating from the great psychiatric clinic in Munich deserves special commendation. Very interesting and particularly full from the scientific point of view are the reports on the medicolegal cases, the alcoholic psychoses, and the results of microscopic examinations.

Fortschritte der naturwissenschaftlichen Forschung. Von Prof. Dr. E. Abderhalden, Berlin. Dritter Band. Paper. Price, 16 marks. Pp. 352, with 136 illustrations. Vienna: Urban & Schwarzenberg, 1911.

Of the several scientific articles contained in this volume two are of especial interest to physicians, namely, the one on heredity by Prof. Dr. W. Johannsen, and the article on the origin and acquisition of human characteristics, by Prof. Dr. Hermann Klaatsch. The article on heredity is particularly valuable, as it gives a complete summary of the work done to date in a very lucid and easily comprehended style. Professor Klaatsch's article deals with the beginning of the human hand, and also constitutes interesting reading.

Serum Diagnosis of Syphilis and the Butyric Acid Test for Syphilis. By Hideyo Noguchi, M.D., M.Sc., Associate Member of the Rockefeller Institute for Medical Research, New York. Cloth. Price, $2.50. Pp. 238. Philadelphia: J. B. Lippincott Co., 1911.

This edition of Noguchi's book is a restatement of the method and results which he published in the first edition. It is valuable as giving his latest views on the subject, but contains no very important additions. The chief addition is a study of the effect of treatment on the serum-test of syphilis, which is interesting especially because of the use of a quantitative estimation of the strength of the reaction. He makes one surprising statement to the effect that relapses after one dose of salvarsan are comparatively few.

Noguchi is still a most enthusiastic believer in the simplicity and practicability of his test. He maintains vigorously that the carrying out of the test does not require especial training. That this is so—that the Noguchi system materially reduces the difficulties of the serum-test—is far from evident, even from his own description of it. His idea, in this connection, that the preparation of materials by competent laboratory workers in fairly stable form simplifies the work sufficiently for the practitioner to do it reliably for himself, he himself disproves by stating, on page 52, that "the performer of the test should, however, know how to determine the reliability of the reagents he secures from others." If the practitioner is in position to do this, he need go little further in order to prepare his own materials and do the original Wassermann. Time, indeed, is not advancing the position either of the Noguchi or the other substitutes for the original Wassermann system. The original has signally established its reliability in comparison with all radical modifications, and if experience has shown anything, it is that the test is worthy of expert and painfully careful performance. Otherwise it is unreliable; and an unreliable test for syphilis is worse than none.

Ueber Neurorezidive nach Salvarsan- und nach Quecksilberbehandlung. Ein Beitrag zur Lehre von der Frühsyphilis des Gehirns. Von Dr. J. Benario. Mit einem Vorwort von Wirkl. Geheimen Rat P. Ehrlich. Paper. Price, 6 marks. Pp. 195, with illustrations. Munich: J. F. Lehmann, 1911.

This work of Benario's is a piece of special pleading in behalf of salvarsan, its object being to show that the disquieting, not to say alarming, accidents to the nervous system arising in connection with the use of salvarsan are due to syphilis and not to salvarsan. His method of procedure is to collect the "neurorecidives" occurring under mercurial treatment reported in the literature and set them over against the nerve disturbances reported following salvarsan. The result is not convincing as regards the harmlessness of salvarsan to the nervous system, but it is a monument of laborious defense and of fidelity to the cause of salvarsan.

Benario, with painstaking thoroughness, defends salvarsan from the charge that it causes toxic injury to the central nervous system either directly or by causing a lessened resistance in these nervous structures to the attack of the *Spirochæta pallida*. By comparing case histories of 122 patients treated with mercury with 177 treated with salvarsan, all having luetic lesions of the central nervous system during the early secondary stage, he seeks to prove that salvarsan is not followed by these lesions any oftener than is other treatment, but simply that the cases have not been reported—a line of argument that is not very conclusive. More convincing is the chapter on pathology, explaining why the basis cerebri and especially the auditory and optic nerves are most often involved.

The neurorecidives occurring after mercury or salvarsan are attributed wholly to non-energetic treatment, such as the usual single dose of salvarsan of 0.4 to 0.6 gm. The author makes the surprising statement that treatment of lues with moderate doses of salvarsan is more favorable to the occurrence of neurorecidives than very small doses or none at all. He recommends, without a thought of danger, three doses of 0.4 to 0.6 gm. salvarsan, intravenously, at intervals of from five to eight days. That these are not wholly without danger no one who has followed the literature of salvarsan can doubt. He attempts to explain away the frequent severe febrile reactions after salvarsan as the result of absorption of some unknown dead organic material collecting in the distilled water which is used—an explanation that forces the conclusion that he is hard pressed for any explanation.

One can readily approve the warning to all physicians to be on the lookout for early meningeal symptoms and to use the serum-test on both blood and spinal fluid and to make a microscopic examination of spinal fluid more often in diagnosis and in watching the progress under treatment, but one cannot so readily accept his thesis that the early secondary neurorecidives, which have been so strikingly frequent since the advent of salvarsan, are simply a common phenomenon of syphilis which has not been recorded heretofore.

The very last case-report in the book is an excellent illustration of the author's peculiar mental attitude. A 39-year-old man, two months after his initial lesion, received 0.4 gm. salvarsan intravenously, on April 15, 1911, for a marked papular eruption. Two days later headache, dizziness and ringing in the ears set in and persisted. These were regarded as syphilitic, and on May 6—nineteen days later—he was given salvarsan, 0.5 gm. intravenously. The following day the symptoms began to grow worse until, in six or seven days, paresis of the auditory, oculomotor and facial nerves occurred, with bilateral optic neuritis and great disturbance of vision. This is a typical example of the case histories that have caused a good many to take a conservative view of the indications for salvarsan, yet the author finds nothing in it worthy of especial comment. To those energetic enough to attempt its polyglot difficulties (for there are no less than seven languages represented in its pages) the book is an interesting contribution to the literature of syphilis.

Pain. Its Causation and Diagnostic Significance in Internal Diseases. By Dr. Rudolph Schmidt, Physician to the Royal Empress Elizabeth Hospital, Vienna. Translated and Edited from the Second Enlarged and Revised German Edition by Karl M. Vogel, M.D., Assistant Professor of Clinical Pathology, College of Physicians and Surgeons, Columbia University, and Hans Zinsser, A.M., M.D., Professor of Bacteriology, Leland Stanford Junior University. Second Edition. Cloth. Price, $3. Pp. 358. Philadelphia: J. B. Lippincott Co., 1911.

The correct interpretation of pain, either that which occurs spontaneously and is complained of by the patient, or that which is manifested only on careful objective examination, is one of the most difficult yet important tasks imposed on the physician. The value of pain as an early indicator of disease and as evidence of the progress of disease is well known to both physician and layman. The difficulty of correctly interpreting pain is, however, properly appreciated only by physicians, and particularly by such physicians as check up on their diagnoses by careful study of the later histories of their patients, with, where possible, the revelations of autopsy. Schmidt has had an ample clinical material at his command, has controlled many diagnoses by autopsy, and has profited by the traditions and examples of such masters of diagnostic detail as Bamberger and Neusser. In this book, therefore, we find a discussion of pain that goes into minutiæ. This critical analysis of details is the main feature of the work. Features apparently trifling are often shown to be of prime significance. In fact, this emphasis laid on minor manifestations may easily lead the reader—and perhaps it occasionally does the author—away from the major facts of the common type of pain. There is at times almost an overrefinement of diagnosis. The scope of the book may be gathered from the chapter headings, which include such subjects as the sensation of pain, the functional modification of pain, topography in its relation to pain, quality and time of occurrence. Then follow chapters dealing with pain in diseases of the nervous system, the organs of motion, the digestive system, the urinary system and spleen, respiratory and circulatory systems. A chapter on cutaneous tenderness in visceral disease, based on Head's researches on referred pain, has been added by the translators. The chapter dealing with pain in diseases of the digestive system is particularly full. The book must be consulted before one can appreciate the large amount of painstaking labor that has gone into its preparation. It is full of suggestive and helpful hints for the practitioner, and if rightly used, will be of great service in solving some of the knotty problems presented to the physician and surgeon. The work of translation has been well done.

Miscellany

The Surgeon's Dilemma

Under this caption there appeared recently in the *Oregonian* (Portland) an editorial which we cannot resist quoting in full:

"This risk which surgeons often run in performing their duties to their patients is illustrated by two recent incidents. The first occurred in this country. A woman engaged a surgeon to operate on her for appendicitis. When the necessary incision had been made it appeared that there were other troubles which required more extensive use of the knife. The surgeon did what the case demanded and the woman recovered. To show her gratitude to the man who had saved her life she sued him for $10,000 damages. Happily the case was a clear one and the judge ordered a verdict in the surgeon's favor. The other incident occurred in London. The patient was a boy. He seemed to be at the point of death, but the physicians saw some chance to save his life by an operation. It was performed and he died on the table. Had he been permitted to die without an effort to save him there would have been no trouble. But because the physicians made an unusual exertion in his behalf they were brought before the coroner at an inquest and a great scandal was stirred up. Because the operation failed to save the boy's life it was assumed that the physicians were criminally rash to have tried it.

"The surgeon often finds himself between a deep ditch on one side and a quagmire on the other. If he does not operate he knows that the patient will die and his conscience will not forgive him. If he does operate the patient may still die and then the horde of enemies of medical science will set up a shriek. 'Behold another victim of the knife.' Even if the patient recovers after an unauthorized operation which saved his life the surgeon is by no means sure of his gratitude. He may be sued for damages because the patient did not order him to do what he did. Like a traveler passing through the street of a strange village, the surgeon's steps are beset by a mob of howling curs whose noise is troublesome at best and may become dangerous. The malignity of the human heart takes many curious forms, but the strangest of all is its enmity to the science and art of healing. There are people in the world who hate a physician much worse than they do a burglar. It sometimes seems as if all the old *odium theologicum* which used to be spent in battles between the sects had now gone into the fight on medical science.

"Emergencies often arise in which a surgeon is compelled to make a swift decision. If he declines to operate, death will be the unavoidable consequence. If he does operate, he imperils his reputation and subjects himself to all sorts of misrepresentation and calumny. It is a great wonder that medical men so often assume this peril when they might escape it by allowing the patient to pass quietly out of the world. Their conduct shows a degree of devotion to science and human welfare which may well excite admiration. There is hardly any other profession in which the same qualities are exhibited to anything like the same extent. As an English medical man has put the case, the surgeon is frequently in the situation of one who stands on the shore and watches a man struggling in deep water. Shall he swim to his rescue? Perhaps the struggler wants to die and interference with his plan will be resented. Perhaps the water is not nearly so deep as it appears and the man may get out alone. Perhaps a big fish will happen along and propel him ashore with his fins. While the observer stands pondering these various possibilities the unhappy struggler drowns and there is an end of the matter. Is this the way we wish our medical attendants to act when they find us in deadly peril? Or do we prefer to have them assume the responsibility of giving us all the help science suggests without waiting for strict authority to do it? If they wait for authorization we may perish when a little boldness would have saved the day. Is not boldness preferable to vacillation?

"A wise man when he employs a lawyer to conduct his case in court follows the professional man's advice implicitly. He will give all possible aid by securing evidence and looking up facts, but he will not question the lawyer's judgment. There may be better lawyers in the world. Mistakes may be made. But no matter about that. For this case the die is cast and the litigant lies quietly in the bed he has made for himself if he is a wise litigant. The same rule applies to our attitude toward medical men, only to a far greater degree. Once a doctor is chosen the patient's fate is in his hands. The issue of life and death depends on the exercise of his judgment and skill. Is not a man a fool to do or say anything which may tend to impair the doctor's skill or shake the firmness of his judgment? What we want in the moment of dire peril is absolutely unhampered courage in the surgeon to do the very best for us that he knows how. Without that courage he will debate instead of acting. He will deliberate instead of striking at the crucial instant. He will look at possible dangers to his reputation instead of seeing only the patient's danger. He will take no chances which involve risk to himself. The moment when life hangs in the balance will pass and death will gain the victory.

"This is what medical men may be brought to by petty persecution. That they have not been brought to it already speaks marvels for their character. No surgeon can always succeed. Some operations must fail. But is it not better, far better, to encourage medical men to employ the last resources of their art for the sake of their patients than it is to worry them into timid adherence to convention and precedent?"

Flies in Foreign Countries.—From the *Daily Consular and Trade Reports*, March 12, 1912, the following information is gathered, concerning the presence of flies in various countries abroad. The reports are made by the United States consuls. There are so few flies in Bavaria that they can in no way be regarded as a pest. This is due to the extreme cleanliness of Bavarian cities. Court-yards, alleys, vacant lots, etc., are kept clean. There are no quarters that could be justly called slums, even in the districts where buildings hundreds of years old are found. Garbage is collected in closed tin or zinc cans and regularly removed in closed wagons. Frankfort, Prussia, is not greatly troubled with flies. In July and August there are some, and protective measures are used in grocery-stores, butcher-shops, etc. Flies are not troublesome in Prague and screen doors are practically unknown. At St. Etienne, France, flies are very troublesome, during May, June, July and August. Rouen is troubled with flies, during June, July, August and September. In London flies are not so numerous as to be troublesome, and butchers expose meat for sale without any protection, though Liverpool reports that the summer of 1911 was exceptionally hot and dry, and there was a plague of flies and wasps. In Plymouth, England, from June to September, flies and wasps are a pest. In Melbourne, Australia, from October to March, flies are very troublesome, as they are also in Johannesburg, South Africa, during the same months. Window and door screens are not used. Nogales, Mexico, during nine months of the year, is comparatively free from flies, but as soon as the rainy season commences in the latter part of June, they are very numerous and a pest until October.

The Biochemical Problem in Bacteriology.—While it is desirable to have standard and uniform methods of describing bacterial species as leading to uniformity of methods and completeness and comparability of results, F. P. Gorham in *Science*, says that we must not become slaves to standardization and uniformity. He believes that in the attempt to follow exact procedures in the culture of bacteria some serious errors have been made. The efforts to have exact methods of preparing culture mediums in order to produce standard and uniform products, Gorham believes, have not been successful. Not only are the results obtained in different laboratories unlike, but two lots of the same medium made at different times in the same laboratory are extremely unlike when measured by the delicate physiologic properties of the organisms, which respond to the slightest chemical differences. He believes that in order to get uniform results in the study of delicate physiologic properties on which depend largely the differentiation of bacterial species, the time has come to abandon complex and variable animal and vegetable mediums and to substitute materials of definite chemical composition. He believes it possible to prepare a synthetic medium containing chemically pure salts on which every organism will grow well. This would give uniform results, and the physiologic properties of the organisms might thus be made the basis for the determination of the species. He believes that it is not so much the properties of the bacteria which are variable as the environment in which we attempt to study them. There is scarcely a physiologic property of the bacteria that is to-day accurately measurable on account of the variability of the mediums in which they are cultured. With the adoption of mediums of definite chemical composition for making all determinations and measurements, the physiologic characters of the bacteria will assume the importance of the morphologic characters of the higher organisms and then only shall we be able to arrive at a natural classification of bacterial species which shall express their true relationship. Slowly and laboriously the physiologic chemist is trying to work out the chemistry of protoplasm, of the proteins, such as the albumins, the peptones and the proteoses; still more light might be thrown on this important problem by the study of the growth of bacteria in simple chemical solutions or in the synthetic culture mediums. We would be able to study step by step the synthesis of protein under conditions accurately controlled and completely known, and Gorham believes that some of the most interesting biologic information lies along this path. Who would dare deny, he asks, that some day it might be possible by some such method as this to discover the secret of the very origin of life itself?

Laws Concerning Ophthalmia Neonatorum.—In view of the activity of the various associations, charitable organizations and social workers in the subject of ophthalmia neonatorum, a publication that will be of considerable interest is Public Health Bulletin 49, issued by the U. S. Public Health and Marine-Hospital Service, on this subject, giving an analysis of the laws and regulations in force in the United States in regard to ophthalmia neonatorum. J. W. Kerr, in his analysis of collected statistics on this subject, says that 25 to 40 per cent. of all blindness can be referred to this cause, and a committee of the British Medical Association found that more than one-third of those in the blind schools of Great Britain owe their defect to this disease. In the United States and Canada, in 1907, out of 240 admissions to ten schools for the blind, fifty-nine, or 24.38 per cent., were blind as a result of ophthalmia neonatorum, and in 1910, out of 351 admissions, eighty-four, or 23.9 per cent., were blind from this cause. Green has found, in Massachusetts, that the minimum morbidity-rate for this disease is 6.1 per 1,000 births. A more complete census made by Green from the practice of 173 physicians in nine cities, revealed an average morbidity-rate of 10.8 per 1,000 births. These figures, of course, apply only to the locations investigated. At the present time, twenty-four states and Porto Rico have laws concerning ophthalmia neonatorum. These laws are set out in the bulletin.

Scientific Medicine and the Rise of Cults.—It is a far cry from the science of symptoms, which found its flower in the writings of Trousseau, to the science of causes, using symptoms but incidentally, as it flowers in the writings of Osler. As the practice of medicine has gone beyond the expressions of disease into its causes, it has left the field of symptoms poorly attended. Let it be understood that the physicians have moved. People have stayed where they were. Meanwhile symptoms, like branches, have grown up more luxuriantly in this nerve-racking, self-centering, neurasthenia-engendering age than in any other time. In order to fill the field which was left when medical men moved out, several agencies have flourished. One of these is social service associated with or separate from medicine; another is Christian Science. In saying that these agencies have come into an unoccupied field I do not wish to say that their motives are the same, or that there is any kinship between them. Each developed because society abhors a vacuum. There is a field for hypnotism, suggestion, auto-suggestion, the mixed suggestion and mental training of Du Bois, the analysis and mind training of Freud, the methods of the mental healer, spiritual healer, faith healer—related methods all—as well as for the pills taken with faith. . . . There must be some basis for the growth of Christian Science and other kinds of mental healing. Among their adherents are bankers, whose minds work very accurately when it comes to business. It cannot be that, when it comes to the business of the commonwealth called the human body, they go off mentally. Among them are judges capable of weighing evidence. If some part of these teachings cannot stand the acid, other parts must, or these judges would not go on accepting. Where is the explanation? The brain dominates its sister organs in the commonwealth called the human body. It can furnish symptoms where there are none. It can exaggerate existing symptoms. It can pervert and change symptoms, so that they bear slight relation to their beginnings. It is the mind that interprets. The conclusion is justified that the mind can modify the course of disease in some measure and its symptoms in great measure. The mind cannot prevent life, influence the sex, or the structure of the child, prevent infection, annul contagion, influence organic changes in organs, or make life everlasting.—W. A. Evans, "How to Keep Well," Chicago *Tribune.*

Prevention of Vomiting from Coughing in Tuberculosis.—H. Paillard writes in the *Progrès Médical* on what he calls the emetic cough of the tuberculous—a cough which irritates the pharynx producing a reflex which may cause the meal to be thrown up immediately after it is taken. He states that this tendency to vomit can be controlled by reclining on the right side after eating, and inhaling oxygen. Reclining on the right side facilitates the evacuation of the stomach while it leaves the left diaphragm comparatively at rest. Among thirty-two patients with immobilization of the left diaphragm from relics of pleurisy, this emetic cough was present in only four in whom the diaphragm was not fastened so firmly. Fixation of the right diaphragm does not influence the occurrence of the emetic cough. Paillard instructs his tuberculous patient to have a bag of oxygen suspended close at hand, and to seize the bag and inhale a few whiffs of the oxygen if, after eating, he feels the slightest tendency to cough. The patient can eat at will without fear that he is going to vomit; he is thereby enabled to retain and utilize his food. Only a very little oxygen should be inhaled at a time. Inhalation of oxygen has been prescribed in treatment of uncontrollable vomiting of pregnancy and for the dyspepsia of chlorosis. The benefit from the oxygen in tuberculosis is said to sustain the assumption that the vomiting is a reflex from mechanical factors; the oxygen reduces to a minimum the excursions of the lungs.

Diseases Not Entities.—"We are too apt, I think," says Exham in the *British Medical Journal,* "to regard diseases as entities—things that are definite and, I had almost said, concrete, not, of course, as contrasted with abstract, but rather as things with boundaries and circumscribed; whereas disease ought to be regarded as a particular condition of the individual, due to certain agents and modified by certain conditions. And as bearing on this view I would like to direct attention to the well-established fact that particular bacilli do not always cause the same symptoms. The pneumococcus does not always cause croupous pneumonia, and we are all familiar with the protean characters of conditions due to the influenza bacillus and the *Bacillus coli.*"

The Urea Sign of Yellow Fever.—F. Villuendas (*Rev. de Med. y Cir.*) calls attention to the abrupt, extreme drop in the proportion of urea excreted during the incubation of yellow fever and during the first day or two of the fever. The output of urea declines in a number of affections of the liver, but in none does it show such a sudden fall as in yellow fever. A strong point is said to be the facility with which the test can be applied by merely examining the urine for urea five or six times during the first twenty-four or thirty-six hours and recording the total output of urine. The differential value of the sign is also emphasized; negative findings are held practically to exclude yellow fever.

Medicolegal

Cruel and Inhuman Treatment of Wife—Indication of Pregnancy—Confidential Communications Where Husband Is a Physician

(Sheldon vs. Sheldon (N. Y.), 131 N. Y. S. 291)

The Second Appellate Division of the Supreme Court of New York reverses a judgment dismissing a wife's complaint asking a separation from her husband for cruel and inhuman treatment. The court says that there was no evidence offered by the defendant, but on that received the court might have found that at the time of her marriage the plaintiff was 37 years old, in perfect health, and was able to give safe delivery to a normal child. During the thirty-two months that the plaintiff resided and cohabited with the defendant her menstrual flow was interrupted and delayed nine times, being restored by the administration of drugs or the performance of operations by the defendant, who was a physician. Each of the operations was attended with considerable pain, and after one of them the plaintiff was confined to her bed for three weeks, and to the house about five weeks longer. On one occasion the defendant examined the discharge after an operation and pronounced it a "growth" of four or five weeks. There was also evidence from three witnesses that the defendant stated that he did not wish to have any children, that he and his wife were too old to have them, and that they would be only an expense.

If it was the fact that, induced by such sordid motives, the defendant deprived the plaintiff of the maternal joy so highly prized by every good woman, and if, in addition, he induced her to submit to treatment intended to produce miscarriages, and which did produce them, with the accompanying pain and suffering, by false and fraudulent statements as to the necessity therefor, judgment should have gone for the plaintiff in this case, and not for the defendant.

The defendant contended that there was no evidence that the plaintiff ever became pregnant, or that the treatment administered by him was unnecessary, or without the plaintiff's consent. Interruption of the menstrual flow might indicate pregnancy. That, taken in connection with the evidence of the defendant's admission that on one occasion the resumption thereof was accompanied with the discharge of something which he, with his experience as a physician, pronounced a "growth" of four or five weeks, called on him to establish satisfactorily that pregnancy had not taken place, or that the operations or the administering of drugs was justified by the circumstances of the case.

The plaintiff sought to prove how she came to submit to the defendant's treatment. She sought to prove statements by him to her on these various occasions, which, if accepted as true, would have warranted the court in finding that he induced her to believe that it was dangerous to her health and life to give birth to a child, that her physical condition and the condition of her womb were such that it was necessary to apply the treatment which he did, and that she only consented to such treatment because of the advice which he gave to her that it was physically dangerous for her to give birth to any child, on which advice she relied because of his professional knowledge and skill. But all conversations on the subject, and all statements made by the defendant to the plaintiff relating thereto, were excluded, on the defendant's objection that they were confidential communications between husband and wife, and that the plaintiff was incompetent to testify to the same. In so ruling the trial court erred.

All communications between husband and wife which are not had in the presence of third persons are not excluded by the statute which provides: "A husband or wife shall not be compelled or without the consent of the other, if living, allowed to disclose a confidential communication made by one to the other during marriage." That relates only to such communications as are expressly made in confidence, or such as spring out of and are induced by the marital relation, and are therefore confidential in character. It is difficult, if not impossible, to formulate a definition so comprehensive as to furnish a ready method of determining the character of every communication between husband and wife. But the communications here reviewed did not approach the border line. The acts, alleged to be cruel, were the acts of the husband. The reasons given for the medical treatment, which involved such acts, were reasons given by a physician to a patient. The sufficiency of these reasons might tend to show whether these particular acts were cruel or benign. But it was not the husband speaking to the wife, but the physician speaking to the patient. In accepting the reasons given for the treatment employed, she was relying on the professional skill of the physician, not the love and affection of the husband. As a layman, simply as a husband, he would have been unable to give her the advice which she claimed that he did. As a physician, if the circumstances warranted it, he might have given precisely the same advice to a woman not his wife. Confidential they probably were, but the marital relation had nothing to do with inspiring the confidence. The confidence was that between patient and physician only, and that confidence the plaintiff expressly waived, as she had a right to do. For error in excluding this testimony, the judgment in the defendant's favor must be reversed, and a new trial granted.

What Constitutes Impotency—Expert Evidence Required

(Bunger vs. Bunger (Kan.), 117 Pac. R. 1017)

The Supreme Court of Kansas holds that impotency, as a cause for divorce, means an incurable defect, and not every temporary or occasional incapacity, but permanent and lasting inability for copulation. The existence of such a ground for a divorce against an accused wife, susceptible, as it is, of certain determination by expert examination, to which she offers to submit, should not be decided against her unless such decision is supported by the evidence of a physician who has made such examination. The best evidence obtainable should, as in other cases, be required.

The court says that the evidence showed that the plaintiff was nearly 70 years of age and that the defendant was about 66 years of age. They were married in May, 1908, in Missouri, and lived together a little less than three months, when the plaintiff left the defendant and went to Kansas. The defendant had previously been married, and had lived with her husband 35 years, but had had no children. The plaintiff testified that during the time that he had lived with her he had made not to exceed four attempts with her, and had utterly failed by reason of some malformation or obstacle in her person. She testified directly to the contrary on all these questions and to oft-repeated acts of intercourse. On the part of the defendant, two physicians testified that she was well-developed and normal in their opinions, and that they had each made a physical examination of her. In rebuttal the plaintiff offered the evidence of two physicians, who said that they had never seen the defendant, but testified in substance that the examinations and the methods of the examinations testified to by the physicians for the defendant were not such as to properly disclose whether or not the defendant was normally developed.

The plaintiff obtained a judgment; but that is reversed, and a new trial ordered, with directions that the plaintiff deposit with the clerk of the court for the use of the defendant a sufficient sum of money to pay her transportation from her home to Kansas and return, also to pay a competent, impartial physician, to be appointed by the court, for the purpose of making a physical examination of the defendant as to the matter in controversy. She had offered to submit to an examination by any physician or physicians that might be selected by the plaintiff or his attorney. There was no expert evidence of her impotency, and the testimony of the plaintiff was not sufficient, giving it full credence, to prove impotency as defined by legal authorities. If it could be said that his evidence was sufficient to establish the fact that at the times testified to by him there was incapacity on the part of the defendant and not on his part, still there was an utter failure on his part to prove whether it was a temporary and curable inability or permanent and incurable. It devolved on him to prove the latter.

Presumption of Sanity and Burden of Proof in Homicide Cases

(Adair vs. State (Okla.), 118 Pac. R. 416)

The Criminal Court of Appeals of Oklahoma holds that, sanity being the normal and usual condition of mankind, the law presumes that every person is sane; hence the state in a criminal prosecution may rely on such presumption without proof relative thereto. But when the defendant in a homicide case produces sufficient evidence to raise a reasonable doubt of his sanity, the law then imposes on the state the burden of establishing the sanity of the defendant, the same as any other material fact necessary to warrant a conviction; and if, on consideration of all the evidence in the case, the jury have a reasonable doubt that the defendant at the time of the commission of the act charged was mentally competent to distinguish between right and wrong, or to understand the nature of the act he was committing, he must be acquitted.

The provision of the Oklahoma statutes that "An act done by a person in a state of insanity cannot be punished as a public offense" does not in effect modify, but is supplemental to, the provision that "All persons are capable of committing crimes, except those belonging to the following classes: * * * 4. Lunatics, insane persons, and all persons of unsound mind, including persons temporarily or partially deprived of reason, on proof that at the time of committing the act charged against them they were incapable of knowing its wrongfulness." Under these provisions the test of criminal responsibility for committing an act, which is a crime under the law, is the mental capacity to distinguish between right and wrong as applied to the particular act, and to understand the nature and consequences of such act, or knowing its wrongfulness the defendant is not criminally responsible, if by reason of insanity he did not have the will and mental power to refrain from committing such act.

It cannot be denied that the defense of insanity is frequently interposed in homicide cases when all other means of avoiding conviction and escaping punishment is hopeless. For this reason, insanity as a defense is almost always viewed with distrust, and it is a popular belief that it is the last resort of desperate criminals. Injustice is thus often done to a defendant who, in the judgment of his counsel, has legitimate ground for interposing this defense, and who must therefore at the outset overcome this sentiment of popular distrust. The court believes the danger is that indignation at the crime and distrust of this defense will cause jurors to be incredulous of its evidence, and thus the actually insane may be unjustly convicted. This result can only be avoided by fully and justly determining this issue the same as any other fact entering into the question of a defendant's guilt. The idea of punishment, when associated with this unhappy malady, is revolting to the instincts of humanity. Modern research has done much to elucidate what was formerly very obscure touching the true pathology of insanity, although no invariable or infallible test of the existence of insanity has ever been found.

Mental Unsoundness Brought on by Excessive Drinking

(Martin vs. State (Ark.), 139 S. W. R. 1122)

The Supreme Court of Arkansas reverses a conviction of bigamy, remanding the case for a new trial, because it holds that it was error to refuse to instruct the jury that, while voluntary intoxication was no defense to the charge of bigamy, yet if the jury believed from a preponderance of the evidence that at the time of the alleged bigamous marriage the defendant was laboring under such a defect of reason from disease of the mind, regardless of the cause of such mental condition, as not to know the nature of the act he was doing, or, if he did know it, that he was ignorant that he was doing what was wrong, then they should find him not guilty.

The court says that the law on the subject is clearly and tersely stated in case of Reg. vs. Davis, 14 Cox, C. C. (Eng. Reps.) 563, as follows: "Drunkenness is one thing and the diseases to which drunkenness leads are different things; and if a man by drunkenness brings on a degree of madness even for a time which would have relieved him from responsibility, if it had been caused in any other way, then he would not be criminally responsible. * * * The man is a madman, and is to be treated as such, although his madness is only temporary."

Of course no degree of mere intoxication will excuse crime. There is, however, another effect of the excessive use of alcoholic liquors which will excuse crime; and that is mental unsoundness brought on by excessive drinking, which remains after the intoxication has subsided. If this latter condition exists to such an extent that the mind of the defendant is incapable of distinguishing between right and wrong in regard to the particular act he is charged with doing, he is not liable to punishment. In this case the testimony of the defendant, if it was to be believed, tended to show mental unsoundness which was separable from mere intoxication. The court should therefore have left it to the jury to determine whether there was any mental unsoundness, which was separable from the intoxication, and, if there was, whether it was sufficient to overthrow the defendant's sense of right and wrong at the time he married the prosecuting witness.

It was also error to exclude evidence which, when considered in connection with the other evidence adduced by the defendant, was intended to show that excessive drinking in his case always had the effect to produce a condition of insanity after the immediate effects of his intoxication had left him, such evidence being admissible for what the jury might consider it worth for that purpose.

Conviction of Abortion on Testimony of Accomplices—Disclosures that are Not Prohibited

(State vs. Stapp (Wash.), 118 Pac. R. 337)

The Supreme Court of Washington affirms a conviction of a physician of the crime of abortion, for which he was sentenced to serve a term of nine months in the county jail, and it does this even conceding that it might be that the defendant's connection with the crime charged was proved only by the uncorroborated testimony of two witnesses who were accomplices in the crime. The court says that, conceding that these witnesses were accomplices, their credibility was affected only by that fact, together with the fact that they denied knowledge of the cause of the miscarriage, and made some statements immediately thereafter inconsistent with their testimony. This court has heretofore recognized the rule that the testimony of accomplices, without corroboration, may be sufficient to support a conviction.

The defendant, as a witness in his own behalf, testified relative to his experience as a surgeon, showing that he had a large and varied experience as such, and gave testimony indicating his opinion that the operation charged to him was very unskilfully performed, based on conditions shown by the state's evidence, this being evidently for the purpose of creating the impression that it was not likely that a surgeon of his skill and experience would bring about a miscarriage in such an unskilful manner. Then the prosecuting attorney questioned him concerning his experience as a surgeon, where he performed the operations which were not performed in his office, when the last one was performed at the hospital then mentioned, whether it was not more than a year back, and what the operation was. The witness thought that it was for a pelvic abscess, on a woman. He was then asked if she was in the hospital pregnant, but objection was sustained to the question as totally irrelevant and immaterial. The court does not think that there was error. Assuming, for argument's sake, that the provision of law that "a regular physician or surgeon shall not without the consent of his patient be examined in a civil action as to any information acquired in attending such patient which was necessary to enable him to prescribe or act for the patient" applies equally to criminal actions, the court is unable to see that it was violated. It was true that a particular operation was being inquired about, but there was nothing testified to by the witnesses which identified the patient with any degree of certainty at all. The court thinks that the information disclosed by the witness was not such as is sought to be suppressed by this law, in view of the fact that the identity of the patient was not disclosed; and it was not claimed that the testimony of the witnesses could lead to the identity of the patient.

Disinterment and Removal of Bodies Calls for Sanitary Regulations

(*Ex parte Lee John (Cal.), 118 Pac. R. 722*)

The District Court of Appeals, First District of California, holds valid a county ordinance requiring the health officer, in every case where application is made for a permit to disinter or remove the remains of a buried body, to investigate the application and ascertain whether the disinterment or removal can be made without danger to the public health, and, if so satisfied, to grant the application. It holds that the matter of the disinterring and removal of dead bodies is clearly one calling for sanitary regulations, and that, while the fee of $10 exacted for such permit by the ordinance in question was somewhat large, the court cannot say that it was so disproportionate to the services necessary to be performed in the faithful safeguarding of the public health as to warrant a holding that the purpose of the ordinance was revenue and not sanitary regulation.

Competent Evidence in Injury Case

(*McCauley vs. Detroit United Railway (Mich.), 133 N. W. R. 11*)

The Supreme Court of Michigan holds that, in an action for personal injuries sustained by the plaintiff in being thrown to the pavement in alighting from a car, causing a retroversion of the uterus, it was competent for her to show the seriousness of the injury and what the probable cost would be to effect a cure, and, after the defendant had shown that the proper time for an operation was immediately following the accident, it was proper for the plaintiff to show that neither she nor her husband had the means to pay for such an operation.

Society Proceedings

COMING MEETINGS

American Medical Association, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
Amer. Assn. of Pathologists and Bacteriologists, Philadelphia, Apr. 5-6.
American Laryngological Association, Atlantic City, May 9-11.
American Urological Association, New York City, April 2-4.
Arizona Medical Association, Bisbee, May 7.
Association of American Physicians, Atlantic City, May 7-8.
California State Medical Society, Del Monte, April 16-18.
Florida Medical Association, Tampa, May 8-10.
Georgia Medical Association, Augusta, April 17-19.
Iowa State Medical Society, Burlington, May 8-10.
Louisiana State Medical Society, New Orleans, April 23-25.
Maryland Medical and Chirurgical Faculty, Baltimore, April 23-25.
Mississippi State Medical Association, Jackson, April 9-11.
Montana State Medical Association, Helena, May 8.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
New York State Medical Society, Albany, April 16-18.
North Dakota State Medical Association, Valley City, May 8-9.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
South Carolina Medical Association, Columbia, April 16-18.
State Medical Association of Texas, Waco, May 7-9.
Tennessee State Medical Association, Chattanooga, April 9-11.

COLLEGE OF PHYSICIANS OF PHILADELPHIA

The President, Dr. George E. deSchweinitz, in the Chair

The College of Physicians and the Public Health

Dr. James M. Anders: The College of Physicians of Philadelphia is intimately associated with the developmental history of our city and its founders clearly recognized the true relationship of medicine to the public health. A well-sustained effort has been put forth to safeguard the public health by timely suggestions, appeals to the legislature, and by petitions and protests to the local authorities. By a slight enlargement of its present activities the college could arrange for a systematic campaign of education among the laity by authoritative popular lectures. In this way it would be possible to mold public opinion into laws and sanitary regulation.

The Treatment of Epilepsy

Dr. S. Weir Mitchell: In the consideration of this subject I shall limit myself to those cases of epilepsy which are various in type and known as idiopathic, a term conventionally employed, and one which it is to be hoped may some day be set aside. Treatment includes, first, the suppression of the symptom-complex by the use of drugs or other forms of general treatment; and, second, the treatment of the period in which the aura affords an opportunity to cut short the sequence of symptoms. I must frankly admit that none of the remedial measures we apply for the general treatment of idiopathic epilepsy has any firm foundation on reason or trustworthy experimentation on the lower animals. The minor epilepsy (petit mal), when it exists alone, is sometimes amenable to the use of bromids and responds favorably to some of the coal-tar products. Then, there are examples of the lesser epilepsy which are made much worse by bromids, and also in general epilepsy there are rare and inexplicable cases in which bromids at once make the convulsions worse and increase their number. For rapid action and for soothing purposes, I am of the opinion that the lithium bromid is the best. I state this with the doubt of self-criticism, because I myself introduced it into medicine. Because of the deleterious effects of the bromids it is desirable, of course, to give just that amount which being added grain by grain on return of attacks will eliminate finally the occurrence of any attack.

I believe that epilepsy originates always in sensorial centers with a discharge from these centers which is recognized or not by consciousness. I believe the aura always exists, but is unperceived in most cases owing to the suddenness with which the motor discharge follows. This statement is supported by the fact that an epileptic having distinct auræ may go on with lessening of the interval between the onset of the auræ and the convulsive attack and loss of consciousness until the time in between becomes too brief for memorial registration or any useful intervention.

I want to say a word as to a set of phenomena which have been, I think, improperly classed, especially by Oppenheim, as also being of the nature of auræ. Thus, certain people before an attack develop either a condition of slight excitement or a state of sensation of being agreeably well. A more distinct symptom is the curious personal odor, sometimes taking the form of bad breath, usually of an acid odor. In dealing with epilepsy of the Jacksonian type or originating in a sensation confined to one limb, a sudden ligature of that limb will frequently arrest the attack. In one case in which the aura was brief I succeeded very well in bringing this about by having a spring arrangement worn on the left arm and set free to act by pulling a cord fastened at the wrist. The attack was thus usually checked. A great change in the mode of life sometimes results in curing epilepsy. The use of amyl nitrite I am sure will arrest attacks of epilepsy if the aura give time and opportunity.

There is one other method which I consider important. It is not my discovery. A physician whom I met on a train told me that by taking a long inhalation, holding his nose and then forcibly contracting his chest he could check the progress during the aura and prevent altogether the convulsions. He assured me that he had thus succeeded finally without bromids in stopping altogether the epilepsy. I have seen a number of patients relieve themselves by this means. I, therefore, suggest in these cases a moderate amount of bromid, with some effort to use the method in question. With the exception of these slight hints as to the aura, I want most to direct attention to the fact that probably all attacks have auræ and all atacks have a sensory origin.

The Medical Treatment of Epilepsy

Dr. F. X. Dercum: The treatment of epilepsy is divided into general or physiologic treatment, and a treatment based on drugs. In the physiologic treatment I would lay special stress on the necessity of keeping the avenues of elimination open, and of the oxidation of the tissues.' Diet should be adapted to each individual case. In drugs we possess a most valuable means for the elimination and often for the control of the seizures. I have made use of sodium chlorid withdrawal and agree with the opinions of others as to its value. I believe it is important to combine with the bromids one of the glycerophosphate salts, preferably sodium glycerophosphate. Thyroid extract is valuable principally in epileptic children with rather marked stigmata of arrest, with signs pointing to possible thyroid deficiency. It should be given in small doses over long periods of time. My observations bearing on the possible rôle of the internal secretions in the pathology of epilepsy suggest very strongly disease of the pituitary body.

I am in accord with Dr. Mitchell regarding the determination of the presence of an aura. I regard the aura as a sensory discharge which begins in a sensory area of the cortex. From such a sensory area the discharge travels either directly or by association fibers to a motor area and arriving there, a motor discharge, a convulsion, takes place. In regard to the arrest or abortion of attacks which the recognition of the aura permits, especially by mechanical procedures, my experience has led me to the conclusion that this can be accomplished for a time only, and that the impulse or tendency to the convulsion sooner or later becomes so great that after a while all artificial barriers are broken down and the convulsion takes place. The toxicity of epilepsy has suggested a serum method of treatment, but the failure of Ceni's attempt in this direction is so recent that it needs only to be mentioned.

The Surgical Treatment of Epilepsy

DR. WILLIAM J. TAYLOR: My experience has led me to confine the surgical treatment of epilepsy to a very limited number of carefully selected cases, and after the most thorough study by both neurologist and surgeon. Occasionally, great benefit may result and unexpected pathologic conditions may be found which may admit of removal. The needs for operation in traumatic epilepsy are well recognized by all surgeons and neurologists. No permanent benefit can be expected from operation in the essential epilepsy of idiopathic or nontraumatic type in which the attacks are general and without local onset and the operation may do harm. Idiopathic epilepsy with focal symptoms, however, if seen early should always be operated on. When a focal epilepsy develops and is due to gross brain disease all surgeons are united in advising operation, and the earlier the operation the better. I do not think we are now justified in excising the center from the convolution of the brain with any expectation of benefiting the patient, unless there be distinct evidence of disease.

A Surgeon's View of Epilepsy

DR. CHARLES H. FRAZIER: Of fifty-three operations on epileptics, in only six is it recorded that the findings were negative, and of the remainder the following conditions were noted: cysts, eight; adhesions, six; pachymeningitis with adhesions, edema or cysts, thirteen; edema alone, eleven; with cyst, one; thickened dura, two; organized blood clot, one; cystic degeneration, two; cortical gliosis, two. Of greater importance even than the performance of the operation is the selection of cases. In my experience the majority of cases present no surgical indications. I include in the indications for operation all cases of traumatic epilepsy with such restrictions as have been indicated, all cases of Jacksonian epilepsy, and cases of general epilepsy in which there are symptoms indicating a focal lesion. As a matter of prophylaxis, we should be a little more painstaking in the examination of patients with cranial and intracranial injuries. If within a few days of the injury we can detect signs of hemorrhage, either epidural or subdural, the suggested region should be uncovered and the clot, if found, removed. To standardize results, no patient should be deemed cured unless at least three years have elapsed since the operation. Turning to my own records, out of twenty-five cases which have passed the three-year limit and could be traced, seven or 28 per cent. have been profoundly influenced by the operation.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Twenty-Second Annual Meeting, held in Chicago, Feb. 28, 1912

(Concluded from page 891)

Report of the Judicial Council

The following were some of the recommendations accepted by the association:

The council recommended that the applications of the University of Pennsylvania, University of Vermont, and the Yale Medical School be accepted. Action on the applications of the Dartmouth Medical School and the Medical School of Maine was postponed until the next annual meeting because of the fact that the council was unable to make an inspection of these two schools. Arrangements for such inspection had been made, but did not materialize, so that the council found itself in the position of not having the necessary information at hand to take action on these two applications.

The status of the medical department, so-called, of the University of West Virginia was thoroughly investigated by the council, and the conclusion reached that inasmuch as the University of West Virginia has no medical department, with a separate medical organization and a medical faculty distinct from that of the college of arts and sciences, the ruling made in the case by the chairman of the council, that the school is no longer in existence, be sustained, and that time credit cannot be given to the students in attendance on the work offered this year. The council further recommended that as soon as the medical department is properly organized to meet the requirements of the state medical boards and of this association, and receives recognition from state medical boards, that the school be re-admitted to membership.

The position of the Meharry Medical College of Nashville, Tenn., was duly considered by the council, and the council recommended that there be established or created a membership in the association restricted to such medical colleges as are exclusively for the colored race, such colleges to be designated as "affiliated members."

The chairman of the council having presented evidence of non-compliance on the part of several colleges with the entrance requirements of the association and of insufficient methods of evaluation and lack of system in keeping records by some examiners, the council recommended:

1. The credentials of all applicants for matriculation should be submitted to the appointed examiner of the evaluation board, who shall issue a certificate of entrance or give notice of rejection.
2. The examiner or board should keep on file in a convenient place all credentials presented by the applicant, or satisfactory data to verify such credentials.
3. These credentials should be open to the inspection of any representative of the association for verification.
4. Records of the examination papers of applicants should be kept on file.

As for the granting of time and scholarship credits to students coming from Class B and Class C schools, this is an important question and deserves careful consideration. If students of low-grade colleges are acceptable and given credit by Class A schools, the distinction is one of name rather than of grade. The council recognized the difficulty in formulating a rule by which members may be governed by evaluating the credentials of students seeking matriculation with them.

Therefore, it was recommended that the greatest care be exercised in rating students coming from colleges that have a rating below Class A in the American Medical Association classification, and that while time credit might be given, subject credit should not be given without a thorough examination.

The council also recommended that this association take cognizance of the classification made of medical colleges of this country, and where a college in membership in this association is not classed as an acceptable college by state medical boards or other evaluating organizations, the council shall inspect the college to verify or correct these findings.

Amendments to the Constitution

The following amendments were adopted:

Article II.—*Section 4.*—The annual dues shall be $25 a year, payable in advance not later than March 1. The year shall be estimated from September 1 to August 31, inclusive. Colleges in arrears after March 1 shall be dropped from the membership roll and can be reinstated only by making formal application to the executive council. The power of reinstatement shall be vested in the executive council, subject to approval of the association.

Article VII.—*Section 1.*—The officers of this association shall be a president, vice-president, secretary-treasurer, and an executive council of seven members, consisting of the outgoing president, the president, the secretary-treasurer and four elective members, two to be elected to serve one year and two to be elected to serve two years, and thereafter, two to be elected at each annual meeting to serve two years. All the remaining officers to be elected to serve one year, or until their successors are elected.

Section 2.—The president shall preside at all meetings and perform such other duties as parliamentary usage in deliberative assemblies and the by-laws of this association may require.

Section 3.—The vice-president shall preside in the absence of the president, and perform such other duties as may be prescribed by the association.

Section 4.—The secretary-treasurer shall record the proceedings of the meetings of the association, and edit and publish the same under the direction of the executive council. He shall collect the dues and assessments from the members. He shall take charge of all monies that may be received from all sources and deposit the same in a bank in the name of the Association of American Medical Colleges. He shall disburse the money only on order of the chairman of the executive council. He shall report to the executive council on the work of his office whenever requested, and shall make an annual report to the association. He shall perform such other duties as may be required of him by the association and the executive council.

Section 5.—The executive council shall organize after each annual meeting and elect a chairman. After such organization it shall appoint the following standing committees and representatives: 1. Education. 2. Research. 3. Pedagogy. 4. Equipment. 5. Representatives to other organizations, and such other committees as may be deemed necessary. The council shall have and exercise direct supervision, general control and management of the business affairs of the association, subject to the direction and approval of the association. It shall have the power to fix the salaries of the officers and disburse funds for purposes pertaining to the affairs of the association. It shall have the power to investigate any charges made against members of the association for violation of the rules and regulations of the association and to settle disputes between members. It shall inspect and examine colleges making application for membership, and shall inspect colleges in membership in the association that have been discredited by other evaluating organizations. It shall have power to fill vacancies occurring in any of the elective offices during the year.

Resolution on Alcohol Excise Tax

Resolved, That in order to promote the advance of instruction and research in the medical schools of the United States the federal act to remit the excise taxes on alcohol used in museums, universities and colleges for scientific purposes should be so amended as to permit, under suitable regulation, the use of tax-free alcohol in all laboratories and all departments of medical schools, including hospitals and dispensaries, for instruction and scientific purposes.

Report of Committee on Pedagogics

Dr. G. H. Hoxie: Reports secured from colleges show that the curriculum varies in its demands on the student's time from 5,628 hours to 9,796 hours. In schools giving only the first two years of the course, the range is from 3,315 hours to 4,600 hours. The committee commended the course adopted by one school which proposes to make home study part of the published requirements. In the reports in which a comparison between the estimate of the students and that of the instructors was made, the result appears that the average time required of the student greatly exceeds the estimate of the instructor. In one case the instructor's estimate was two hours, while the student's estimate was from five to sixteen hours. This finding shows the need of checking up the matter of arrangement of the work.

Colleges are meeting the time requirement in two ways. One group believes that the time requirement of the curriculum, 4,000 hours, represents the total time to be required of the student. The other group requires 4,000 hours in the class-room and preparation time besides. The result is that the latter require nine and ten thousand hours of work. The university schools, in general, work on the basis of requiring outside reading and study, that there be as many if not more hours devoted to the preparation of lessons as are allotted for recitations, lectures and laboratory work. The committee appreciates that the entire medical knowledge cannot be acquired by the ordinary student in 136 hours; but the graduate must be thoroughly grounded in the principles of pathology and therapeutics so that he can command the scientific procedures by which additional knowledge is to be obtained. In many schools there should be a decrease in the amount of material presented, restricting the work to the teaching of the essentials and omitting the non-essentials.

The committee concludes that 1,920 hours represent the average requirement for a thirty-two weeks' year, or 2,160 hours for a thirty-six weeks' year. This makes an 8,000 hours' course as much as should be demanded. The course of study should be fitted to a definite number of hours and not to a conception of what we should like to have the student know. A syllabus must not dictate methods, but rather should indicate the relative value of the material to be taught in each department. Graduates are not now being turned out with a symmetrical training, or a training that fits them for practice.

The Addition of a Fifth Year to the Medical Curriculum

Dr. John M. Dodson: Object teaching has largely supplanted the didactic lecture and recitation in the first two years of the curriculum, but unfortunately it has made little progress in the clinical subjects. It is a marked advance in medical education, parallel to the raising of the entrance requirements and the lengthening of the medical course. It is unwise at the present time to contemplate any further advance in the requirements for admission as a universal standard in the near future. Two years of college work apparently is a sufficient requirement. The next step in advance, the most needed and under right conditions the most feasible, is the addition of a fifth or practical year to the present course of study, this year to consist of service as an interne in a hospital under supervision of the faculty, or, in exceptional cases, for those who look forward to a career of teaching and investigation, of advanced and research work in one or more departments of the college. This fifth year should precede the conferring of the degree. It may be conservatively estimated that there are about 700 hospitals in this country, of fifty beds or more each, an aggregate of over 90,000 beds. This number does not include sanitariums, special hospitals or infirmaries. About sixty-four hospitals, with 10,000 beds, are already controlled more or less completely by medical schools. About 300 hospitals, with approximately 45,000 beds, are located in cities in which medical schools may be found, but which are not operated or controlled by these schools. About 320 hospitals, with approximately 35,000 beds, are in cities containing no medical schools. Each one of these institutions means an intern for every twenty-five beds, so that every medical graduate may receive an internship. Six medical schools have an optional fifth year. One school requires this year for graduation. In Germany, Great Britain, and France the practical year is compulsory.

As to the curriculum for this fifth year: the hospital and dispensary are the laboratories for the clinical years, but the hospital is a place primarily for the care of the sick, and everything else must be subordinate to the welfare of the patient. No patient should be used as a clinical subject against his will. The hospital where complete and accurate histories are written, where thorough diagnostic methods are carried out in a well-equipped laboratory, is almost without exception under the control of a high-grade medical school. The hospital needs association with the medical school quite as much as the college needs the clinical material of the hospital. Hospital boards realize this and are asking college faculties to assume entire responsibility for the conduct of the hospital so far as its medical work is concerned. The maintenance of a hospital is not properly a function of the medical school, nor should the medical college attempt to duplicate hospital accommodations already in existence and probably in excess of the demands of the community. It should seek to establish the proper relationship to the hospital, and secure the necessary control which cannot fail to be of advantage to both the hospital and the school.

No college can assume the ownership and maintenance of a hospital of such magnitude as to supply internships to all of its graduates. A hospital in which satisfactory intern service may be had must have a good system of keeping clinical records, a well-equipped clinical laboratory and one or more members of the staff must be able and willing to supervise closely the work of the intern, correct his mistakes and give him needed instruction in the details of the practice of medicine. Such staff members may be made extramural members of the faculty, in order to secure their cooperation. A trained, salaried pathologist is a valuable addition to the hospital staff, and a school of nurses cannot fail to prove valuable educationally.

Of the student during this year of intern service it should be required (1) that he be under the immediate supervision of a member of the college faculty, to whom he reports, and who acts as his advisor. (2) The student should report at least once a month to his faculty superior, setting forth the nature of the cases he has had in charge, and certifying to the fact that he is writing accurate and complete clinical histories, is making the necessary laboratory examinations, etc. These reports should be attested by his sponsor on the medical staff. (3) He should, if possible, complete some piece of original research along clinical lines embodying his results in a thesis to be presented to the faculty and approved by them as a requirement for graduation. The interns of two or three schools may serve in the same wards. It will stimulate and broaden their views and be helpful in making them better practitioners.

DISCUSSION

Dr. Arthur Dean Bevan: I have been very much impressed with the necessity for introducing into the college curriculum, as an integral part, this intern year. I have found that in teaching surgery the time allotted is altogether too limited. We have in the third and fourth year less than six hundred hours to teach the students modern surgery in all its branches.

We feel that it is essential to give our men a thorough course in surgical anatomy; in surgical pathology; in operative surgery on the cadaver and on animals; a certain amount of dispensary work; to instruct them in clinics and in conference in general regional surgery; in anesthetizing and as much as we possibly can in the way of small class instruction groups in hospitals. When you add these courses all together, even though you are thrifty in saving your time, there is very little left of the six hundred hours—so little that the amount of actual hospital instruction one can give is not enough to round out the students' course. Even if you have small classes and absolute control of the hospital and all the material and facilities you can ask for. With the time allotted and the facilities for teaching, it is absolutely impossible, at least in surgery, to give the student anything like a thorough clinical course. In other words, it is essential to add this hospital year.

The only time we can have the student do the actual work of surgery is when he is part of a machine that is giving the patient medical and surgical attention, and that is the time when he is an intern in the hospital. I believe, then, that we are absolutely confronted with the necessity for making this intern year an integral part of the course and the student of good caliber has already done this before us. In our own school every man has had an internship, with the exception of two or three who for good reasons have not served. The medical student has himself seen the necessity for it.

Dr. Burton D. Myers: Three years ago, in Indianapolis, we established the fifth year. The first year we had no applicants for the special degree. Last year there were six who completed the work for the degree. This year twenty are candidates for the degree, seventeen out of a list of fifty graduates and three out of the preceding year's class. Now, there is something further in this optional fifth year than a mere hospital year, that is, the completion of an original thesis involving some original work. The first year they were not much interested in it, but lately we have made something of a feature of it at graduation. We insisted on the rewriting of some of the theses, and some were later published in a medical journal, and that was appreciated by the men.

Dr. F. F. Wesbrook: Last year I presented a paper here with reference to the action Minnesota had taken and asked for the experience of others who had instituted this fifth year. I was firmly fixed in my conviction that the fifth clinical year should be taken. Dr. Christian asked me if I did not think it would be just as well to add a year of laboratory work, instead, for those who were to teach. I expressed it as my opinion that this was not desirable—that all should take the hospital work. I have been converted. I do think that a year of laboratory work for those who are to teach, or specialize in these branches, might well be substituted for the hospital year.

Of the graduates of Minnesota about 80 per cent. become general practitioners and about 20 per cent. teachers or research men.

In Minnesota we now have our hospital in connection with the college, and we expect to appeal to people interested not only in educational work, but in charity of the highest type. I see very great and practical difficulties in the way of applying this year wisely at any very great distance from home. We have established very friendly relations with our municipally controlled institutions, and the managers are much interested in the plans, but they represent the municipality and we represent the state, and so there are no complications. But, suppose, we entered into relationship, for instance, with New Orleans? It would be an exceedingly hard matter for Dr. Dyer to examine these students, even after the matter of the expense of getting the students down there had been disposed of. But, on the other hand, if we could arrange with some member of the faculty of Tulane, for instance, to have supervision over these students, reporting back to our faculty, even this difficulty could be overcome. I am much interested in this whole subject, and think it absolutely necessary that we have this practical year, and I furthermore hope that a system of checking the work of these students will be devised. We have already, during our stay here, been struck forcibly with the inadequacy of our examination work with our teaching system. It is going to be just as difficult if you do not get some good method of putting a check on these students as well as to have something to show to other students, to handle this branch of study. They are going to have advantages that will be well worth their while. I think the mutual side of this requirement must be fully understood I should not wish to put my senior students into an institution which would be practically in control of one year of that student's training with no check at all on what he was able to do, so that if the institution were erroneously led to the conclusion that the student was not fitted for the work they could lose to him from two to any number of months of his work. That would be delegating to an outsider more power than we would want to give to any teacher.

That was a practical difficulty I had in mind in placing students in remote institutions. It will require very careful study and thorough understanding between student and faculty. I should like to see the time come when we may exchange students for the benefit of the colleges themselves, to prevent their becoming narrow and for the benefit of the alumni.

Dr. Reuben Peterson: The first thing we should do is to find out the actual conditions confronting us, have a personal inspection made to learn what these hospitals are doing in the way of instructing interns. After we have these facts in our possession, then we can take up with the various bodies having control of these institutions suggestions to improve conditions. I believe we are leaping ahead too fast. We must remember that the student has already tried to solve this problem for himself, but did not have it in his power. The minute one intern or several tried to improve conditions in the hospital they were suppressed and they did not get very far.

Hospitals are multiplying. Large institutions that have treated the question of intern service haughtily are finding that students are not applying to them. It can be handled along these lines and I believe handled very well.

I think we had better be careful about degrees and affiliation with hospitals. If we place hospital chiefs or clinicians on our medical school faculties we may possibly make a good many mistakes; but if we go carefully and find out the true condition of the hospital and then put them into Class B if they are not all that we think they should be, they will look to see what hospitals are in Class A and strive to get into that class. We can then submit to them workable plans for the work of interns, and it will enable us to accomplish much.

Dr. John M. Dodson: We should go to work deliberately, and no school should undertake to require of the student things which it is not able to furnish. It is true that we have students who do this of themselves, but to certify to it and have it incorporated in the diploma will mean something more. To my mind this movement is of far more importance to the hospital than it is to the medical school. The conditions in detached hospitals are deplorable. I believe that the service rendered and the research done in the wards will do more than anything else to elevate the work being done in these hospitals.

The Migration of Students

Dr. E. P. Lyon: Our personal duty to the individual student is our fundamental duty. If we can do right by the individual student we shall do right to the colleges and the state; we will see that his obligations are met; that his deficiencies are corrected; that he is protected from his misdirected inclinations. If need be, he will be kept from a profession for which he is not fitted. Every case is an individual case. The individual student means individual consideration, the breaking loose from rules and the application of principles rather than formulas. The first condition in dealing with the student is that someone must know all about it. Rules should be broken only when there is a good and sufficient reason for doing so, and a body of men should decide when this may safely be done. Neither the dean alone nor any member of the institution should be allowed to decide. A committee of the faculty should have the case of the individual student referred to it, with a power to break rules, as their training in educational methods and experience may indicate. The paid full-time instructors are pedagogues as well as practitioners. They are educators, they are always in touch with the work, and they, with a suitable representation from the clinical faculty, might well constitute such a committee.

Few good students come from good schools. A few good students change for reasons unconnected with education. Provided such reasons are honorable, such students should be accepted on the basis of equivalents of discipline rather than exact quality of subject-matter. The migration of good students should be encouraged. The poor students from good schools usually are not desirable. Much of the credit they have received is contingent. Frequently, however, one of these students will settle down to business and do well after his migration. A third class of migrating students includes those who come from poor schools. That does not mean necessarily that the student himself is a poor student; in fact, he is usually a good man who desires to better his condition. To refuse him all subject credit is unjust. His credentials and grades should be carefully gone over, and, if necessary, contingent credit may be given. For example, give him credit in dissection if he passes in topographic anatomy. This procedure is safe and it is sound pedagogically. Additional laboratory work may be required, or attendance in summer school or on short special courses. No student from an inferior college should be received into the senior year. We always require at least one complete laboratory course, even if the student is admitted into the junior year. In our experience the students from poor schools, who could be admitted, have done well. The school from which the student comes should always be consulted, and an exact statement obtained with regard to the student. Some schools refuse to respond to requests for grades or information regarding students who wish to enter another school. Such students may properly be received from their class grades or attendance certificates. Sometimes justice to the individual requires that a rule be not enforced. However, each case should be considered on its merits and the student held rigidly enough to test his ability and knowledge. Hard-and-fast rules cannot be followed, but certain principles find more or less general application.

DISCUSSION

Dr. William J. Means: The migrating student is certainly a very interesting specimen of the genus homo, exceedingly interesting to us in our college relations. I agree thoroughly with the doctor on the migrating student from the doubtful school. Some of our brightest and most intelligent students spent their first years in low-grade schools. They recognized their trouble and tried to right it. They are good students and we are glad to have them.

Of the second class of students—the doubtful student from the good institution—I have nothing to say. They come from good schools. We have half a dozen, more or less, in the first and second year that we would be perfectly willing to pass along to any one who wants some more students, and yet we cannot say they are absolute failures. I think some of the brightest memories of my work are of the students we have had who in their first and second years with us were not good students. They were bright young men, but they seemed to bear no responsibility on their shoulders of their work. They were encouraged and helped along until they did well in their last years, and have made good, strong men. I have known of many instances where men have been conditioned and have found it to be due to the personality of the teacher. At the end of the term they were examined and conditioned and they returned to their homes, many of them never to come back again. That is not right, and I wish to emphasize every point raised.

Dr. Reuben Peterson: The spirit of what Dr. Lyon has said should commend itself to every one of us. After all, rules are only for organization purposes, to give us lines along which medical schools should be run, and we should consider individual students and do by them, individually, as well as we can.

It is not so much the question of the failure of these students in their studies that leads them to leave one medical school, but the fact that a student who is not progressing at one school may go to another and find himself.

Dr. Alfred L. Gray: There is another class of migrating student that gives us trouble—the class who appeal to you for admission because, for some really good reason, such as ill health, wish to change during the session the school of their first choice.

Dr. John M. Dodson: There are just two points that I wish to make: One is the fact that medical schools do not deal fairly with each other in issuing to such students credentials setting forth their standing. I think it is better for schools to apply direct to each other for them, rather than to have them come through the hands of the students. If a student has been warned, disciplined or conditioned in any way that also should appear plainly. The students do not like it, but it is the only fair, right thing to do. I frequently say to students: I shall be glad to write a letter for you to any school you select recommending you to careful consideration, but I must tell the truth with regard to your record with us. The record must stand as it is if it is correct. If it is not correct, we will gladly investigate any seeming errors and correct them if necessary.

A great many of the students who come to us are from schools whose instructors used to be with us and who are familiar with us and with our requirements, with our standing and our records, and they are able to give us the information we need. Such a letter as that is the best possible method we have of evaluating the student. They act, in a way, as examiners of the student for us. Schools handling migrating students should know each other. I think it is a good thing for the dean to visit as many schools as he can. He can learn more during a half hour's visit at a school than he will ever know from perusing college announcements and curriculums. Then there is another plan which with our summer quarter we find very advantageous. A course of study is selected to give a student a knowledge of certain branches in which he is weak. That plan was instituted many years ago and has proved of great value to our own students. Students can come to us during the summer quarter and we can determine before the fall term begins what their standing is, whereas if they come to us at the beginning of a regular term we have no means of telling except by the credentials they bring.

Dr. Egbert Le Fevre: The college has a duty to the public and a duty to its other students. When a student comes to us without satisfactory credentials, what shall we do? If they go through one year and we find that they are absolutely unfitted for the study of medicine, shall we not stop them, if we can, from pursuing a hopeless professional life? Then we have those who, on the other hand, are unfit morally. We should stop them absolutely. We should always consider the individuality of the student. The automatic rejection has been bad. No man is rejected automatically, but before he is accepted the standing of the year must meet with the approval of the dean. No other man can approve it. That man must be reviewed by all the men present before he is rejected hopelessly. Conditioned men are given a chance to make up their work before they go down automatically. We are liberal in first examinations and they are given every chance. I have advised men who wanted to repeat the course to go elsewhere. I think it is bad for a man whom we have conditioned when the curriculum is so inelastic that he cannot repeat the course in which he has failed and lead to the next year. As medical schools we must come to the course method, whereby a man must have so many courses for graduation rather than to hold every man rigidly to six or eight weeks with no possibility for change. Some men could take eight years of one course that another would get through with in as many weeks. I hope that sometime we shall have a course system instead of a time system.

Dr. Henry A. Christian: We have had considerable experience with all sorts of migrating students, and there are two or three points coming out of our dealing with these men that I think may be of help to others. The first is that it seems to me important to explain to men coming from advanced standing the responsibility of his two years taken elsewhere in so far as meeting the requirements of the state board lies with the school from which he comes. The school to which he comes carries only the responsibility for the years with which he is with them. That explains the time incident. A man came to us from a university conducting a medical department and a collegiate department where it was possible for men to take certain years of collegiate work and then go into the medical department and for the complete course receive a combination diploma. That man had actually done medical work for two years to the satisfaction of the men teaching medicine. We had accepted him, but doing so did not make this explanation. He went to another state for registration. We gave him credentials for two years in medicine taken at Harvard and referred him to the other institution for the preceding two years. They gave him credentials, but in looking it up discovered that for one-third of one year, although taking medical work, he was not registered in the medical department. That man had great difficulty in getting registered in the state to which he applied, because he had not been registered for four full years in the study of medicine.

We have had many similar instances of the kind where the absolute rule of the state boards made it very hard for the man to register, so that we now say to each man who comes to us: if you apply for registration in any state we are not responsible for work in the other school, except as it is satisfactory to us. So far as your case appears on the surface we do not anticipate any trouble, but if trouble comes we are not responsible for it. We have to be exceedingly careful in receiving these men or we shall get into trouble with the state examining boards. We should not accept a student as having fulfilled the conditions of the institution to which we admit him unless we know he has had some preliminary training and could have fulfilled our requirements had he come to us in the first place.

Another point is the advisability of considering conditioned students. Let us say we accept a man to the second year, conditioned in anatomy. Is that right to the man? He is going to have a hard time anyway. He has the handicap of getting accustomed to new surroundings and work with which he is not familiar, new teachers, etc. Should we give him the additional handicap of a condition in some subject? I think not. I believe he should be entered for the full year or be advised to take the year over, not allowed to go on conditioned.

If you get him in the summer you can remove the conditions. If you get him in the autumn and then expect him to come up to your own students he will come out at the end of the year pretty badly damaged. If he is weak in anatomy, but you think he has had enough physiology to make it up, say all right, but do not pass him in conditioned. Either accept him to one year or the other. The matter of conditions and the necessity for meeting these was one of the conditions that led to the adoption of the plan of examinations by which a man is examined before receiving his degree, and by it he either passes or fails. If he passes he is entitled to begin the third year's work. If he cannot pass it, he must take the second year over. He is not entitled to take the first full examination until he has studied with us a year. For instance, if he comes in at the beginning of the second year he has a full year before him before he faces his first general examination. He has his work accepted on the standing he had at the other college, or he is required to pass the practical examination, but in either event before he comes to the first general examination he has passed his practical examination. He might be able to postpone the practical examination in anatomy until the end of the year if he wishes, but before he comes up for the general examination he must have passed the practical examination. In that way we can allow considerable latitude in examining, and we are responsible only for the time during which we have had him in charge.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Sciences, Philadelphia

March, CXLIII, No. 3, pp. 313-468

1 Functional Diagnosis of Pancreas Disease. J. H. Pratt, Boston.
2 Pellagra in Its Relation to Neurology and Psychiatry. B. R. Tucker, Richmond, Va.
3 *Gastric or Intestinal Hemorrhage as Early Manifestation of General Toxemia. N. Jacobson and C. D. Post, Syracuse, N. Y.
4 *Dietetic and General Management of Typhoid in Children. C. G. Kerley, New York.
5 Vaccination Against Typhoid in United States Army. A. W. Williams, Philadelphia.
6 *Experimental Study of High Intestinal Obstruction. J. A. Hartwell and J. P. Hoguet, New York.
7 Loss of Emotional Movement of Face with Preservation or Slight Impairment of Voluntary Movement in Partial Paralysis of Facial Nerve. W. G. Spiller, Philadelphia.
8 Relationship Between Erythema Nodosum and Tuberculosis, with Report of Case. F. S. Meara and M. Goodridge, New York.
9 Certain Changes in Elastic Tissue of Pelvis of Kidney and Their Relation to Hydronephrosis. H. Oertel, New York.
10 Thrombo-Angeitis Obliterans. T. H. Coffen and C. G. Heyd, New York.
11 Effect of Caffein on Nitrogenous Excretion and Partition. C. B. Farr, Philadelphia, and W. H. Welker, New York.
12 Cardiospasm; Treatment and Use of Esophagoscope for Examination. W. Lerche, St. Paul.

3. **Gastric Hemorrhage in Toxemia.**—Jacobson and Post claim that certain microorganisms, particularly those posses-

ing the characteristics of the pneumococcus are capable of provoking severe hemorrhages in various parts of the body, and that gastric and intestinal hemorrhage can be the first evidence of such a toxemia.

4. **Typhoid in Children.**—With the diagnosis of typhoid positive, Kerley dictates a list of permissible food articles. For a patient five years of age, the diet schedule includes gruels, usually two ounces of the cereal to the pint of water. Gruels are made palatable and their nutritional value increased by the addition of broths or milk sugar or sherry wine. Cereals very thoroughly cooked, such as rice, farina and a wheat cereal, are served with butter and cane or malt sugar or with maple syrup and butter. Milk foods are rarely given oftener than once a day. Among those used are matzoom, kumyss, eiweiss milch of Finkelstein, and skimmed milk. The latter is always given mixed with a gruel and rarely oftener than once a day. The whites of two, three or four eggs are given daily with orange juice, or frozen with orange juice and cane sugar and served in the form of a sherbet. Lemonade and weak tea, both with the addition of cane sugar, are given between the regular feedings.

Early in the convalescence scraped rare steak, custard, soft boiled egg and junket are allowed. It is advisable to feed the patient lightly for the first few days, until the organism adjusts itself and adapts itself to its changed condition, when freer feeding may be allowed. Food will be tolerated during the latter part of an illness which could not be taken during the earlier stages. Feedings are given never oftener than at three-hour intervals or less than four hours, in quantities that we know from observation the child will be able to take care of. One of the reasons for the considerable variety is that children soon "go stale" on any one article of diet; if given persistently, it is refused or taken in small quantities. If it is forced, it is very apt to be vomited; or if retained, the child in all probability will not digest it.

The diet schedule for a typhoid patient, aged 5 years, would be something as follows: 6 a. m.—Eight ounces of gruel with sugar or a small amount of broth added. Zwieback or dried bread and butter. 8 a. m.—A drink of weak tea with sugar or the whites of one or two eggs with sugar in orange juice. 10 a. m.—Farina, a wheat cereal, rice, served with butter and sugar, or maple syrup and butter. Drink of weak tea or kumyss or matzoom, or perhaps a dried milk food. 2 p. m.—Eight ounces of kumyss, matzoom, or skimmed milk diluted with gruel. Zwieback; dried bread and butter if wanted. 4 p. m.—Orange egg sherbet or a drink of lemonade or tea and sugar. 6 p. m.—Cereal or gruel with sugar and butter or with broth. If skimmed milk has not been given at 2 o'clock it may be given with gruel at this time. 10 p. m.—Gruel with sugar or broth or with wine. Fat in considerable quantity is poorly digested by young typhoid patients. It may be given, however, in small amounts when mixed with other foods. Foods containing protein should not be given in considerable amount until we know something of the course of the disease. Milk, scraped beef and soft boiled eggs are not well borne in young typhoid patients and a temporary reduction of protein is not felt by them. Drugs are of no service except to produce an evacuation when there are not two in twenty-four hours, and to control the evacuations when there are more than four in twenty-four hours.

6. **High Intestinal Obstruction.**—The following is a summary of the findings of Hartwell and Hoguet's work: 1. A high intestinal obstruction, that is, 10 to 30 cm. from the pylorus, in dogs, may not produce death for ten days, provided the gut wall is not damaged. If it is damaged by section and inversion the average life is only half as long. 2. There are found in the kidney and liver cellular changes which are the same as those found in many toxic diseases. The intestinal mucosa is found to be damaged to such an extent that it may readily be conceived that it has been deprived of its natural defense against the passage of toxic substances, unaltered, through it. 3. Bacterial invasion of the blood and organs does not necessarily occur. 4. Dogs deprived of food for forty-eight to seventy-two hours may die as early as those fed ten to twenty hours before the obstruction is produced. Decomposition of foodstuffs is not, therefore, an essential element in causing death. 5. If a double occlusion of the alimentary tract, with reestablishment of the continuity of its lumen, above the lower ileum be produced, the damage to all the tissues is greater than with a simple obstruction, and the course of the disease to a fatal termination is shorter. A double occlusion in the lower ileum produces much less damage than in the upper. 6. The action of the gastric juice, bile, pancreatic juice and duodenal secretions are not a requisite in producing the symptoms and pathologic changes seen in intestinal obstruction, because these are produced by a double occlusion in the upper ileum when none of these secretions are blocked. 7. Simple occlusion of the pylorus does not necessarily produce any evidence of a toxemia in two weeks, and the gastric mucosa at the end of this time shows no evidence of being damaged. 8. The above findings indicate that death from intestinal obstruction in dogs results from the presence of toxic substances in the circulating blood which produce fatal lesions in the kidney, liver and other tissues. The essential factor which admits these substances into the blood is an injury to the lining cells of the intestine caused by the irritating action of the stagnated contents, together possibly, with the mechanical damage due to stretching. The poisons themselves may arise from the secretory activity of the various digestive glands, or from bacterial activity. They may be the same as those found in the normal tract or they may be substances newly formed under the conditions of stagnation. Whatever their source, they are innocuous so long as the mucosa remains normal.

Bulletin of Medical and Chirurgical Faculty of Maryland, Baltimore

March, IV, No. 9, pp. 145-164

13 Surgery of Stomach. J. M. T. Finney, Baltimore.
14 Physician's Interest in National Standards; Conditions and Possibilities. H. P. Hynson, Baltimore.
15 Book and Journal Club of Medical and Chirurgical Faculty. H. B. Jacobs, Baltimore.

Maryland Medical Journal, Baltimore

March, LV, No. 3, pp. 53-78

16 Maryland's Annual Typhoid Problem. C. W. G. Rohrer, Baltimore.
17 Is Syphilis Hereditary? E. K. Tullidge, Baltimore.

Annals of Surgery, Philadelphia

March, LV, No. 3, pp. 330-472

18 *Indications For and Against Operative Treatment of Simple Fractures. J. H. Gibbon, Philadelphia.
19 *Treatment of Simple Fractures; Some End-Results. J. M. Hitzrot, New York.
20 Luxation of Ulna Forward at Wrist (Without Fracture). F. J. Cotton and W. J. Brickley, Boston.
21 *Osteomyelitis of Long Bones. J. Homans, Boston.
22 *Diagnosis of Diaphragmatic Hernia. H. Z. Giffin, Rochester, Minn.
23 *Management of Opening in Transverse Mesocolon in Completing Operation for Posterior Gastrojejunostomy. W. J. Mayo, Rochester, Minn.
24 Sarcoma of Small Intestine. J. Douglas, New York.
25 Inversion of Meckel's Diverticulum. H. Drummond, Newcastle-on-Tyne.
26 Primary Sarcoma of Male Urethra. E. G. Mark, Kansas City, Mo.
27 Combination Abdominal Retractor. D. C. Balfour, Rochester, Minn.

18. **Operative Treatment of Simple Fractures.**—There are, says Gibbon, of course certain indications for the open treatment which all recognize and follow, unless they are outweighed by equally positive contra-indications. In the first place, the situation of the bone or the type of the fracture may be a sufficient indication for operation; this is the case in fractures of the patella, in many fractures near a joint, in an epiphyseal separation which cannot be perfectly reduced, in some comminuted fractures, in those where a muscle or tendon or other tissue is interposed between the fragments, where a nerve-trunk has been caught under one of the fragments, and in all fractures where a fair reduction has not been obtained *after the exhaustion of all rational non-operative means*. Emphasis is laid on this last condition. A conscientious practice of the rule of exhausting the nonoperative means of reduction will obviate the necessity of operation in many so-called irreducible fractures.

19. **Treatment of Simple Fractures.**—Hitzrot believes that that method of treatment which offers the patient the most satisfactory functional result with the least danger should be the method of election in the treatment of the great majority of simple fractures. The method which most nearly fulfils the above requirements is the non-operative reduction of fractures. Operation he would consider not the method of election, but the method of selection for a carefully chosen group of cases, and in selecting the types for operation, each case must be considered a law unto itself.

21. **Osteomyelitis of Long Bones.**—Osteomyelitis of the long bones in children, Homans says, originates in the ends of the diaphyses, rarely as a periostitis. It principally attacks the weight-bearing bones. The early or primary operation demands the removal of bone for purposes of drainage only. The infected medulla should be fully uncovered without doing unnecessary damage to the periosteum or endosteum. Considering the power of regeneration of periosteum plus endosteum, early complete resection of a shaft is not advisable; therefore total resection later should be reserved for cases of total necrosis. The Roentgen ray he would not depend on for diagnosis in the very early stages, but it is invaluable in following the course of the disease.

22. **Diaphragmatic Hernia.**—A history of severe trauma, followed by upper abdominal and left thoracic pains, dyspnea and vomiting, together with physical findings pointing to displacement of the stomach or intestine into the lower left chest and of the heart to the right in Giffin's opinion will ordinarily be sufficient for making a diagnosis of diaphragmatic hernia. If the history and findings be definite, this will be true whether the patient is seen immediately after injury or some time later. Roentgen-ray findings will then be mostly of corroborative value. When, however, the injury has been less severe and the symptoms and signs less definite, and again in most cases of congenital diaphragmatic hernia, radiographic and fluoroscopic examinations must be relied on for a differentiation of the condition. In interpreting the plates (1) a destruction of the definite dome shape characteristic of the normal diaphragm line, (2) the appearance of lung tissue through the gas bubble in the left chest, and (3) the demonstration of bismuth in the colon above the level of the bow line of the chest constitute the most important evidence in favor of hernia of the diaphragm. By fluoroscopic examination the "paradoxical respiratory phenomenon" may be demonstrated.

23. **Disposition of Mesocolon in Gastrojejunostomy.**—Fastening the margins of the opening in the transverse mesocolon to the gastrojejunal suture line by several sutures and neatly tucking the edges underneath so there will be no raw surface to become adherent, Mayo finds an excellent practice and suitable in the large majority of cases. In the occasional case, however, in which the transverse mesocolon is quite fat, there is danger that adhesions will form, and he says this technic should not be adopted in these cases, but rather the old method of suturing to the posterior wall of the stomach three-fourths of an inch away from the gastro-intestinal anastomosing suture line.

Texas State Journal of Medicine, Fort Worth

March, VII, No. 11, pp. 293-318

28 Injuries to Spinal Cord, and Treatment. J. E. Thompson, Galveston.
29 Radical Mastoidostomy; Report of Two Cases. W. D. Jones, Dallas.
30 Sinus Thrombosis as Complication of Mastoiditis. J. H. Foster, Houston.
31 Dallas Epidemic of Meningitis; Laboratory Work. A. E. Thayer, Dallas.

Journal of Medical Society of New Jersey, Orange

March, VIII, No. 10, pp. 503-556

32 Recent Advances in Orthopedic Surgery. J. K. Young, Philadelphia.
33 Use of Cycloplegics and Mydriatics in Ophthalmology. L. Emerson, Orange.
34 Some Practical Points on Diseases of Upper Respiratory Tract. G. C. Stout, Philadelphia.
35 *Study of Alteratives. F. S. Gordon, Blairstown.
36 Lymphangitis. H. Chavanne, Salem.
37 Some Changes in Practice of Medicine Within Past Twenty Years. J. W. Martindale, Camden.

35. **Alteratives.**—It is advised by Gordon to use the alteratives both in health and disease, to give them in minute doses because if given in excess of the body's needs they act as poisons. He says: When a drug is being eliminated by urine, sweat or saliva, it is evidence of an excessive dosage and, unless especially indicated, the drugs iodin and arsenic should not be pushed to physiologic symptoms when a tonic effect is desired. In prescribing these drugs, administer when possible in organic form. Of the foods, spinach and apples contain the most iron; milk, figs, cabbage, lentils and cheese the most lime; cod liver oil, fish and blood, the most iodin; milk, eggs and fish the most phosphates. Until it is shown that cooking does not injure the lime salts in food, milk, cabbage and lentils should be served raw. Lime should be tried in all convulsive disorders, croup, tetany, infantile convulsions, puerperal eclampsia, muscular cramps, etc. In growing children, and in pregnant women, it is wise to investigate diet in order to know if lime is being assimilated in requisite amount. The most promising treatment for chronic alcoholism is that of generously supplying in the dietary all the elemental foods. There is great variation in individual diet. A close study of the dietary history of a patient may at times disclose the cause of an obscure nutritive disorder. To save the teeth of pregnant women, increase the amount of lime and fluorine in the diet. The chemical composition of a tissue sometimes furnishes a clue to therapeutic practice when the tissue is diseased. Parasitism, starvations and poisonings probably include all ills of men. The alteratives in excess are poisons; in normal amounts they are foods.

Journal of Tennessee State Medical Association, Nashville

March, IV, No. 11, pp. 431-471

38 Peritonitis. R. A. Barr, Nashville.
39 Surgical Aspect of So-Called Indigestion. L. L. Sheddan, Knoxville.
40 Diagnosis of Pneumonia in Infancy. O. W. Hill, Knoxville.
41 Anomalies of Amniotic Fluid. J. W. Cox, Johnson City.
42 Cardiac Neuroses. W. J. Matthews, Johnson City.
43 Elements of Insanity. M. Campbell, Knoxville.
44 Treatment of Fractured Femur. J. F. Gallagher, Nashville.
45 Extrauterine Pregnancy. R. Caldwell, Nashville.

Journal of Experimental Medicine, New York

March, XV, No. 3, pp. 205-306

46 *Dog Maintained in Good Health by Parathyroid Autograft W. S. Halsted, Baltimore.
47 *Lesions Produced in Appendix by Oxyuris Vermicularis and Trichocephalus Trichiura. R L. Cecil and K. Bulkley, New York.
48 *Pregnancy and Chloroform Anesthesia. G. H. Whipple, Baltimore.
49 Histologic Signs of Resistance to Transmissible Sarcoma of Fowl. P. Rous and J. B. Murphy, New York.
50 Production of Antibodies by Tissues Living Outside of Organism. A. Carrel and R. Ingebrigtsen, New York.
51 Experimental Production of Leprosy in Monkey (Macacus Rhesus), with Critical Study of Culture Employed. C. W. Duval and M. Couret, New Orleans.
52 *Bulkhead Suture of Intestine. W S. Halsted, Baltimore.
53 *Insusceptibility of Pups to Chloroform Poisoning During First Three Weeks of Life. G. H. Whipple, Baltimore.

46. **Dog Maintained in Good Health by Parathyroid Autograft.**—In a paper on the auto- and isotransplantation, in dogs, of the parathyroid glandules the histories of two of the dogs reported in the series of experiments were incomplete, the animals having been kept for further study. One of these dogs was observed for fifteen months and was in good health until the performance of the final operation at which a parathyroid auto-graft too small to be visible to the naked eye was removed. The death of the dog from hypoparathyroidism occurred about three months after the removal of the tiny transplant which was only 0.25 of a millimeter in one diameter and little more than this in the other. The dog lived three months absolutely without parathyroid tissue, so far, at least, as it was possible with the most painstaking search, to determine this fact. Whether or not there was somewhere in the animal's body a particle of parathyroid tissue remaining at the time of its death will, of course, never be known, but it is quite certain, Halsted says, that the removal of an "epithelial body" so small as to be practically invisible produced the almost inconceivable effect described, namely, death from tetany in an animal whose condition prior to the removal of the few cells had been excellent. The dog's organism had, it seems, in some

way accommodated itself to the loss of all of its parathyroid tissue, except the quite invisible remnant in the graft; so that on the removal of this minute fragment, the impression produced was neither so immediate nor so profound as it is after the excision of these glandules in the animal unprepared for their loss.

In confirmation of the story of this dog is that of another dog operated on three times in precisely the same way, on approximately the same dates, and affected in an almost identical manner. The differences observed in the two dogs tend to strengthen rather than weaken the argument which has been advanced. In the second dog both thyroids and all the parathyroids had been removed in two operations, and one parathyroid transplanted extraperitoneally at each of these. But the myxedema became excessive after the removal of the second thyroid lobe (second operation) and remained so to the end of its life a year later. Furthermore, mild symptoms of parathyroid privation persisted throughout, and finally, prolonged and thorough search (third operation) for the parathyroid autograft was negative in result although the sites of the transplantation of these bodies had been accurately recorded. Unfortunately, the nonresistent myxedematous tissues of this dog became infected in the course of the prolonged third operation and death from peritonitis followed so quickly that there was not time for the development of lethal tetany. The slight previous symptoms of hypoparathyroidism became, however, definitely intensified. At the autopsy no accessory thyroid could be found and not a trace of the transplanted epithelial bodies.

47. **Lesions Produced in Appendix by Oxyuris and Trichocephalus.**—In a study of 129 cases of appendicitis in children, Cecil and Bulkley found that in nineteen of them (15 per cent.) the appendix contained *Oxyuris vermicularis* or *Trichocephalus trichiura*. The oxyuris is much the commoner of the two parasites, occurring seventeen times, while the trichocephalus was found only twice. In fifteen out of the nineteen cases, the parasites were associated with a nonsuppurative catarrhal type of appendicitis. If four cases of catarrhal oxyuris appendicitis of adults be included, 83 per cent. of the cases of appendicitis associated with parasites have been of the catarrhal type. In the four remaining cases, the appendix was gangrenous. The cellular changes noted in the catarrhal cases have been, distension of the crypts with mucus, hyperplasia of the lymph follicles, and in some cases, the presence of a few leukocytes in the muscularis and serosa. In thirteen of the nineteen cases (70 per cent.), there have been noted, in addition to the cellular changes, certain lesions in the mucosa, unquestionably produced by the parasite. Of the six cases in which no specific lesions were demonstrated, the extensive gangrene in three of them might have obliterated specific lesions had they been present. Specific lesions were not demonstrated in any one of the four adult cases.

48. **Pregnancy and Chloroform Anesthesia.**—Whipple's experiments raise objections to the use of chloroform in pregnant women where an anesthetic must be continued for half an hour or longer. Chloroform anesthesia may be admissible for the few minutes at the end of the delivery, but when operative measures are necessary, before or after delivery, it is a dangerous anesthetic and surely capable of producing injury to the liver in the manner recognized in the case of normal persons.

52. **Bulkhead Suture of Intestine.**—Since his first report on this subject in 1910, Halsted has improved it by the substitution of paper cones for the licorice rods. Cones of any desired size and thickness can be manufactured in a few minutes by twisting and pasting together narrow strips of paper, one after the other, on a conical form of wood, the latter to be used later as a mandrel. The paper cones are armed, each with a rubber flange or ring cut from a catheter. The operation is then performed as follows: The peritoneal and muscular coats are divided and stripped back on the submucosa far enough to enable the operator to place two ligatures around the gut and to divide between these with the hot knife. To prevent the slipping of these ligatures which are of fine silk, and threaded on straight needles, they are made to engage, but not completely pierce, the submucosa at, say, three or four points before being tied. The paper cone armed with the rubber ring and mounted on the mandrel of wood is carried by the latter into the invagination. When invagination to the desired extent has been made, a ligature of strong silk is tied with force, binding the gut to the cone distal to the rubber flange. Both ends of the intestine having been treated in this manner, they are burned, close to the ligatures, down to and through the paper cones. The invaginated portion of bowel constitutes the bulkhead, the paper cones serving merely to sustain the pressure of the confining ligatures. The blood-supply having been undisturbed is, of course, perfect up to the exact site of the ligature. Precisely at this point the mesentery is transfixed close to the bowel with one of the fine milliner's needles carrying a thread for the circumvection ligature which is to occlude the ultimate little mesenteric vessel. The larger vessels supplying the gut distal to this point are now tied off by circumvection ligatures carried by needles of the kind named. The end-to-end anastomosis is then made with the continuous mattress suture described by Cushing and Halsted, reinforced here and there by an interrupted stitch.

53. **Insusceptibility of Pups to Chloroform Poisoning.**—Employing the liver necrosis as an index Whipple found that pups are immune to the poisonous action of chloroform anesthesia. This immunity or resistance to late chloroform poisoning is complete in the first week, very striking during the second and third weeks, and usually disappears during the fourth week of life. Nests of blood-forming cells (blood islands) are numerous in the sinuses of the liver during the first week and normally become progressively less numerous each week until the liver is almost free from these cells at the end of the fourth week of life. It is considered possible that these leukocytes in the blood islands protect the liver against the specific action of a known poison (chloroform). The mechanism of this hypothetical protective action is not understood, but it may consist of a process of neutralization. Perhaps this protective action against poisons is an important part of the functions of white blood cells and may bear an important relationship to the process of inflammation.

Kentucky Medical Journal, Bowling Green

March 1, X, No. 5, pp. 183-242

54 Acute Spinal Paralysis; Diagnosis and Treatment. J. J. Moren, Louisville.
55 Diagnosis and Treatment of Cerebrospinal Meningitis. J. H. Parker, Corbin.
56 Diseases of Prostate. S. M. Hopkins, Demossville.
57 Gonorrhea and Syphilis. J. J. Rodman, Owensboro.
58 One Year's Experience with Salvarsan. D. H. McKinley, Winchester.
59 Salvarsan; Report of Cases. P. D. Gillim, Owensboro.
60 Animal Experimentation; Its Contribution to Medicine and Surgery. W. E. Senour, Bellevue.
61 Sanitation in Schools. B. Warren, Crab Orchard.
62 Five Months' Experience in Tuberculosis Sanatorium. T. S. Talbott, Bardstown.
63 How to Prevent Tuberculosis. J. H. Hester, Munfordsville.
64 Narcodoulosis (Drug Habituation). J. B. Brasseur, Norway, Mich.
65 Medical Missions. D. O. Hancock, Henderson.
66 House-Fly and How to Get Rid of It. J. H. Peak, Louisville.

New York Medical Journal

March 16, XCV, No. 11, pp. 521-572

67 Colds. A. Jacobi, New York.
68 *Cause of Myopia. W. H. Bates, New York.
69 *Circulation of Cerebrospinal Fluid and Its Bearing on Pathogenesis of Poliomyelitic Disease. S. P. Kramer, Cincinnati.
70 Home Operations. W. F. Burrows, New York.
71 Moderately Contracted Pelvis and Induction of Labor. E. McDonald, New York.
72 *Significance of Group of Hemophilic Bacilli in Conjunctivitis, Especially in Trachoma. A. W. Williams, New York.
73 *Transduodenal Lavage. M. E. Jutte, New York.
74 *Fatigue in Relation to Colds. G. N. Kimball, Poughkeepsie, N. Y.

68. **Cause of Myopia.**—After twenty-five years' study of these cases, experience leads Bates to the conclusion that atropin does not always relax the near focus or relieve functional myopia. A study of the eyes of a large number of individuals in whom functional myopia was produced by an effort, unconsciously or voluntarily, is briefly summarized as follows: An unsuccessful effort of the normal eye to see

accurately new, strange, or unfamiliar distant objects was always followed either by myopic astigmatism, usually—compound myopic astigmatism, occasionally, or simple myopia infrequently. Mixed astigmatism was not observed.

69. **Circulation of Cerebrospinal Fluid.**—Kramer is engaged in an experimental investigation in which it is sought to produce the condition found in acute anterior poliomyelitis by the injection into the spinal subarachnoid cavity of dogs of various poisons. After the injection of morphin, dogs show a motor paralysis of the posterior extremities, sensation remaining intact. This motor paralysis disappears after twenty-four hours. On injecting small doses of dilute hydrocyanic acid, a motor paralysis of the posterior extremities, associated with general convulsions, is produced. The convulsions disappear after an hour; the motor paralysis remains. Such animals have been kept alive for seven days, the motor paralysis persisting, sensation being unaffected. These cords show a degeneration of the motor cells in the anterior horns and a beginning replacement fibrosis.

72. **Bacilli of Conjunctivitis.**—In all, 128 strains of a hemoglobinophilic bacillus have been isolated by Williams and her co-workers from 213 cases and they have as yet not been able to find any distinct differential points between any of them or between their strains and those of *B. influenzæ* as described by others or as studied by them. Williams suggests that the hypothesis that one or more of the group of hemoglobinophilic bacilli is the cause of trachoma explains many other hitherto unexplainable phenomena of this disease: (1) Its irregular onset; (2) its insidious course; (3) its variable contagiousness with its exacerbations of secretion; (4) the continued presence of trachoma in certain districts where helping causes are present, etc. Naturally suitable monkey inoculations would in all probability be all that is necessary for proof or disproof.

73. **Transduodenal Lavage.**—The modus operandi employed by Jutte is as follows: After swallowing the duodenal tube to a point about 20 cm. beyond the mark which indicates the distance from mouth to pylorus, the patient lies down on his right side and drinks about 100 c.c. of water. This position very soon brings the heavy end of the tube near the pylorus, while the peristalsis of the stomach propels the water onward and carries along with it the end of the tube. On turning on the faucet, part of the water swallowed and some secretion are aspirated into the flask. If the reaction is acid, the end of the tube is likely to be still in the stomach; if alkaline, it is in the bowel, except when regurgitation of duodenal secretion into the stomach has taken place. Hyperacidity is apt to cause delay in the opening of the pylorus, which may be overcome by giving some sodium bicarbonate.

For irrigation of the bowel, Jutte disconnects the apparatus on reaching the duodenum, and attaches the catheter tube to an irrigator containing about 1,500 c.c. of a solution of 1 to 1,000, made with sapo medicatus to which is added 14.5 grams of sodium chlorid which, to some extent, prevents rapid absorption of water and allows of the flushing out of still lower segments of the intestinal tract. While the fluid runs in, the patient lies on his back and receives abdominal massage to make the cleansing process more effective. After the treatment he rests awhile and is then directed to rise slowly. Within an hour he usually has a copious movement.

74. **Fatigue and Colds.**—Fatigue is the outward and visible sign of an inward and active poison or toxemia, and that toxemia means lessened resistance to colds, as well as to many other morbid invasions. Rest, local disinfections, and stimulation by proper food and air, Kimball suggests as the royal roads to avoiding as well as curing colds.

Journal-Lancet, Minneapolis, Minn.

March 1, XXXII, No. 5, pp. 113-140

75 *Prevention and Treatment of Ventral Hernia. E. S. Judd, Rochester, Minn.
76 Hospital of University of Minnesota: Its Economic and Educational Value. C. L. Greene, St. Paul.
77 Bone-Formation in Abdominal Cicatrix Following Laparotomy. C. L. Sherman, Luverne, Minn.
78 Laryngeal Papilloma and Subperitoneal Pedunculated Fibroid. A. A. Law, Minneapolis.

75. Also appeared in *Surgery, Gynecology and Obstetrics* for February, 1912.

Boston Medical and Surgical Journal

March 14, CLXVI, No. 11, pp. 399-438

79 *Continuous vs. Interrupted Hospital Service. R. H. Fitz, Boston.
80 Nursing and Public Health. A. Nutting, New York.
81 *Outdoor Treatment of Puerperal Infection. E. B. Young and J. T. Williams, Boston.
82 *Tubercular Epididymitis; End-Results of Seventy-One Cases. J. D. Barney, Boston.
83 Bone Lesions Accompanying Chronic Leg Ulcers. W. P. Coues, Boston.
84 Disappearance of Ovarian Tumor After Vesicular Mole. S. Rushmore, Boston.

79. **Hospital Service.**—In brief, the question of the introduction into hospitals of a continuous or an interrupted service seems to Fitz to depend, first, on the source from which the hospital derives its funds, that is, from endowment or taxes. Although all hospitals are for the immediate benefit of the sick, in a civic hospital opportunities for teaching and research must be subordinate. They are called for and justified on the ground that through them a better grade of physician and surgeon can be secured for the hospital and can be developed in it. The endowed hospital is less urgently called on than the civic hospital to maintain an interrupted service, for taxpayers are justified in the demand that it is more important for them to have many well-trained practitioners at their call than fewer but more highly trained physicians and surgeons. In endowed hospitals, unless thoroughly identified with teaching, a combination of continued and interrupted services, open only to competition through merit, offers more favorable opportunities for more highly trained practitioners and producers than a continuous service alone. An endowed hospital so situated and so controlled as to place research, teaching and the care of the sick on an equal plane, and able to induce the exceptionally qualified man, wherever he may be found, to assume charge of these threefold interests, should come to such terms with him as to control of service, appointment of assistants, equipment and salary as would urge him to relinquish all but the most exclusive practice and thus assure his acceptance of a position which necessitates leadership.

81. **Outdoor Treatment of Puerperal Infection.**—According to the authors, the outdoor treatment has reduced the mortality of severe puerperal infections by nearly 20 per cent. This treatment they believe probably exerts its action chiefly by increasing the amount of hemoglobin in the blood, therefore, sunlight is probably quite as important as fresh air. Curettage, they hold, is contra-indicated in puerperal infection, because it increases the mortality nearly 10 per cent. A single intra-uterine douche of sterile salt solution should be the only local treatment. Antistreptococcic serum and vaccines have proven of much value.

82. **Tubercular Epididymitis.**—Of these seventy-one cases, twenty-two were personally examined by Barney on one or more occasions, forty-one were seen by others, while eight were followed by letter only. Twenty-six patients were seen after unilateral operation and without involvement, when seen, of the opposite side; twenty-three returned as reentries to the hospital with infection of the second epididymis; twenty were examined after bilateral operations. Of the two remaining, one was seen by Barney before and after a subsequent double epididymectomy, while the other case is still unoperated. In Barney's opinion these results show that orchidectomy is no more curative than epididymectomy, and, except in rare instances, is an unjustifiable procedure; 76 per cent. of those operated on are now in good condition, in spite, in some cases, of the presence of tuberculosis; 51 per cent. had definitely gained weight, while in 17 per cent. there was no change, in other words, no loss of weight.

Bulletin of Johns Hopkins Hospital, Baltimore

March, XXIII, No. 253, pp. 65-96

85 Proteins. A. Kossel, Germany.
86 Pathology of Fat Metabolism. F. M. Hanes, New York.
87 Samuel D. Gross: America's Foremost Surgeon. C. W. G Rohrer, Baltimore.

Journal of Michigan State Medical Society, Battle Creek

March, XI, No. 3, pp. 151-210

88 Nitrous Oxid-Oxygen Anesthesia. R. R. Smith and R. Mauritis, Grand Rapids.
89 *Physostigmin Combined with Morphin in Treatment of Pain Following Abdominal Operations. B. R. Schenck, Detroit.
90 *Coloptotic Constipation. L. J. Hirschman, Detroit.
91 Fever of New Born. E. Boise, Grand Rapids.
92 Puerperal Infections. A. S. Wheelock, Goodrich.
93 Some Things to Be Remembered in Management of Stricture. A. E. West, Kalamazoo.
94 Office Management of Rectal Diseases, Surgical and Non-Surgical. J. A. McVeigh, Detroit.
95 Results of Treatment at Michigan State Sanatorium. E. B. Pierce, Howell.

89. Abstracted in The Journal, Oct. 21, 1911, p. 1392.

90. Abstracted in The Journal, Oct. 28, 1911, p. 1484.

Medical Record, New York

March 16, LXXXI, No. 11, pp. 501-550

96 Importance of Disease in Plant and Animal Evolution. R. G. Eccles, Brooklyn.
97 Relation of Pelvic Disease in Women to Osteoarthritis. W. A. N. Dorland, Chicago.
98 *New Antiserum for Cancer. W. N. Berkeley and S. P. Beebe, New York.
99 Clinical Accounts of Thirteen Cases Treated with New Antiserum for Malignant Disease. W. M. Ford, New York.
100 Beriberi. V. G. Heiser, Manila, P. I.
101 Schools for Midwives. I. S. Wile, New York.
102 Treatment of Eczema Rubrum of Lower Extremities. P. E. Bechet, New York.
103 Malaria in Infant Five Months Old, Simulating von Jaksch Anemia. A. C. Henderson, New York.
104 *Family Fatalities; Heredity, Environment or Accident? W. S. Mills, New York.
105 Foreign Bodies in Vagina. W. J. Robinson, New York.
106 The Autopsy; a Letter to the Public. R. Stein, New York.

98. **New Antiserum for Cancer.**—What has so far been accomplished by Berkeley and Beebe may be stated as follows: By successive injections of a specific human cancer extract (the cancer being partially removed by operation) into an alien mammalian species it appears that a serum may be developed which, when injected intramuscularly, or better, intravenously, in increasing doses into the original host, is followed by rapid regression and disappearance of the remains of the tumor. There is a strictly quantitative relation between the amount of serum used and the amount of tumor which may be made to disappear. No ill effects have been so far observed from the injections of the serum (16 cases), except local swelling and the anaphylactic fever and vasomotor disturbances noted after giving an equal amount of normal foreign serum. Present clinical results are briefly as follows: Sixteen cases of malignant disease in all stages of advancement have been treated in the last nine months. A microscopic diagnosis was made in all but three cases. Fifteen were cancer and one was sarcoma. Nine received stock serum, one received autogenous serum after a secondary operation, six received autogenous serum after a primary operation. Of the nine patients receiving stock serum two were moribund when first seen, and died quite uninfluenced by the injections; another, having cancer of the esophagus, was remarkably benefited for several weeks; one, with an immense cancer of the tonsil, was somewhat benefited temporarily. One very extensive primary cancer of the bladder has not been recently heard from, but was probably not benefited. Of two immense cancers of the stomach, one was entirely unaffected, one slightly improved. One patient (breast case), after two months of injections, is nearly well and in excellent general condition. Another case (uterine cancer recurrent in the bladder) recovered promptly and has remained entirely well for four months. In one far advanced breast case receiving a small amount of autogenous serum after a secondary operation, the patient was greatly improved, but subsequently died of intercurrent acute disease. Of the patients receiving autogenous serum after a primary operation one is still under treatment, greatly improved; the others have had no recurrence within a period ranging from three to six months. The present impression of the authors is that autogenous serum is much more effective than stock serum. It is believed that the great field of usefulness of the new serum will be to prevent the recurrence of malignant tumors removable in the early stages by operation. There is no indication from present experience that large inoperable cancers and sarcomas will be amenable to the serum treatment. Treatment, to be effective, must be early if there is to be any reasonable quantitative relation between tumor and antibody.

104. **Family Fatalities.**—Mills recounts instances of burning, drowning, deaths by accident or by murder, occurring repeatedly in families, and asks on what basis such curious happenings may be explained. He says that the fact remains if the deaths had been caused by the same disease, heredity or family predisposition would have been put forward as the cause. What is the underlying cause that makes similar accidents happen to different members of the same family?

Lancet-Clinic, Cincinnati

March 2, CVII, No. 9, pp. 229-262

107 Eradication and Prevention of Bubonic Plague. W. C. Rucker, Washington, D. C.
108 Pellagra; Study in Epidemiology. R. M. Grimm, U. S. P. H. and M.-H. S.
109 Treatment of Cerebral Hemorrhage. E. M. Hummel, New Orleans.
110 Importance of Proper Feeding After Celiotomy. J. H. Carstens, Detroit.

March 9, CVII, No. 10, pp. 263-288

111 Our Social and Moral Scourge. B. L. W. Floyd, Evansville, Ind.
112 Colon Bacillus Infections of Urinary Tract. I. S. Koll, Chicago.
113 How to Fulfil Purposes of Ohio Association of Medical Teachers. H. K. Dunham, Cincinnati.

American Medicine, Burlington, Vt.

February, VII, No. 2, pp. 67-126

114 Diagnosis and Treatment of Kidney Tuberculosis. M. Packard, New York.
115 Transperitoneal Operations on Bladder. P. Syms, New York.
116 Nephrolithiasis. W. Ayers, New York.
117 Hydronephrosis. C. H. Chetwood, New York.
118 Use of Fats in Disorders of Stomach. A. Freeman, New York.
119 Stomatitis in Children. L. Kerr, Brooklyn.
120 Dichotomy, or Division of Fee Between Physicians. W. W. Vinnedge, Lafayette, Ind.
121 Digitalis or Digitalin? W. F. Waugh, Chicago.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

Omitted from February Number

122 Causes of Appendicitis. G. K. Dickinson, Jersey City, N. J.

March, LXV, No. 411, pp. 393-556

123 The Midwife. A. B. Emmons and J. L. Huntington, Boston.
124 Preparation of Patient Before Operation. H. Grad, New York.
125 Childbirth in Elderly Primipara. K. C. Spain, St. Louis.
126 Blood-Pressure in Pregnancy. C. H. Judd, Detroit.
127 Three Cases of Antepartum Eclampsia with Conservative Treatment. C. E. Ferguson, Indianapolis.
128 Relation of Vaginal Hysterotomy to Problem of Rapid Vaginal Delivery. A. Hussey, New York.
129 Nervous Phenomena as Sequelæ of Changes in Pelvic Viscera. C. N. Ballard, Oklahoma City, Okla.
130 Symptomatology of Infantile Paralysis. J. V. Manning, Brooklyn.
131 Interpretation of Unusual Types of Poliomyelitis. T. A. Williams, Washington, D. C.
132 Prune-Juice Vomiting as Symptom in Cyclic Vomiting in Children. R. S. Morris, New York.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Practitioner, London

March, LXXXVIII, No. 3, pp. 353-488

1 *Anemic Vomiting. A. P. Beddard.
2 Some Appliances of Use to General Practitioner in Treatment of Diseases of Throat, Nose and Ear. J. D. Grant.
3 Four Hundred Operations Involving Peritoneal Cavity. J. D. Malcolm.
4 Analysis of 500 Operations Performed Under Influence of Spinal Analgesia by Use of Stovain-Glucose Solution. L. McGavin and R. D. O'Leary.
5 *Congenital Hypertrophic Stenosis of Pylorus in Infancy. C. P. Lapage.
6 *Causation and Treatment of Dislocation of Ulnar Nerve from Anatomic Standpoint. C. Woodward.
7 Inunction Treatment of Syphilis as Carried Out at Foreign Spas. D. Freshwater.
8 Morbid States Produced by Chronic Movable Kidney. P. Hicks.
9 *Relation of Chorea to Rheumatism; Analysis of 300 Cases. M. S. Fraser.
10 Minor Accidents in General Practice. M. C. S. Lawrence.
11 Case of Simple Obstructive Jaundice with Huge Dilatation of Common Duct. C. E. L. Burman.
12 Cerebellar Tumor Causing No Symptoms Till Shortly Before Death. A. E. Crabbe.
13 *Auto-Serum Treatment of Ascites; Cirrhosis of Liver in Infant. M. Lahiri.

1. **Anemic Vomiting.**—Four cases of anemic vomiting are cited by Beddard occurring in women. He says such patients

are liable to severe attacks of epigastric pain and vomiting, which may be mistaken for gastric perforation and frequently for gastric ulcer. The symptoms of anemic vomiting are pain in the epigastrium and vomiting. Almost everything placed in the stomach gives rise to the pain, which is relieved by the vomiting. The symptoms point to hyperesthesia of the mucous membrane of the stomach, which in turn is due to dilatation of the heart. An active stretching of the cardiac muscle is a common process in anemic girls, especially when they have to do comparatively hard work. This process is frequently associated with severe pain and tenderness referred to two parts of the body: (a) The skin and muscles under the left breast. Many of these patients complain of this pain; in others the tenderness is demonstrated only by firm palpation. There is, of course, nothing the matter with these structures, although they may be so tender that the patient cannot bear her clothes to touch them. (b) The mucous membrane of the stomach. This may become so hyperesthetic that whatever touches it causes pain and the stomach empties itself. If pain is thus referred from a stretching heart to the stomach, it follows that anything which suddenly increases the stretching process will increase the pain in the stomach and lead to vomiting. Therefore, in anemic vomiting, exertion, like running upstairs, is liable to bring on just the same pain and vomiting as food does; if the exertion is long and arduous, the attacks of pain and vomiting may be so severe as to roughly simulate perforation of the stomach.

Beddard says that these very severe attacks, which may induce the unwary to open the patient's abdomen, are in many respects comparable to the gastric crises of locomotor ataxia. In both conditions pain is referred to the mucous membrane of a stomach which may in itself be perfectly healthy, and yet the hyperesthesia of the stomach may be so great as to lead to severe and prolonged attacks of vomiting; of course, the ultimate cause of the pain in the two conditions is different. The treatment comprises absolute rest in bed, diet, 2 drops of Fowler's solution three times a day. To this may be added at once, or in the course of a few days, 10 grains of citrate of iron and ammonia.

5. **Stenosis of Pylorus in Infancy.**—The actual medical treatment of stenosis of the pylorus in infancy is outlined by Lepage: 1. Carefully regulating the feeding, with easily digested foods, which leave no residue and have the greatest chance of passing the pylorus. Small feedings given frequently are necessary, and 1 ounce every hour, or even teaspoonful feeds very frequently, will be found the best in the early stages. As the child improves and the vomiting ceases, larger amounts at longer intervals may be given. Peptonized milk, whey and albumin water, meat juice and other foods may be tried. A change in the food may lead to a temporary improvement, but the vomiting soon becomes as bad as ever. 2. Gastric lavage, which is a very important part of the treatment, partly because it empties the stomach regularly without causing nearly so much strain as does vomiting, and partly because it soothes and cleans the gastric mucous membrane. 3. Want of fluid naturally follows on the excessive vomiting. It is no good pouring fluid into the stomach, because, Lepage says, it only adds to the dilatation; on the other hand, rectal salines or infusion can and should be used without hesitation. If the large intestine is irritable, or if there is much evidence of want of fluid in spite of rectal salines, infusion with normal saline should be used. The value of feeding with nutrient enemata is doubtful, but in some cases there does seem to have been some improvement, and from the nature of the returned stools a certain amount of digestion seemed to have taken place. Inunction with cod-liver oil may do good, and brandy is also very useful, both to keep up the strength and from the medicinal effect it seems to have in aiding digestion. Drugs are not of much value. In the cases of gastric spasm, antispasmodics may have a very good effect and small doses of tr. opii or belladonna should certainly be tried.

6. **Dislocation of Ulnar Nerve.**—The method employed by Woodward in one case to prevent the dislocation of the nerve was as follows: The incision was slightly curved in order that the suture-line should not overlie the nerve. A flap of the deep fascia forming the aponeurosis over the common flexor origin was dissected inward and slightly upward, from off the underlying muscles, right up to the very tip of the internal condyle. The flap, which was about a third of an inch in breadth and rather more than 1 inch in length, was then turned back and stitched with fine silk to the inner margin of the triceps tendon near its insertion and to the lateral aspect of the olecranon itself in its upper part. The ulnar nerve itself was not interfered with in any way. The skin incision was closed and the arm put up in the extended position. The stitches were all removed by the eighth day. On flexing the elbow the nerve no longer slipped forward over the condyle, nor did it show up as prominently as before. He has had no recurrence of the trouble, and his work, that of wire-drawer, causes him no inconvenience.

9. **Chorea and Rheumatism.**—From the analysis of 300 cases, Fraser is convinced that the majority of cases of chorea are closely associated with rheumatism, and that possibly all cases of true chorea are rheumatic in origin. He says that the fact that almost all cases of chorea examined post mortem show endocarditis may be fairly taken as very strong evidence in favor of the rheumatic theory of chorea.

13. **Treatment of Ascites.**—Lahiri's patient, a child of 18 months, had been ill for eight months with a hard, enlarged liver (2½ inches below the costal arch). Medical treatment gave symptomatic relief, but the enlarged liver and ascites were still present. Following the experiment of Audibert and Monges, Lahiri injected 0.5 c.c. of the child's serum into the cellular tissue of the flank. The urine began to increase in frequency next day and continued for four or five days. On the eighth day the second injection was given, this time 1 c.c. being used. Thus continuing, the last injection, which was received six weeks after the first, was 2 c.c. and has apparently cured the little patient. The enlargement of the liver and that of the spleen are gone; the urine is almost normal. The child has been allowed to eat bread and pulse and is thriving.

Sei-I-Kwai Medical Journal, Tokyo

February 10, XXXI, No. 2, pp. 115-130

14 *First Report on Action of Phenyl Urea. H. Sewaki.

14. **Action of Phenyl Urea.**—Phenyl urea is a derivative of urea, made by Sewaki in the beginning of 1911. The present report is only a preliminary part of his studies. It embraces the study, first, on the properties of phenyl urea; second, on the action of phenyl urea on animals; third, on the habitude of phenyl urea; fourth, on the absorption and excretion of phenyl urea; fifth, on the effect of phenyl urea on strychnin; sixth, comparative study of the action of urea, anilin and phenyl urea on the mouse. Phenyl urea is a light, brownish, white fluorescent crystal; soluble in boiling water, alcohol and ether. The melting point is 146 C., molecular weight 125. Its structure is C_6H_5-NH-CO-NH_2; it has a neutral reaction. In small doses, it affects only motor centers; in large doses motor and sensory nerve centers are affected as well. When a maximum dose is used the affected animal falls into deep sleep and awakes four to ten hours afterward, without any ill effect. During sleep the cardiac and respiratory centers are not interfered with. Repeated injections of phenyl urea induce accumulation to a very slight extent. Phenyl urea has a power to restrain strychnin convulsions.

Australasian Medical Gazette, Sydney

January 13, XXXI, No. 2, pp. 25-48

15 Importance of Lumbar Puncture in Plumbic Ocular Neuritis of Children. J. L. Gibson.
16 Mosquitoes and Disease. R. Dick.
17 Case of Successful Removal of Cerebral Tumor from Right Parietal Cortex. R. H. Marten.
18 Infantile Diarrhea and Its Treatment. H. A. Ellis.

January 20, XXXI, No. 3, pp. 49-76

19 Feeble-Minded; Classification and Importance. H. Sutton.
20 Position and Needs of the Profession. W. Dalsh.
21 *Unique Case of Rupture of Common Bile Duct. O. F. Paget.
22 Snake Bite. E. Florence.

January 27, XXXI, No. 4, pp. 77-100

23 Paramyoclonus Multiplex Epilepticus of Unverricht. J. C. Verco
24 Proposed Technic for Prevention of Dengue Fever and Filariasis. T. L. Bancroft.

25 Some Meeting Points of Obstetrician and Surgeon. W. T. Chenhall.
26 Retroversion of Uterus and Rupture of Intestine. G. S. Samuelson.

February 3, XXXI, No. 5, pp. 101-124

27 Medical Politics. R. Bowman.
28 Operative Treatment of Retrodisplacements of Uterus. J. A. G. Hamilton.
29 Alcoholism and Suggestion, with Two Extreme Cases. J. Boyd.
30 Pulsating Tumor of Nasopharynx Removed by Moure's Operation. O. Smithson.

February 10, XXXI, No. 6, pp. 125-148

31 Fatal Reflex Syncope During Chloroform Anesthesia. A. J. Turner.
32 Postoperative Cardiac and Pulmonary Embolisms. P. T. Thane.
33 Romance of Medicine. J. W. B. Bean.
34 Death During Thyroidectomy. G. R. Ward.

21. **Rupture of Common Bile Duct.**—Paget's patient was run over by a sulky. The liver had been apparently torn from its suspensory ligament and rotated forward, its superior surface becoming an anterior surface, and allowing the closed fist to be easily accommodated between the liver and diaphragm. The anterior edge of the liver was found flattened out like a ribbon some inch and a half wide, and was adherent to the transverse colon. The gall-bladder, adrift from the liver, hung by a pedicle consisting of its duct, and, obviously, its blood-supply, since there was no appearance of gangrene. The line on the liver whence it had been torn away was distinctly visible. The point of leakage of bile was located in the main duct in the hepatoduodenal ligament. During the efforts made to dissect out the duct the patient's condition became so serious as to necessitate finishing the operation. A large rubber tube, containing gauze, was therefore passed down to the region of the tear, and the abdomen closed. The patient was barely resuscitated by subcutaneous salines, pituitary hypodermically, etc., before being taken off the table. The gall-bladder was suspended to the liver in its proper position by a single gut suture, with the idea of making it easy to find at a second operation.

The second operation was performed, and everything differed from the expected. (1) The liver had regained its normal position and was adherent to the diaphragm; (2) the gall-bladder had again come adrift and was nowhere to be found; (3) of course, there were many adhesions from drainage, tube tracts, etc. The gall-bladder, completely retroverted on its pedicle, and, disguised by liver-colored adhesions, was ultimately found adherent to the posterior surface of the liver. It was quickly sutured to the colon, and the abdomen closed with a rubber drainage tube.

There are many interesting points in this case: (1) The result of a practically aseptic rupture of the common duct, which allowed no bile to enter the intestine, but let it accumulate in the peritoneal cavity was limited to (a) intense emaciation, (b) jaundice. All other symptoms were secondary to pressure. The temperature had been normal. (2) The presence of fluid in the closed abdomen apparently checked the formation of adhesions. (3) As a result of paracentesis, the temperature shot up to 103 F., and then returned to normal. (4) After the first operation, which was practically a mere draining away of bile from the abdominal cavity, the temperature was immediately typical of a mild septic case, ranging the first week between 102 F. and normal, the second week 101 F. and normal. There was absolutely no evidence of peritonitis or sepsis. Within twenty-four hours of operation the patient was fed freely. There was never any vomiting, and the bowels acted within twenty-four hours without medicine. A small degree of swelling at the lower end of the wound was at the second operation found to be blood extravasated, where the muscle had been divided. It was partially organized as white clot, and in no degree purulent. (5) In spite of jaundice, there was no hemorrhage at either operation, and no ligature to the vessels was used. (6) The fact that the gall-bladder and duct can be freely separated from the liver without fear of gangrene is of value in gall-bladder surgery. (7) Hypodermic injections of pituitary gland were given for days and weeks. They unquestionably prevented the patient from dying. (8) The patient's collapse at operation was appalling, and only equalled by his rally-power. After both operations he was fed as often as possible, immediately after recovering from the anesthetic. He never vomited.

Lancet, London

March 2, IX, No. 4618, pp. 557-628

35 Glycosuria. A. E. Garrod.
36 Significance of Symptoms in Cases of Duodenal Ulcer. C. M. Moullin.
37 Differential Diagnosis of Certain Infectious Diseases. F. Thomson.
38 Cystitis; Its Causes and Treatment. D. Newman.
39 Volvulus Coincident with Strangulated Hernia. F. Fraser.
40 Vaginal Pessary Retained for Twenty-Nine Years. A. C. Butler-Smythe.
41 Two Cases of Pneumonia Treated with Pneumococcus Vaccine. G. P. Jones.
42 Examination of Medical Provisions of National Insurance Act. W. A. Brend.

Australian Medical Journal, Melbourne

January 13, I, No. 26, pp. 273-284

43 Seven Years' Experience of Value of Roentgen-Ray and Electro-Therapeutics. S. Argyle.
44 Cause and Treatment of Summer Diarrhea in Children. A. J. Wood.
45 *Case of Cirrhosis of Liver with Recurring Ascites Treated by Drainage Into Subcutaneous Tissues. J. E. Piper.

January 20, I, No. 27, pp. 285-296

46 Report of Investigation in Syphilis Made in Melbourne from June 1, 1910, to May 31, 1911. K. Hiller.
47 Treatment of Summer Diarrhea. H. D. Stephens.
48 Etiology of Infantile Diarrhea. R. L. Forsyth.

January 27, I, No. 28, pp. 297-308

49 Laceration of Cervix. G. Horne.
50 Pneumonia Simulating Perforation in Convalescing Typhoid Patient. W. R. Groves.
51 Doctrine of Complexes. C. G. Jung.

February 3, I, No. 29, pp. 309-320

52 Talbot Milk Institute. A. J. Wood.
53 Case of Popliteal Aneurysm; Obliterative Endoaneurismorraphy. R. S. Cross.

45. **Cirrhosis of Liver with Recurring Ascites.**—The abdomen of Piper's patient was tapped and 350 ounces of fluid drawn off. On examination it was then found that her liver extended a handsbreadth below the costal margin. No definite nodules could be felt. No spleen palpable. A partial Wassermann reaction was obtained. During the next three months paracentesis abdominis was performed eight times, and altogether 1,978 ounces of ascitic fluid was thus removed. Medical treatment proved ineffective. An elliptical incision was made over the crural canal. The femoral and saphenous veins were isolated and protected from injury, and the crural canal exposed. Next, an incision was made in the right semilunar line, the center of the incision being opposite the anterior superior-iliac spine. On opening the abdomen a large amount of ascitic fluid escaped, but no attempt was made to empty the abdomen of fluid. Then, through his femoral incision he cut down on his finger, cutting the peritoneum in such a way as to make three small flaps. A stout piece of silk was then passed through each flap and its neighboring ligament and tied, leaving both ends of each ligature about 9 inches long. Each pair of these ends was then threaded at the same time through the eye of a long seeker, and this instrument passed down the thigh subcutaneously until the silk was unthreaded and left there. The three pairs were put in different directions radiating from the crural canal. The crural ring was then stitched up with silk, leaving a small opening so as to permit drainage from the abdominal cavity. The femoral incision was then closed. Through the abdominal incision several sutures were put in uniting the omentum to the parietal peritoneum. Next the end of the omentum was brought through the incision into the subcutaneous tissues of the abdominal wall and fastened by a suture to the abdominal aponeurosis. The abdominal incision was then closed. For several days some ascitic fluid came through both incisions, but ceased at the end of a week. Between the day succeeding the operation and the day of her discharge the patient's measurement at the level of the umbilicus fell from 27½ inches to 26 inches. The patient walked out of hospital feeling greatly improved and without a trace of ascites.

British Medical Journal, London

March 2, I, No. 2670, pp. 469-528

54 Pruritus Vulva; Its Etiology and Treatment. R. A. Gibbons.
55 Retroversion of Uterus. W. J. Gow.
56 Four Successful Cases of Cesarean Section. C. Y. Pearson.
57 Diagnosis of Ectopic Pregnancy. R. Davies-Colley.
58 Albuminuria in Pregnancy. H. M. Raven.
59 Chicken-Pox During Puerperium. B. Myers.

Annales de Gynécologie et d'Obstétrique, Paris

February, XXXIX, No. 2, pp. 65-128

60 Prophylaxis and Treatment of Prolapse of the Uterus. (Traitement du prolapsus utérin.) Potockl. Commenced in No. 1.
61 *Acute Dilatation of the Stomach in Parturients. (La dilatation aigue de l'estomac chez les accouchées.) Audebert.

61. **Postpartum Acute Dilatation of the Stomach.**—Audebert reports two cases personally observed and summarizes ten similar ones from French literature. In the latest of his own cases the patient had suffered from uncontrollable vomiting during the pregnancy, labor had been long and difficult and it is possible that the stomach had been injured by the traumatism occasioned by expression of the placenta, and possibly also by the chloroform given. In four of the total cases the change to the ventral decubitus put an end almost at once to the syndrome. Chloroform had been given in eight of the total twelve cases and Audebert thinks that the old idea as to the harmlessness of chloroform for parturients will have to be abandoned. In seven cases other predisposing causes were evident, streptococcus infection, gastric ulcer, eclampsia or exhaustion from difficult labor.

Archives des Maladies du Cœur, etc., Paris

February, V, No. 2, pp. 81-160

62 Determination of Arterial Pressure. (Baisse systolique de la tension artérielle au moment de la mensuration. Technique et notation sphygmo-manométriques.) L. Gallavardin and J. Haour.
63 Aneurysm of Sinus of Valsalva. (Anévrysme du sinus de Valsalva à développement intracardiaque associé à des lésions d'aortite syphilitique.) C. Roubier and H. Bouget.
64 Pneumococcus Endocarditis. (Endocardite ulcéro-végétante à pneumocoques de l'orifice aortique et de l' "undefended space.") N. Fiessinger and L. Roudowska.

Bulletin de l'Académie de Médecine, Paris

February 20, LXXVI, No. 8, pp. 127-148

65 Swallowing of Air and Eructation in Man and Horse. (Pathologie comparée des diverses variétés d'aérophagie et de leur bruit éructant chez l'homme et chez le cheval.) Pécus and G. Hayem.
66 *Diverticulum of Meckel Opening Into the Umbilicus. (Persistance du diverticule de Meckel ouvert à l'ombilic.) E. Kirmisson.

66. **Diverticulum of Meckel Opening Into the Umbilicus.**—An infant nearly a month old was operated on for this deformity, the diverticulum acting as an artificial anus. After excision of the diverticulum normal conditions were restored. This is the second case of the kind in which Kirmisson has operated. The importance of such cases lies in the possible accusation of the physician that he had tied a loop of intestine in with the umbilical cord. This is disproved by the lack of signs of strangulation as would have to be the case if there were incarceration of a loop. In two other cases on record the infants were less than a month old, and they all bore the operation perfectly, confirming the remarkable way in which very young infants bear major operations.

Journal de Chirurgie, Paris

January, VIII, No. 1, pp. 1-112

67 Technic for Operations for Cleft Palate. (Technique de l'uranostaphylorraphie.) L. Ombrédanne.

Journal de Médecine de Bordeaux

February 11, XXIV, No. 6, pp. 81-96

68 *Excessive Uterine Hemorrhages at Puberty. (Sur un cas de metrorragies de la puberté.) A. Venot.
69 *Necrosis of the Jaws from Mercurial Salve Applied to Burn. H. L. Rocher.

68. **Uterine Hemorrhages at Puberty.**—Venot discusses the causes of incessant uterine hemorrhages at puberty, relating the case of a girl of 16, whose first menstruation came on suddenly without warning and was extremely profuse, lasting for three days. On return of the menses two months later, the hemorrhage persisted for two weeks and returned after a few days, the intervals growing less until finally there was daily hemorrhage. The girl had previously been robust and came of a healthy family. After exclusion of chlorosis, hemophilia, myxedema and leukocythemia, malaria and a cardiovascular or kidney affection, the uterus was examined and found soft and somewhat enlarged and was easily dilated with bougies and curetted; the mucosa showed signs of inflammation. No evidences of tuberculosis were found, and after the curetting all disturbances ceased and menstruation since has been normal. There had never been any pain at any time and nothing was found to explain the metritis, no vulvovaginitis or stenosis of the cervix or displacement of the uterus. There must have been some slight unnoticed infection in the region, possibly years before, predisposing the uterus to hemorrhage when it learned to bleed. Before attempting to curet, Venot applied persevering internal measures, repose, copious injections of hot water through a small catheter and under low pressure, sitz and other baths. Pain can be combated by large cataplasms to the abdomen, hot moist packs and injections with a little laudanum. When these measures fail after a thorough trial, one is justified in curetting.

69. **Mercurial Necrosis of the Jaws.**—A little girl of 5 had been burnt on the buttocks and the extensive burnt area was treated with a salve containing 0.1 per cent. mercuric chlorid, 1 per cent. iodoform and 3 per cent. iodol. Mercurial stomatitis appeared in two months and progressed to necrosis of large parts of both jaws on the right side.

Lyon Médical, Lyons

February 11, CXVIII, No. 6, pp. 281-352

70 *Percussion Sign of Typhoid Fever. (La submatité de la base droite—submatité rétro-hépatique—signe de fièvre typhoide.) C. Lesieur.
71 *Operative Treatment of Hemorrhagic Pachymeningitis. G. Gayet.

70. **Percussion Sign of Typhoid Fever.**—The sign to which Lesieur calls attention is an area of relative dulness on superficial percussion of the back over the right base of the thorax, indicating congestion and enlargement of the liver. The dulness was noted by the fourth day in some of his cases. In the few cases in which positive findings were obtained into convalescence, the patient almost always had a relapse later. In two cases recently of febrile, nodose erythema, the finding was positive and Lesieur's confidence in it began to waver until the course of the case showed that there was associated typhoid. The sign was constant in 90 per cent. of 300 typhoid patients of both sexes. The subsidence of the dulness presages the approach of convalescence. The persistence of the dulness, on the other hand, warns to be extra careful in the diet as the patient is still in a precarious condition. In these conditions he has found hexamethylenamin a valuable means for *antisepsie hépatobiliaire*, as he calls it.

71. **Hemorrhagic Pachymeningitis.**—Gayet reviews four cases on record in which operative treatment of a nontraumatic hematoma of the dura cured the patients; he also cites a fifth case in which the patient succumbed, and reports a case from his own experience in a woman of 53. The signs of pressure on the brain had come on gradually; the temperature was a little above normal and the fluid from lumbar puncture showed no trace of blood. An abscess in the brow six months before was the first sign of trouble, several others forming and opening spontaneously; intense headache became constant, and paresis of the right leg and arm developed, with vertigo and left optic neuritis. A large skin-skull flap was turned back in the left temporal-parietal region but instead of the anticipated abscess only signs of a hemorrhagic pachymeningitis were found with several pockets of serous fluid. Improvement was evident at once, and the patient soon recovered except that an intercurrent frontal sinusitis since has required treatment. The good effects of large exposure of the brain confirm the importance of early exposure and incision of the dura mater in such cases, removing clots and cleaning the dura.

Presse Médicale, Paris

February 17, XX, No. 14, pp. 141-152

72 The Natural Mechanism of the Formation of Albuminoids. (Recherche du mécanisme naturel de formation des albuminoides.) L. C. Millard.
73 Hemolysis and Pigmented Cirrhosis of the Liver in a Diabetic of 72. J. Chalier and L. Nové-Josserand.
74 Tuberculin Therapy by Intradermal Route. (La voie intradermique en tuberculinothérapie.) C. Mantoux.

February 21, No. 15, pp. 153-160

75 *Vaccination Against Tuberculosis. (Quelques aperçus nouveaux sur la question de la vaccination contre la tuberculose.) A. Calmette.
76 Fracture of Auditory Canal. (Fracture du conduit auditif externe.) A. Broca.

75. **Prospects for Vaccination Against Tuberculosis.**—Calmette states that none of the methods hitherto in vogue has succeeded in inducing the formation of the durable vaccinating lymph-node lesion which seems to be the indispensable factor for resistance to true tuberculosis later. He reviews them all and compares them unfavorably with the results of his recent vaccination work on cattle which opens brighter prospects. He regards as almost inevitable the contamination of children under 5 with tuberculosis, at least in crowded cities. If this infection remains localized in the lymph-node system —which is generally the case—and if the infection is not too massive, it confers on the child an immunity to reinfection or at least makes it more resistant, so that reinfecting bacilli are not tolerated. The organism then displays a characteristic tendency to expel them at once, while it displays an equally characteristic intolerance for the products of the bacillary secretions (reactions to tuberculin). This resisting power can be measured by quantitative determination of the antibodies in the serum. The antibody index shows that the resistance increases with each new infection—manifested by the greater and greater tendency to rapid, cheesy changes, purulent softening of tubercles and prompt expulsion of their contents. But when reinfection occurs again and again and in massive doses, this constant recurrence of softening and breaking down of tubercles, overwhelming the system with their products, brings the condition of actual phthisis, and the individual finishes by succumbing in spite of, or, rather for the very reason that he had acquired, immunity. These facts point the way to effectual prophylaxis, Calmette thinks. As soon as the tuberculin reaction first reveals that infection has occurred, the child must be protected against reinfection; he has acquired immunity and resisting power enough to carry him through life if he can be protected against massive reinfections. Calmette adds that it is possible to conceive of artificially inducing this primary immunizing lymph-node action by vaccinating very young infants by feeding them some attenuated strain of tubercle bacilli while the intestine walls are still in their primal comparatively permeable condition.

Berliner klinische Wochenschrift

February 19, XLIX, No. 8, pp. 337-384

77 *Diarrhea of Gastric Origin with Stenosis of the Pylorus. (Gastrogene Diarrhöen bei Pylorusstenosen.) I. Boas.
78 *Fracture of Cervical Vertebræ. (Halswirbelbrüche.) E. Sonnenbarg.
79 *Exclusion of Bladder. (Die Ausschaltung der Blase bei schweren Formen der Blasentuberkulose.) L. Casper.
80 Occurrence of Fat and Myelin in Tumors. (Statistischer Beitrag über das Auftreten von Fett und Myelin in Geschwülsten.) I. Haga.
81 Origin of Anaphylatoxin. (Herkunft des Anaphylatoxins.) J. Bauer.
82 Psychic Elements in Asthma. (Die psychische Komponente unter den Asthmaursachen.) M. Saenger.
83 Reaction in Urine of Breast-Fed Infants. (Zur Engel-Turnau'chen Urinreaktion.) D. v. Balazsy.
84 Present Status of Lung Surgery, with Personal Experiences. (Der gegenwärtige Stand der Lungenchirurgie.) A. Fraenkel and W. Körte. Comemnced in No. 6.
85 Sensitizing Action of Fluorescent Substances. (Ergänzende Bemerkung zu dem kurzen Referat über die Photodynamische Wirkung fluorescierender Stoffe, von F. Nagelschmidt-Berlin.) H. Raubitschek.

77. **Diarrhea of Stomach Origin with Stenosis of the Pylorus.**—Boas has encountered in the last ten years a number of patients with profuse diarrhea for which no cause could be discovered until the microscope revealed sarcinæ in the feces; this pointed unmistakably to obstruction to the evacuation of the stomach, and the further course of the cases confirmed the stenosis of the pylorus assumed on these findings. The usual signs of stenosis of the pylorus may be entirely absent, and the patients' attention is not directed to the stomach at all. The intestinal symptoms on the other hand suggest a primary bowel affection, especially the painful and offensive flatulence, and profuse diarrhea three or four times a day, but the discovery of the sarcinæ excluded a primary bowel trouble. As a rule, the sarcinæ flourish only with non-malignant lesions, but this rule has its exceptions as he shows by a case in which the sudden onset of the diarrhea and pains in the midst of apparent health except for slight stomach disturbances over a long period, and the signs of typical benign stenosis of the pylorus which then developed proved the manifestations of inoperable pyloric carcinoma. He does not know of any similar case on record in which persisting diarrhea was the first and predominant symptom of cancer at the pylorus. The material reviewed teaches the importance of thorough examination of the entire gastro-intestinal tract with any chronic diarrhea. When the gastrogenic origin is determined, treatment should be the reverse of that advocated for primary bowel troubles. As soon as the diet is modified to reduce stagnation and fermentation in the stomach, with or without lavage, the diarrhea is generally arrested. Boas calls attention anew to the value of the salicylates internally in checking fermentation; 2 or 3 gm. of magnesia salicylate a day, with or without calcined magnesia, has always proved useful in his experience in these cases.

78. **Fracture of Cervical Vertebræ Without Spinal Cord Symptoms.**—Sonnenburg has had two recent cases of this kind, and he emphasizes the importance of roentgenoscopic control and the necessity for shielding such patients from hard work, possibly for a year, as otherwise there may be serious damage from resumption of work before consolidation is complete. Boeckel has recently compiled ninety-five cases of the kind, including fourteen previously unpublished. Isolated fracture of the body of the vertebra occurs most frequently and a sliver of bone may be felt through the mouth in the pharynx. Extravasation of blood may compress the cord for a time, causing paralysis, but as the blood is absorbed the paralysis retrogresses.

79. **Exclusion of the Bladder for Severe Local Tuberculosis.**—Casper remarks that Legueu and Willems seem to have been the only ones to date who have published cases of tuberculosis of the bladder so severe as to compel diversion of the urine. They accomplished this by nephrostomy, but Casper thinks that the danger of complications is much less and the operation less trying, when the kidney is left untouched and the ureter is drawn out and sutured to the skin. He reports a case in which this was done; the pains and tenesmus were relieved at once and the man is in fairly good condition, his portable urinal working tolerably although its functioning might be improved. This patient, a man of 36, had had one kidney removed for tuberculosis over six years before. In another case he tried to divert the urine directly from the remaining kidney which was much diseased, but anuria followed, to which the patient succumbed. The diseased kidney is not able to stand any operation, so that diversion of the urine by an operation on the ureter seems much more promising.

Correspondenz-Blatt für Schweizer Aerzte, Basel

February 20, XLII, No. 6, pp. 177-224

86 *Phlegmonous Gastritis. (Zur Kenntnis der Gastritis phlegmonosa.) L. Bossart.

86. **Phlegmonous Gastritis.**—Bossart reports a case with necropsy and reviews the history of phlegmonous gastritis from Borel's description in 1656 to date; a total of 110 cases are on record. In the majority of cases the symptoms developed suddenly as an idiopathic affection, while in other cases there had been preceding disturbances on the part of the stomach. In eleven cases habitual liquor drinking was an important factor and poisoning in ten others; articular rheumatism and pulmonary tuberculosis were possibly connected with the affection in some cases. The phlegmon had developed after an operation on the stomach in five cases. In a case reported by Schwartz the phlegmon in the stomach was traced to an ulcerative tonsillitis. There are no pathognomonic symptoms, but the diagnosis was suggested in Bossart's case by the fact that movements did not aggravate the pain. His patient was much debilitated, and had much pain, vomiting and diarrhea, with great local tenderness and occasional clouding of the mental faculties and extreme restlessness, but he had walked to the hospital. The fact that the pain is not aggravated by movement is characteristic, as also the striking psychic and motor restlessness and dread, and alternation of this restlessness with stupor, and the fact that the fever and general symptoms are generally much more intense than

with ordinary gastritis or circumscribed peritonitis. The prognosis is graver in the acute than in the chronic cases. Recovery is known in only eleven of the total 110 cases; in these the abscess or phlegmon spontaneously emptied its contents into the stomach. Pus in the vomit suggests that this may have happened. Operative treatment was applied only to six patients but three of them recovered. One was a woman of 36, six months pregnant. In König's case, reported last year, the stomach was resected for supposed cancer, but the trouble proved to be a suppurative infiltration in the stomach wall. The findings in the eighty-eight necropsies on record show that erosions in the cardial part of the esophagus seem to be the portal of entry for the infection.

Deutsche medizinische Wochenschrift, Berlin

February 22, XXXVIII, No. 8, pp. 345-392

87 *Personal Prophylaxis of Venereal Disease. (Ueber die persönliche Prophylaxe der Geschlechtskrankheiten.) K. Zieler.
88 Salvarsan in Anthrax. (Wirkung des Salvarsans auf den Milzbrand.) S. Bettmann and Laubenheimer.
89 Salvarsan in Bilharziasis. (Salvarsanwirkung bei Bilharziose.) F. Fülleborn and F. E. L. Werner.
90 Technic for Application of Radium Emanations in Therapeutics. (Therapeutische Methodik der Radiumemanation.) P. Lazarus.
91 *Toxicity of Methyl Alcohol. (Giftigkeit des Methylalkohols.) E. Harnack.
92 Paroxysmal Hemoglobinuria. (Zur Kenntnis der paroxysmalen Hämoglobinurie.) T. Kumagai and B. Inoue.
93 Swing Extension in Treatment of Fracture of the Leg. (Zur Extensionsbehandlung der Beinbrüche.) L. Heusner.
94 *Technic for Removing Cancer of the Rectum. (Die kombinierte Operation bei Mastdarmkrebs.) H. Riese.
95 Bacteriologic Diagnosis of Diphtheria. (Zur bakteriologischen Diagnose der Diphtherie.) Schopohl.
96 Chemicals with Selective Affinity for Tumor Substance. (Tumoraffine Substanzen.) C. Neuberg and W. Caspari.

87. **Personal Prophylaxis of Venereal Disease.** — Zieler emphasizes that the measures which will prevent gonorrhea will not ward off syphilis and vice versa, and that this must not be forgotten in personal prophylaxis for which he gives minute directions. He also urges that physicians should constantly inculcate the necessity for thorough daily cleansing of the external genitals in both sexes, even in children. The multiplicity of secreting glands and the decay of their secretions are liable to induce irritation and minute lesions which open portals to infection of all kinds.

91. **Toxicity of Methyl Alcohol.**—Harnack's research has shown that methyl alcohol in itself is not very toxic, not nearly so much so as the allied alcohols containing more carbon. But it becomes extremely toxic from the feature peculiar to it, namely, its gradual oxidation into formic acid in the tissues. As this alcohol seems to have a special affinity for certain nervous elements, the slow gradual oxidation thus occurs in these elements. It is this which confers on methyl alcohol its peculiarly dangerous properties and these properties seem to be particularly baleful for human beings.

94. **Combined Method of Removing Rectal Cancer.**—Riese has applied Kraske's abdominodorsal technic in eleven cases. His first four patients died soon after the operation but only one of the last seven. He discusses the special indications for this technic and certain minor points. Its special advantages are the control of hemorrhage, the small loss of blood and the accessibility of the high lymph-nodes. It permits operative relief in cases inoperable by the dorsal route alone. Naturally the more serious cases are reserved for this technic so that the outcome can scarcely be compared with that under other methods. Kraske, Rotter and Kümmel have reported over 40 per cent. mortality, but Mozkovicz has had no deaths in his last six cases. In conclusion Riese reports a case in which he perforated the rectum with the proctoscope in examining a woman of 40, in the knee-elbow position, seeking to discover the cause of hemorrhagic diarrhea. He found it impossible to suture the intestine through a laparotomy and after rinsing out the abdominal cavity and making a circular incision in the fold of the pouch of Douglas, he exposed the rectum from the rear by removal of the coccyx. He was then able easily to suture the bowel, the patient on her side. He then turned her on her back and sutured the peritoneal and abdominal incisions. This point, where the peritoneum in the pouch of Douglas folds back on the rectum is peculiarly liable to be perforated in proctoscopy—Sultan has reported a case of the kind, he says—and he extols the advantages of the above technic for repair.

Jahrbuch für Kinderheilkunde, Berlin

February, LXXV, No. 2, pp. 131-264

97 *Salvarsan in Treatment of Inherited Syphilis in Infants. (Klinische Beobachtungen bei der Salvarsanbehandlung syphilitischer Säuglinge.) C. T. Noeggerath.
98 *Dispensary Tuberculin Treatment of Scrofula and Tuberculosis in Children. (Versuch einer poliklinischen Tuberkulinbehandlung der kindlichen Skrofulose und Tuberkulose.) H. Wittich.
99 Scarlet Fever. (Ueber Scharlach.) K. Preisich.
100 *Syphilitic Leptomeningitis in Infants. (Zur Kenntnis der luetischen Lepto-Meningitis beim Säugling.) E. Rach.
101 Temperature of the Prematurely Born. (Zur Lehre von der Temperatur der Frühgeborenen.) F. Masay.

97. **Salvarsan in Treatment of Syphilitic Infants.**—Noeggerath reports his experiences in this line with twenty-eight infants; nine died. The rapid symptomatic efficacy of the drug was confirmed in his cases, and in nine of the sixteen infants under observation for a number of months no further signs of syphilis could be detected; in seven the Wassermann reaction was still positive at the later examination. A combination of salvarsan and mercury seemed to give the best results.

98. **Dispensary Tuberculin Treatment of Tuberculosis.**—Wittich reports the history of sixty children with scrofula or other manifestations of tuberculosis given tuberculin treatment as outpatients. The outcome speaks strongly in favor of small, slowly increasing doses of tuberculin as a systematic method of treatment for children. The signs of scrofula disappear, the appetite returns, the weight increases, the children cease to cough and there is no further diarrhea or pain in the chest and the tendency to night sweats is entirely or partly arrested, while the general health shows marked improvement. Only three of the thirty-four children whose cases are reported in detail failed to benefit by the treatment.

100. **Syphilitic Leptomeningitis in Infants.**—The experiences related by Rach demonstrate that the discovery of the pale spirochete in the lumbar puncture fluid, when none can be found in the blood, may explain the symptoms observed as a true florid and severe syphilitic affection of the central nervous system.

Medizinische Klinik, Berlin

February 25, VIII, No. 8, pp. 303-342, and Supplement

102 *The Cardiovascular System and Pregnancy. (Kreislauf und Schwangerschaft.) R. T. Jaschke.
103 Diphtheria at Rostock. (Die zurzeit herrschende Diphtherieepidemie.) F. Lux.
104 Vaccine Therapy. (Allgemeines und Besonderes über Vaccinetherapie.) A. Menzer.
105 *"Bloodless Bloodletting." (Der "unblutige Aderlass"—Phlebostase.) S. Lilienstein.
106 Tuberculin Treatment in General Practice. (In welcher Weise führt der praktische Arzt am besten eine Tuberkulinkur durch?) M. Hollensen and M. Wilms.
107 Localization of Varicose Leg Ulcers. (Zur Lokalisation des Ulcus cruris varicosum.) K. Freuder.
108 Color Reaction in Urine Differentiates Serum Exanthem from Scarlatinal Eruption, Which It Resembles. (Scharlachartige Serumexantheme und ihre Unterscheidung vom echtem Scharlach durch die Ehrlichsche Amidobenzaldehydreaktion im Harn.) F. Umber.
109 Starting Point for Extrasystoles. (Ursprungsort der Extrasystolen.) G. F. Nicolai.
110 *Present Status of Treatment of Suppurative Meningitis. (Ueber den gegenwärtigen Stand der Therapie der eitrigen Meningitis.) F. Henke.

102. **The Circulation and Pregnancy.**—Jaschke concludes his postgraduate lecture on this subject with the statement that the picture has been painted altogether too black in respect to the influence of a pregnancy on an existing heart defect. The statistics to date have been based on the exceptional cases. He found the mortality only 4 per cent. among 1,548 parturients with valvular defects in a total of 37,000 maternity cases. In the fatal cases there were generally other factors so that the connection between the valvular defect and injury from the pregnancy was scarcely determinable. Pure uncomplicated valvular defect need not be regarded too seriously from the standpoint of pregnancy. Even the extent of the defect, aside from mitral stenosis, is generally of comparatively little importance. In seven-eighths of all the cases

delivery occurred at term, and the woman was prematurely delivered only in 8 or 9 per cent. of the total; in the literature the proportion is estimated at from 20 to 50 per cent. When compensation is failing, the tendency to premature delivery increases, which may be regarded as a natural self-correcting tendency. In only about 1 per cent. did it become necessary to interrupt the pregnancy; this should be done only when compensation cannot be restored by internal medication, or when there is complicating nephritis or laryngeal tuberculosis. If it becomes necessary to interrupt the pregnancy, measures should be taken to prevent further conception. A premature delivery at the eighth month makes more demands on the heart than a childbirth at term. Under careful supervision the physician should wait, ready to deliver the woman at need by anterior hysterotomy, but he should bear in mind that 98 per cent. of all the births with heart defects occur spontaneously at term. There is danger in expectant waiting only when the myocardium itself is severely damaged, and to determine this is the main point. There is generally plenty of intact heart muscle left, sufficient to carry the patient through several pregnancies.

105. **Bloodless Bloodletting.**—Lilienstein found accidentally in examining the blood-pressure of an elderly man that the patient experienced great relief when the cuff was left on his arm longer than usual. On this suggestion Lilienstein had an appliance made with four cuffs, all connected with the manometer and air bulb, applying a cuff to each arm and leg and pumping air into them until the radial pulse became imperceptible, maintaining the compression for two or three minutes, and repeating the procedure four or five times. The blood in the limbs is thus shut off from the trunk, and the heart is left free to work with merely the blood left in the trunk. This gives it a great rest and relief, and enables it to catch up with its task in general and to go on thereafter far better from every point of view. He calls this method bloodless bloodletting or phlebostasis, and the quadruple cuff appliance, the phlebostat. Nine typical cases of arteriosclerosis with myocarditis or mitral insufficiency or dilatation of the aorta and hypertrophy of the heart are reported to show the benefit derived from the procedure. In the healthy no appreciable action on the heart or circulation is evident but with cardiovascular disease the heart murmurs become modified, dyspnea and oppression, headache and vertigo subside and the patients experience immense relief; in none of the cases did the disturbances afterward reach the height attained before. Nervous and hysteric heart affections are not influenced, so that the measure is sometimes a valuable aid in differentiation. The indications for phlebostasis are the same as for venesection, he says; the contra-indications seem to be limited to a tendency to thrombosis, and edema or varices in the limb.

110. **Meningitis.**—Henke emphasizes in this monograph on suppurative meningitis that treatment to have any chance for success must be applied early and kept up energetically. As long as the affection is merely a diffuse seropurulent meningitis, repeated lumbar puncture and systematic administration of hexamethylenamin may cure. He reports a typical example of the disease with a favorable outcome. The nystagmus and vertigo accompanying a cholesteatomatous otitis when the patient was first seen denoted some involvement of the labyrinth. Hexamethylenamin was given as a prophylactic before the radical operation on the ear; the operation seemed to spread the inflammatory process to the entire labyrinth, possibly by the concussion from the chiseling; the patient became quite deaf and suddenly, the fourth day, intense headache developed, with pains in the sacral region, fever, rigidity of the neck and Kernig's sign. Four lumbar punctures released a total of 115 c.c. of cloudy fluid containing pus and diplococci. The hexamethylenamin was kept up systematically, and all the symptoms gradually subsided. After expulsion of a sequester, which proved to be the cochlea, the patient recovered, cured of both meningitis and otitis. In this case, as also in Stockmayer's clinical experiences and in Crowe's animal experimentation, suspension of the hexamethylenamin was followed each time by exacerbation of symptoms.

Münchener medizinische Wochenschrift

February 20, LIX, No. 8, pp. 401-456

111 *An Idiosyncrasy to Drugs Not a True Anaphylaxis. (Ist die Idiosynkrasie gegen Arzneistoffe als echte Anaphylaxie aufzufassen.) K. Zieler.
112 Bacterial Action of Silver Salts in Saline Medium. (Ueber den Vorgang der bakteriziden Wirkung der Silberpräparate in kochsalzhaltigen Medien. II.) O. Gros.
113 *Examination for and Treatment of Tonsillitis with Polyarthritis. (Neues über Untersuchung und Behandlung gewisser mit Polyarthritis causal verknüpfter Tonsilliten.) P. Roethlisberger.
114 Stroganoff's Prophylactic Treatment of Eclampsia. (Behandlung der Eklampsie nach Stroganoff.) B. Zoeppritz.
115 *Ischemic Contracture and Acute Diffuse Gangrene. (Symptomatologie der Entstehung ischämischer Kontraktur und der akut diffusen Gangrän.) B. Bardenheuer.
116 Fat in Uterine Muscle. (Ueber den Fettgehalt des Sarkoplasmas der glatten Muskelfasern des schwangeren und puerperalen Uterus.) B. Huguenin.
117 Contractions of Pylorus Under Palpation. (Die Kontraktionsphänomene der Pars pylorica bei palpatorischer Exploration.) T. Hausmann.
118 *Importance of Heredity in Development of Heart Disease. (Ueber den Einfluss der Heredität auf die Entstehung von Herzkrankheiten.) M. Herz.
119 Baseless Claims for Antimeristem in Cancer. (Zur Beurteilung der Schmidtschen Krebshypothese.) v. Wasielewski and Walker.
120 Case of Scopolamin Poisoning. (Fall von Skopolaminvergiftung.) R. Zimmermann.
121 Disproportion Between Slow Pulse and High Temperature as Sign of Salpingitis. (Ein Symptom für Salpingitis.) W. Kühl.

111. **Is Idiosyncrasy to a Drug a True Anaphylaxis?**—Zieler answers his question in the negative, basing this conclusion on the results of treating animals with serum from patients with an idiosyncrasy, as he relates in detail.

113. **Tonsillitis Associated With Rheumatism.**—Roethlisberger insists on the inadequacy of mere visual inspection of the tonsils and even of exploration with a sound or probe. The only means to examine the tonsils thoroughly, he says, is with the finger, squeezing out the contents of the cysts, applying this massage in cases of rheumatism, acute or chronic, two or three times a day or even oftener. If an operation becomes necessary, this massage is an excellent preliminary. It is an easy matter, he says, to introduce the right forefinger along the wall of the cheek to the right tonsil or the left finger to the left tonsil and massage it and squeeze out the contents of the crypts. Sometimes the tonsil is found apparently sound but adherent. Scraps of purulent or cheesy matter frequently adhere to the finger when the tonsil was apparently sound on the first examination. If the tonsil feels hard and tender and yet no secretion can be expressed, an incision is necessary to release the confined contents of the follicle involved. He found it a frequent experience that specialists to whom he referred such patients either declared that there was nothing wrong or else foci were left behind after their operation; systematic massage of the tonsil with the forefinger answered the purpose even better than the single specialist operation in many cases. He thus was led to adopt the method as a routine measure in treatment of patients with acute or chronic rheumatism. By clearing out the tonsils in this way and putting an end to all trouble except possibly inaccessible foci, conditions are made much more favorable for surgical intervention on the tonsils if it is found necessary; it is thus directed to the exact point where it is needed. After the massage the tonsil frequently is reduced to a very small, soft, comparatively flat body with little chance left for accumulations in its follicles. In a case reported in detail, some of the joints of a young woman with an inherited tendency to gout became very stiff and painful, some of them much enlarged. The tonsils were found large and tender. Treatment consisted of internal medication and massage once or twice daily of the tonsils and joints affected. In eighteen days the tonsils and joints were nearly normal.

115. **Prophylaxis of Acute Diffuse Gangrene.**—Bardenheuer reports recent experiences which have confirmed his previous statements in regard to the importance of obstruction of the veins as the main factor in the development of ischemic contracture and of acute diffuse gangrene. As long as the veins are able to carry off the blood laden with carbon dioxid, no gangrene follows, but when this becomes impossible from subfascial constriction of the veins, the carbon dioxid accumulates and this has a most destructive action on the fixed tis-

sue cells. There is grave danger in delay when this point is reached; the limb should be massaged, exercised and kept high. The same applies also to arteriosclerotic gangrene; the arterial circulation may have been long impeded, the pulse in the arteries almost imperceptible for months or years, the feet alternately hot or cold, blue or bluish or red, and yet there is no tendency to gangrene as long as the veins are able to convey away the deadly carbon-dioxid laden blood. When a tendency to gangrene becomes apparent, it may be arrested by promoting the venous circulation by massage, exercise, warm cataplasms to the calf of the leg, and dipping the foot alternately in hot and cold water. When all such measures fail, the diffuse gangrene can no longer be averted.

118. See Abstract 127 in THE JOURNAL, March 23.

Wiener klinische Wochenschrift, Vienna

February 22, XXV, No. 8, pp. 291-330

122 *Filling for Gap in Skull. (Schädelplombe bei Eingriffen an der Gehirnbasis.) J. P. Karplus.
123 *Technic for Removal of Entire Stomach. (Gastrectomia totalis.) S. Verson.
124 *Acute Leukemia. H. K. Barrenscheen.
125 Case of Lymphogranulomatosis. H. K. Barrenscheen.
126 Tuberculin in Treatment of Laryngeal Tuberculosis. (Kehlkopftuberkulose, Tuberkulin und lokale Behandlung.) F. Hutter.
127 *Acute Polyserositis. (Morbus Bamberger acutus.) J. Cecikas.

122. **Plugging the Gap After Operations on the Skull.**—Karplus has found that the opening in the base of the skull can be effectually and harmlessly closed by fitting into the gap a filling made of rubber moulded to fit, according to dentists' technic. He dried the edges of the bone with the thermocautery and then ran the cautery around the edges after the filling was introduced, thus soldering it in place. The results on animals and the cadaver were unusually promising. The filling can be easily removed at any time or punctured to permit escape of secretions, while the plugging of the wound at once wards off danger of infection.

123. **Technic for Total Gastrectomy.**—Verson states that he removed the entire stomach in a dog which is now in perfect health a month later, and he advocates the special technic followed, namely, operating through the left pleural cavity and the diaphragm. The stomach can be most easily reached by this route and can be then readily isolated and removed including the pylorus and cardia. He operated under ether given by Giordano's tracheal insufflation apparatus. The skin was incised in the eighth interspace, the diaphragm in the center and down to the cardia. The duodenum was sutured to the esophagus with exceptional ease.

124. **Acute Leukemia.**—Barrenscheen reports the clinical course and necropsy findings in a case of *Staphylococcus aureus* sepsis with leukemic reaction on the part of the bone marrow. The patient was a woman of 38 and she died within a week from the first symptoms of the acute leukemia. Her brother was brought to the clinic not long after with typical lymphatic leukemia and it was learned that a cousin had died a year before from a similar affection.

127. **Acute Polyserositis.**—Cecikas' case of acute Bamberger's disease confirms the assumption that it is an affection of the endothelium and that its manifestations may occur wherever endothelial tissue occurs. In the present case the symptoms indicated involvement of the endothelium in the posterior cranial fossa, heart, internal ear and meninges. He thinks the primary source for the trouble was an old cavity in the left lung; in nearly all the cases on record there was some preceding pulmonary lesion. The brother of the patient had had pericarditis, which suggests a possible familial predisposition on the part of the endothelial tissue.

Zentralblatt für Chirurgie, Leipsic

February 24, XXXIX, No. 8, pp. 249-280

128 *Blocking the Local Nerves for Operations on the Trunk. (Ueber Leitungsanästhesie bei Nierenoperationen und Thorakoplastiken, überhaupt bei Operationen am Rumpf.) M. Kappis. (Zur Technik der Lokalanästhesie bei Thorakoplastiken.) E. D. Schumacher.
129 Local Anesthesia Plus the "Twilight Sleep" for Abdominal Operations. (Ueber Pantopon-Skopolamin-Lokalanästhesie bei Bauchoperationen, insbes. bei der Appendektomie.) F. Colmers.
*Tamponing the Abdominal Cavity. (Zur Tamponade der Bauchhöhle.) Wehl.

128. **Local Anesthesia for Nephrectomy and Other Operations on the Trunk.**—Kappis has removed the kidney in three cases and incised it in two others for calculi or pyelitis—all under local analgesia induced by blocking the nerves of the region by injection of a local anesthetic. He states that after considerable tentative work, he found the best and entirely safe technic to be injection of the anesthetic and epinephrin solution at the angle between the rib and the transverse process. The needle is introduced close to the lower margin of the rib, about 3.5 cm. from the median line. It is generally possible to palpate and locate one of the ribs in this way. The needle hits the bone at a depth of 4 or 5 cm. and the lower edge of the rib is felt for with the needle, and its tip is pushed farther in just below, slanting a little towards the median line and injecting the fluid in two or three directions. After one rib is thus located, it is easy to locate the others up and down, allowing about 3 cm. interval between them. He injected 10 c.c. of a 1.5 per cent. novocain-suprarenin solution at the eighth to twelfth dorsal vertebræ and the first and second lumbar. In fifteen minutes he could proceed to operate, cutting into the skin, soft parts and kidney without the patient's feeling it. Manipulation of the peritoneum caused slight pain, requiring a few drops of ether. The cooperation of the conscious patient was quite a help, and recovery was smooth, disturbed only by brief paresis of the intestine in one case. He was able to resect the ninth and tenth rib entirely and part of the fifth to the eighth and the eleventh—all without the slightest pain, and part of the pleura in another case. The avoidance of the injurious influence on the other kidney from general anesthesia is a great gain in these kidney cases, especially when the other kidney is not absolutely sound. In conclusion Kappis warns that scopolamin had better not be used in cases of kidney disease. He has had a number of disagreeable complications which he ascribes to the scopolamin used in some cases of prostatitis with pyelonephritis.

Schumacher reports thirty-five thoracoplastic operations done with nerve blocking anesthesia, using 100 or 200 c.c. of a 5 per cent. solution of novocain plus a little epinephrin. He injects the fluid at the angle of the rib, expelling 1 or 2 c.c. as the needle hits the bone, then working the tip down to below the rib and injecting 5 or 8 c.c. more. This blocks the nerves which just beyond this point bend upward. From an incision in the axillary line a long needle is inserted and pushed as far backward as possible along the lower margin of the ribs, injecting the fluid continuously as it goes along. In twenty of the thirty-five cases no further anesthetic was required for resection of the ribs; in the others a few drops of chloroform were given. No by-effects nor injury of any organs were observed in any instance.

130. **Tampon for Abdominal Operations.**—Wehl has found that gauze sprinkled with a mixture of equal parts of iodoform and calomel will not stick to the tissues like ordinary gauze, while it retains all its absorbent properties and has a slight antiseptic action. It seems to increase the secretion a little and hence should not be left unchanged over three or four days.

Zentralblatt für Gynäkologie, Leipsic

February 24, XXXVI, No. 8, pp. 225-256

131 *Treatment of Acquired Atresia of Female Internal Genitals. (Ueber senile Muttermundsatresie und zur konservativen Behandlung der Gynatresien.) Lichtenstein.
132 Placenta Prævia. (Zur Behandlung der Placenta praevia.) J. Thies.
133 Predetermination of Sex. (Die praktische Vorausbestimmung des Geschlechts beim Menschen.) O. Schöner.

131. **Senile and Other Atresia of the Genital Organs.**—In the first case reported senile changes in the external os uteri closed it up before the menopause in a woman of 51 who had borne ten children, the last eleven years previously. Severe symptoms including anuria developed in the course of a week, explained by the escape of over a pint of thick brownish blood when a catheter was finally worked through the os into the uterus. In a second case a girl of nearly 16 had severe menstrual pains but no discharge and the lower three-fourths of the vagina were found grown up, evidently the

result of a pneumococcus vaginitis in early childhood. The patient had never had any "children's diseases," merely pneumonia in infancy. The retained blood was evacuated through a laparotomy and, working from within outward, the vagina was made permeable. An important point is to separate the bladder from the cervix as the first step in such operations.

Zentralblatt für innere Medizin, Leipsic

February 24, XXXIII, No. 8, pp. 173-196

134 Chemical Changes in Degenerated Muscles. (Ueber die chemische Veränderung des Muskels unter dem Einfluss der Entartung.) G. Grund.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 18, XXXIII, No. 21, pp. 209-224

135 Comparative Efficacy of Various Antipneumococcus Serums. (Sul valore immunizzante comparativo di alcuni sieri antipneumococcici.) V. Puntoni.

February 20, No. 22, pp. 225-232

136 Vaccination Against Typhoid. (I piu importanti processi di vaccinazione antitifica dal punto di vista pratico.) Cerrano.

Policlinico, Rome

February 18, XIX, No. 8, pp. 261-300

137 *Malaria in Children. (La malaria nell'infanzia.) V. Fusco.
138 Hernia as Industrial Accident. (Di alcune considerazioni intorno alle ernie da infortunio.) G. Domenichini.

137. **Malaria in Children.**—Fusco has been examining for malaria 147 children in the hospital at Grosseto during the three years ending with 1911. Grosseto is on the sea-coast half way between Rome and Leghorn, and the province has extensive salt marshes. He found that 90.9 per cent. of the children under the third year had malarial parasites in the blood, and 92.03 per cent. of those about 7 years old, while 74 per cent. of all the children had positive blood findings, the type of parasite not differing from those found in adults. It was surprising to find the parasite in many children apparently free from the slightest symptom of malaria and without any history of such. The malarial attacks in many of the infants came on without a chill or any vasomotor phenomena. In ten out of sixteen less than a year old, the onset of the fever was associated with vomiting or convulsions, but these were never observed in children over 7, their attacks resembling those of adults, with the inevitable chill. The blood findings were constantly negative in the still-born infants and in seventeen living newly-born infants of mothers with severe malaria. No parasites could be found in the blood, brain or spleen or in the blood in the placenta or umbilical cord in these maternity cases. This suggests that malaria is not congenital.

Riforma Medica, Naples

February 17, XXVIII, No. 7, pp. 169-196

139 Syphilis and Pregnancy. (Malattie infettive e gravidanza. Sifilide e gravidanza.) L. Mangiagalli.
140 Experimental Research on Effect of Reducing Size of Left Ventricle. (La limitazione della cavita del ventricolo sinistro e suo rapporto colla patogenesi dell'edema polmonare meccanico.) A. Montanari.

Brazil Medico, Rio de Janeiro

February 8, XXVI, No. 6, pp. 51-60

141 Biologic Studies of Trypanosomas. (Notas sobre a biologia do trypanosoma gambiense, equinum, congolense e equiperdum.) G. Vianna.

Semana Medica, Buenos Aires

January 25, XIX, No. 4, pp. 137-188

142 *Pulmonary Influenza. (Algunas consideraciones sobre la grippe pulmonar.) L. J. Facio.
143 Salvarsan in Syphilitic Disease of the Nervous System. (Sobre 50 casos de afecciones nerviosas sifiliticas y parasifiliticas tratados por el dioxidiamidoarsenobenzol.) C. Preioni.

February 1, No. 5, pp. 189-240

144 Internal Version in Management of Shoulder Presentation. (Leyes y reglas para la version interna en las presentaciones de hombro.) J. A. Beruti.
145 Inflammation of the Liver of Appendicitic Origin. (Higado apendicular.) M. F. Arguello.
146 The Art of Medicine Among the Chinese. (El arte medico en China.) J. Regnault.
147 *Vertex-Coccygeal Length as Index of Age of Fetus. (El diagnostico de la edad del embarazo por el metodo de Ahlfeld.) E. M. Villapadierna.

142. **Influenza Localizing in the Lungs.**—Facio comments on the manifold ways in which any or all parts of the lungs may be affected by influenza infection. In a case in a girl of 17 the influenza lesion was located in the right apex but all traces of trouble disappeared at the end of twelve days and the patient has been in apparently normal health since. He describes in detail two cases of extensive pulmonary localization of the influenza with speedy recovery, and a third case in which the patient, a man of 30, died, necropsy confirming the acute influenza pneumonia, enlargement of the spleen and myocarditis. In all such cases of influenza the nervous system, especially the pneumogastric, is extensively involved. This explains the tendency to vomiting, etc. Revulsion does not seem to do much good in influenzal lung affections, and the variability of the symptoms confirms the nervous factors. This in turn explains the benefit from stimulants, such as strychnin, in the nervous depression of influenza. The insomnia of influenza is an early and tenacious symptom and he says it indicates the involvement of the brain in the process.

147. **Determination of Age of Fetus.**—Villapadierna states that at the maternity in his charge at Madrid the majority of the births are illegitimate, and the women scheme to be admitted to the institution as long before the end of the pregnancy as possible in order to conceal their condition. For this reason they lie in regard to the date of the last pregnancy and the date when the first movements of the fetus were felt, trying to give the impression that term is close at hand, while it is the object of the institution to admit only those who are expecting to be confined soon and reject women whose pregnancy has several weeks yet to run, other things being equal. He has been studying the best means for determining the age of the fetus objectively, comparing the girth of the abdomen at the umbilicus in 564 women, with other findings, and tabulating the findings in ninety-four cases in which the vertex-coccygeal length of the fetus was determined. This latter measurement was found the only reliable means to estimate the age of the fetus; it was found surprisingly accurate, as is seen by comparison in the table of the vertex-coccygeal length with the actual number of weeks afterward before delivery. The vertex-coccygeal length is multiplied by 2, then 2 cm. is subtracted to allow for the thickness of the abdominal wall; the remainder is the actual length of the fetus. This for the Madrid material was 35.4 cm. at the seventh month; 38.4 cm. at the eighth month; 43.3 cm. at the ninth, and 45.5 cm. at the tenth month. [Edgar's corresponding figures ("Practice of Obstetrics," Second Ed. 1904, p. 89), are seventh month, 35-38 cm.; eighth month, 38-43 cm.; ninth month, 42-48 cm.; tenth month, 48 to 52 cm. Comparison of these two sets of figures may be useful in estimating the age of the fetus in a woman rather below the average size.]

Hospitalstidende, Copenhagen

January 4, LV, No. 1, pp. 1-24

148 Technic of Gastro-Enterostomy. (Lidt Gastroenterostomiteknik.) A. Madsen.

January 10, No. 2, pp. 25-56

149 Dupuytren's Contracture. (2 Tilfælde af Dupuytrens Kontraktur, opstaaet efter en akut Betændelse i Fascia palmaris.) H. Kærn.
150 Hour-Glass Stomach. (Timeglasventriklen.) S. and J. Nordentoft. Commenced in No. 1.

January 17, No. 3, pp. 57-80

151 Familial Kidney Disease. (Nyrebetændelse med familiær Optræden.) K. A. Heiberg.
152 Bactericidal Action of Radium Emanation Not Due to Ozone Production. (Undersøgelser over, om Radiumsemanationens Baktericiditet skyldes Ozonudvikling.) H. Jansen and O. Strandberg.

January 24, No. 4, pp. 81-108

153 *Sinus Thrombosis. (Kauistisk Bidrag til den otogene, aseptiske Sinusthromboses Patologi og Klinik.) L. Mahler.

153. **Aseptic Sinus Thrombosis.**—Mahler states that he has been able to find only three cases on record of aseptic otitic thrombosis of the transverse sinus, and he adds another to the group. The thrombosis was evidently of purely toxic origin.

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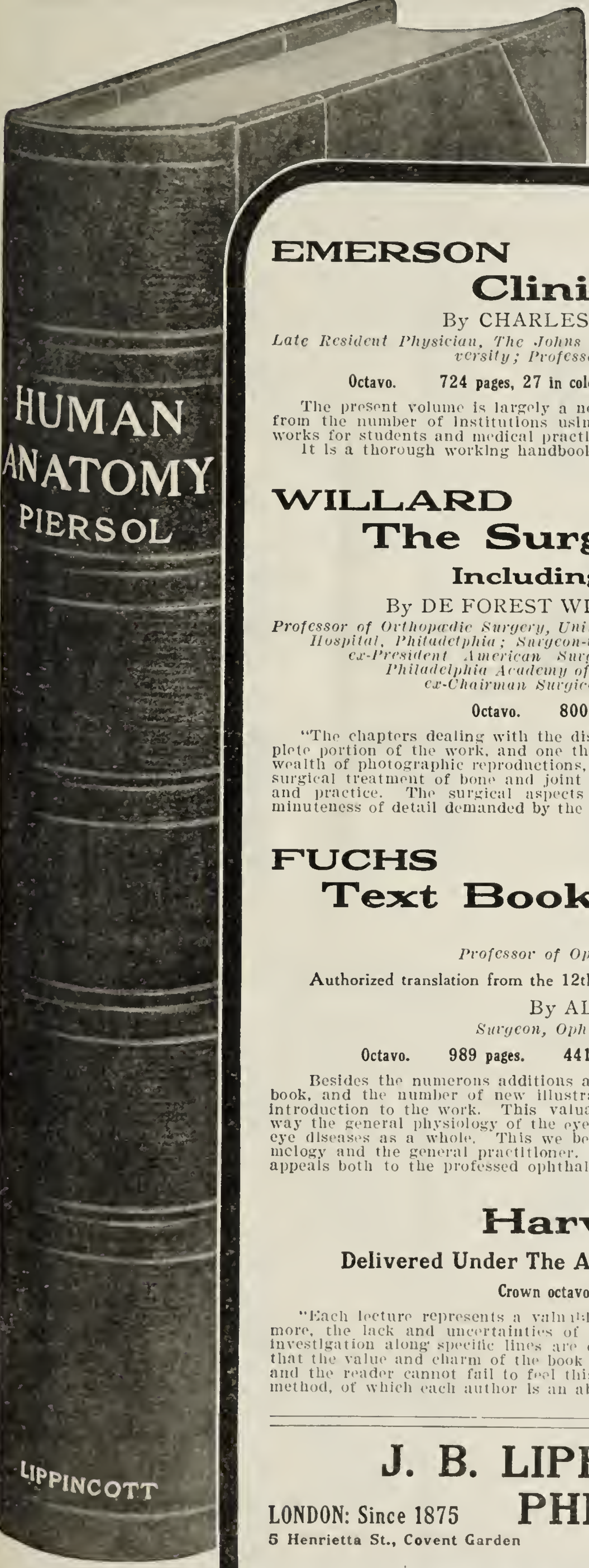

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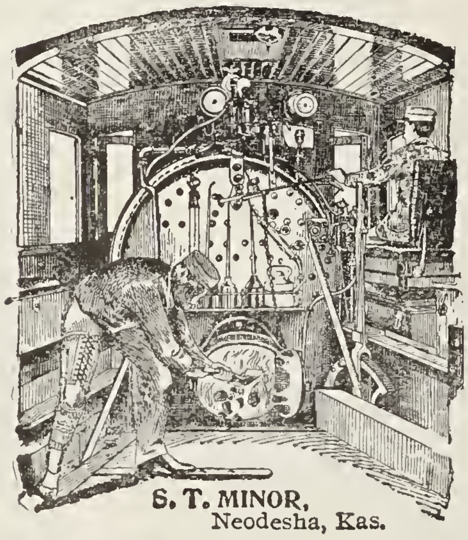

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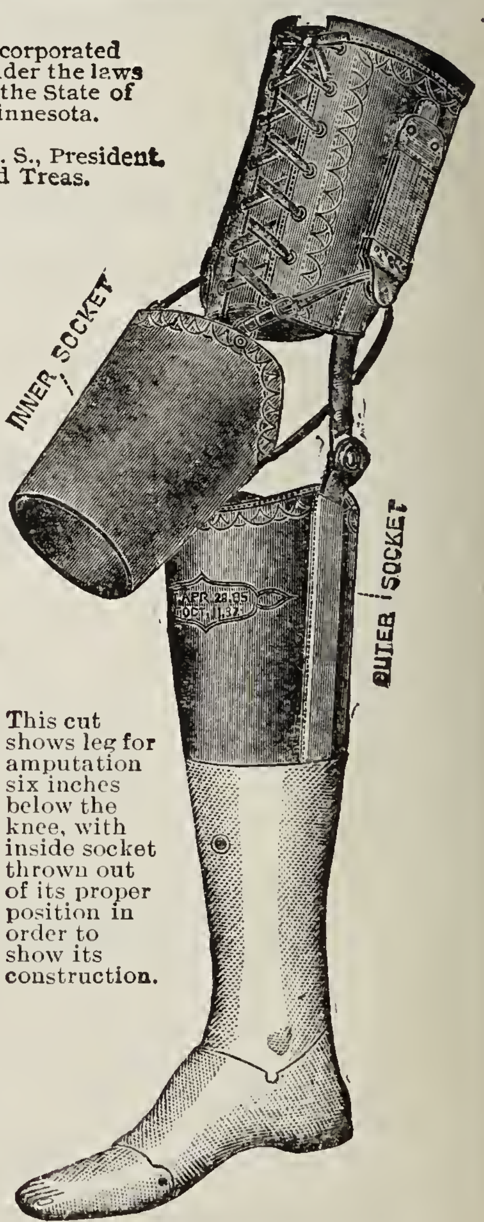

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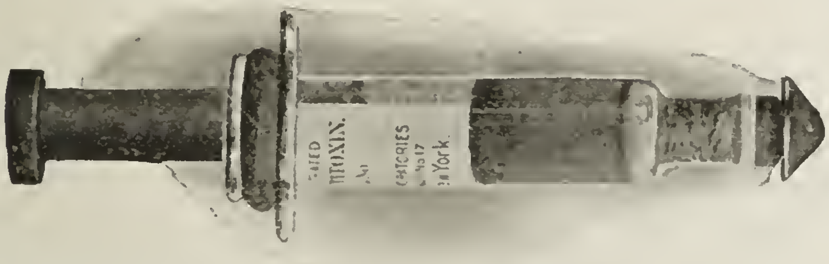


FIGURE 1 shows the syringe as the physician receives it

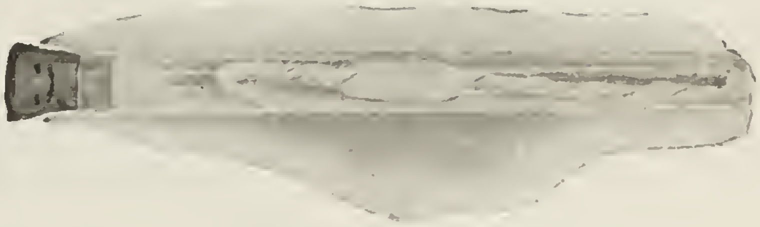


FIGURE 2 shows the needle wrapped and encased in a glass tube in which it has been sterilized

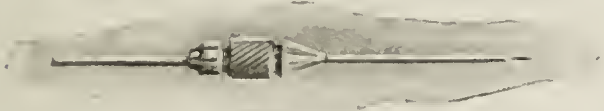
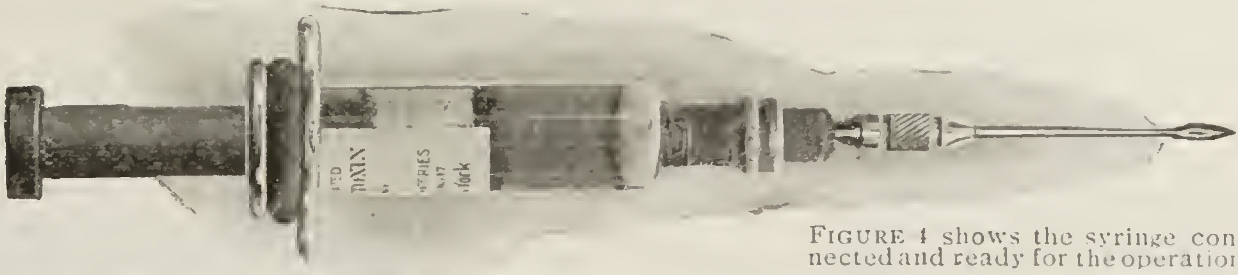


FIGURE 3 shows the needle with the paper wrapping removed



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NEWS: Our readers are requested to send us items of news of a medical nature, also *marked* copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

URSACHEN UND BEKÄMPFUNG DES KINDBETTFIEBERS. Von Dr. E. Radtke and Geh. Med.-Rat Prof. Dr. Winter. Säuglingssterblichkeit und Säuglingsfürsorge in Pommern. Von Dr. Erich Peiper. Veröffentlichungen aus dem Gebiete der Medizinalverwaltung. Herausgegeben von der Medizinalabteilung des Ministeriums. Volume 1, No. 1. Paper. Berlin: Richard Schoetz, 1912.

A PRELIMINARY STUDY OF KENTUCKY LOCALITIES IN WHICH PELLAGRA IS PREVALENT. Having Reference to the Condition of the Corn Crop and to the Possible Presence of an Insect or Other Agent by which the Disease Spreads. Bulletin 159. Kentucky Agricultural Experiment Station of the State University. Paper. Pp. 72, with 65 illustrations.

DIGEST OF COMMENTS ON THE PHARMACOPEIA OF THE UNITED STATES OF AMERICA (EIGHTH DECENNIAL REVISION) AND ON THE NATIONAL FORMULARY (THIRD EDITION) FOR 1909. By Murray Galt Motter and Martin I. Wilbert. Paper. Public Health and Marine-Hospital Service of the United States. Hygienic Laboratory Bulletin No. 79. 1912.

DIE ARZNEIMITTEL-SYNTHESE AUF GRUNDLAGE DER BEZIEHUNGEN ZWISCHEN CHEMISCHEN AUFBAU UND WIRKUNG. Für Aerzte, Chemiker und Pharmazeuten. Von Dr. Sigmund Frankel, a. o.

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BOOKS RECEIVED

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Professor für medizinische Chemie an der Wiener Universität. Third Edition. Paper. Price, 24 marks. Pp. 823. Berlin: Julius Springer, 1912.

INDEX-CATALOGUE OF MEDICAL AND VETERINARY ZOOLOGY. By C. Wardell Stiles, Ph.D., Consulting Zoologist, Bureau of Animal Industry, and Albert Hassall, M.R.C.V.S., Assistant Zoologist, Bureau of Animal Industry. Part 35 (Authors: Y to Zypkin). Paper. Bureau of Animal Industry, Bull 39. Washington: Government, 1911.

ELEMENTS OF HYDROTHERAPY FOR NURSES. By George Knapp Abbott, M.D., Dean of the Faculty and Professor of Hydrotherapy and Practice of Medicine in the College of Medical Evangelists, Loma Linda, Cal. Cloth. Price, $1.50. Pp. 273. Washington: Review and Herald Publishing Association, 1911.

THE CAUSATION AND PREVENTION OF TYPHOID FEVER. With Special Reference to Conditions Observed in Yakima County, Washington. By L. L. Lumsden. Paper. Pp. 53, with illustrations. Public Health and Marine-Hospital Service: Public Health Bulletin No. 51. 1912.

ESSENTIALS OF SURFACE ANATOMY. By Charles R. Whittaker, F.R.C.S. (Ed.), F.R.S.E., Senior Demonstrator of Anatomy, Surgeons' Hall, Edinburgh. Second Edition. Cloth. Price, $1.40. Pp. 59, with illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

ELEKTROPHYSIOLOGIE MENSCHLICHER MUSKELN. Von Dr. Med. H. Piper, a.o. Professor der Physiologie, Kgl. Friedrich-Wilhelms-Universität zu Berlin. Paper. Price, 8 marks. Pp. 163, with 65 illustrations. Berlin: Julius Springer, 1912.

THE TOBACCO HABIT, ITS HISTORY AND PATHOLOGY. A Study in Birth-Rates, Smokers Compared with Non-Smokers. By Herbert H. Tidswell. Cloth. Price, 3 shillings, 6 pence net. Pp. 246. Philadelphia: P. Blakiston's Son & Co., 1912.

MODERN THEORIES OF DIET AND THEIR BEARING ON PRACTICAL DIETETICS. By Alexander Bryce, M.D., D.P.H. (Camb.). Cloth. Price, $2.10 net. Pp. 368. New York: Longmans, Green & Co., 1912.

DIE GOLDSCHMIDTSCHE IRRIGATIONS-URETHROSKOPIE. Eine zusammenfassende Darstellung der Methode. Von Dr. A. Schlenzka. Paper. Price, 4.50 marks. Leipsic: Werner Klinkhardt, 1912.

ACCIDENT BULLETIN 41: RAILROAD ACCIDENTS IN THE UNITED STATES, during July, August and September, 1911. Paper. Washington: Interstate Commerce Commission, 1912.

EMERGENCY MEDICAL AND SURGICAL AID. What to Do and What Not to Do. By Ernest A. Wells, M.D. Paper. Pp. 48. Ætna Life Insurance Company, Hartford, Conn., 1911.

MODERN METHODS OF NURSING. By Georgiana J. Sanders. Cloth. Cloth. Price, $2.50 net. Pp. 881, with 228 illustrations. Philadelphia: W. B. Saunders Company, 1912.

TRUTH CAUTIONARY LIST FOR 1912. Cloth. Price, 1 shilling, 2 pence. Pp. 140. London: Truth Publishing Co., Ltd., 10 Bolt Court, Fleet Street, E. C.

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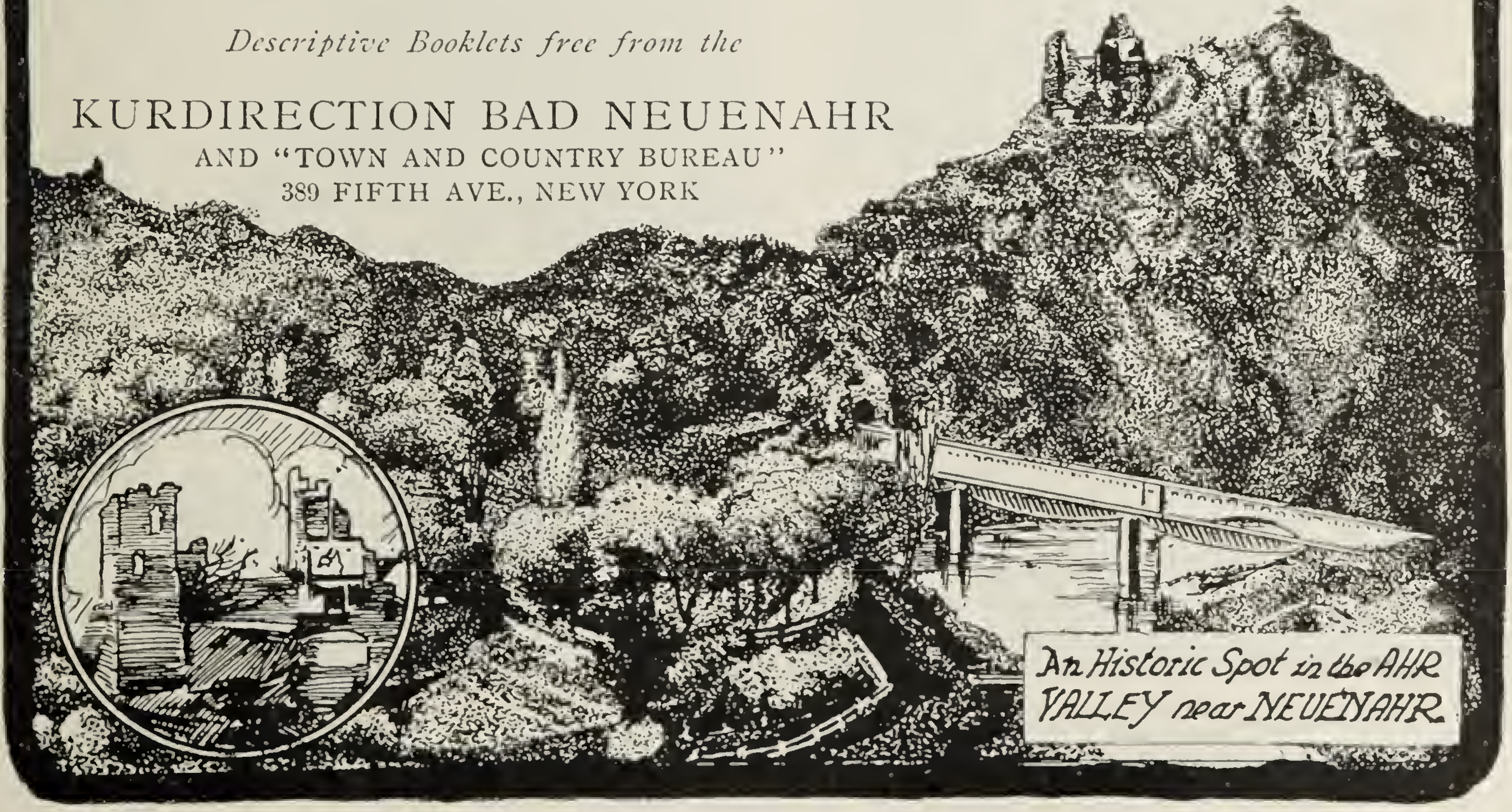
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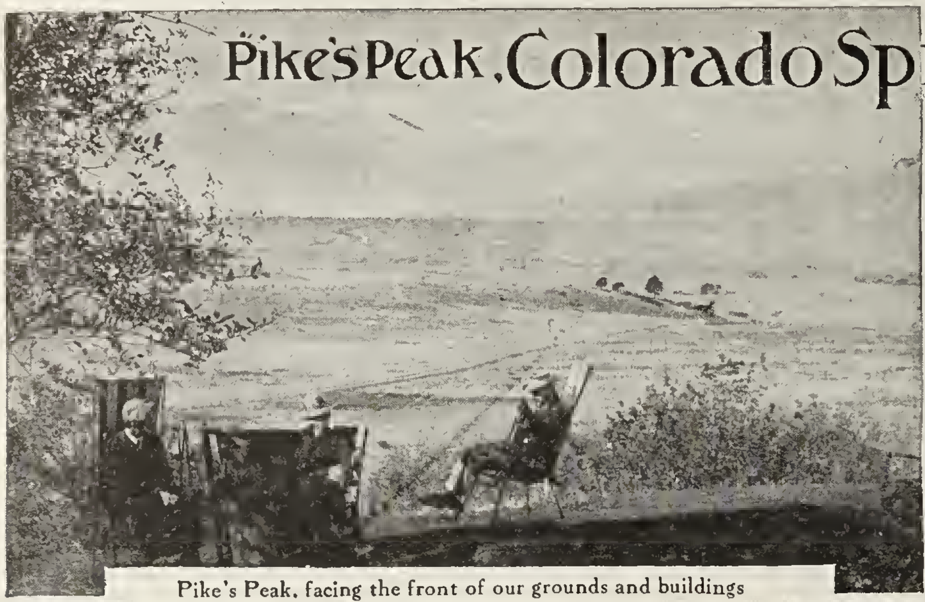

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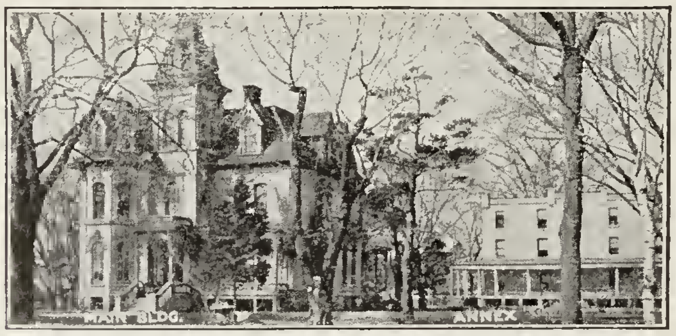

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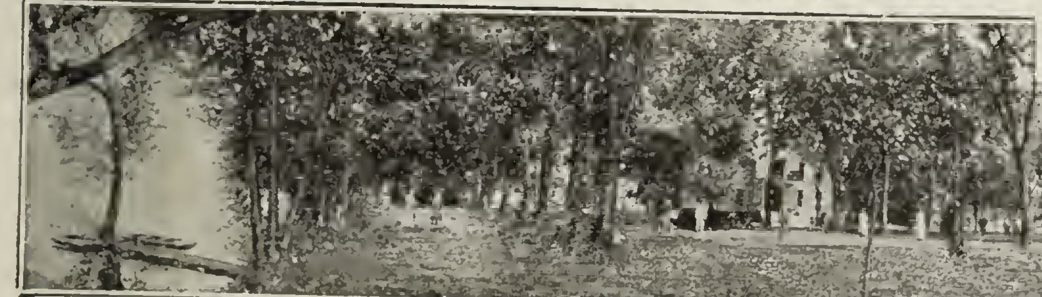

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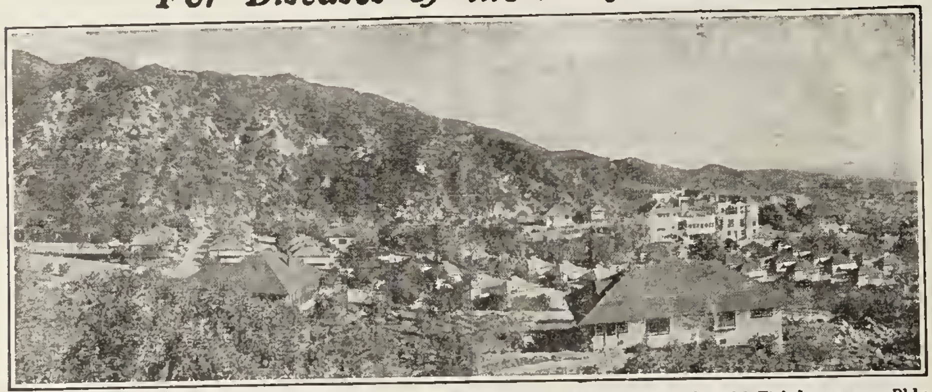

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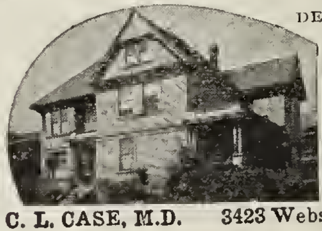

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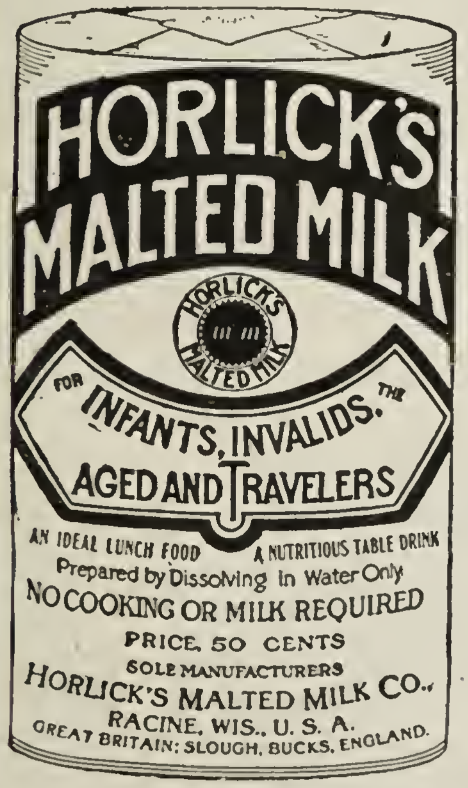
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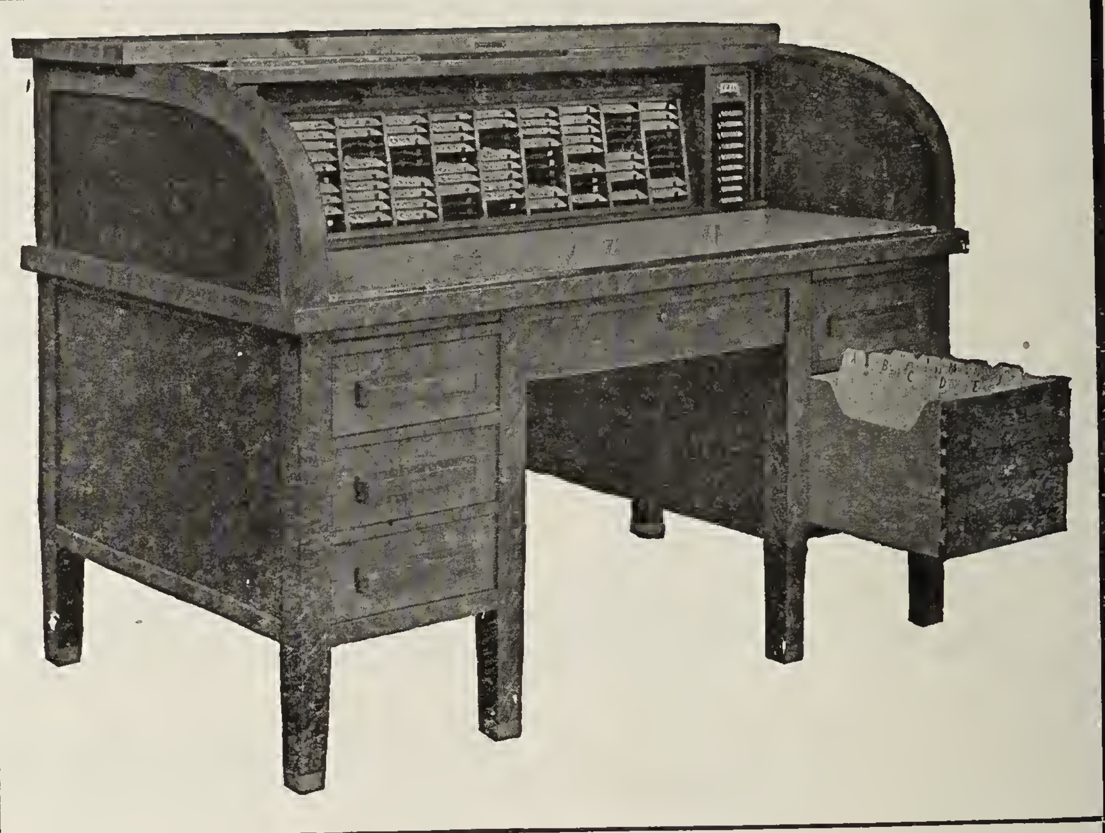

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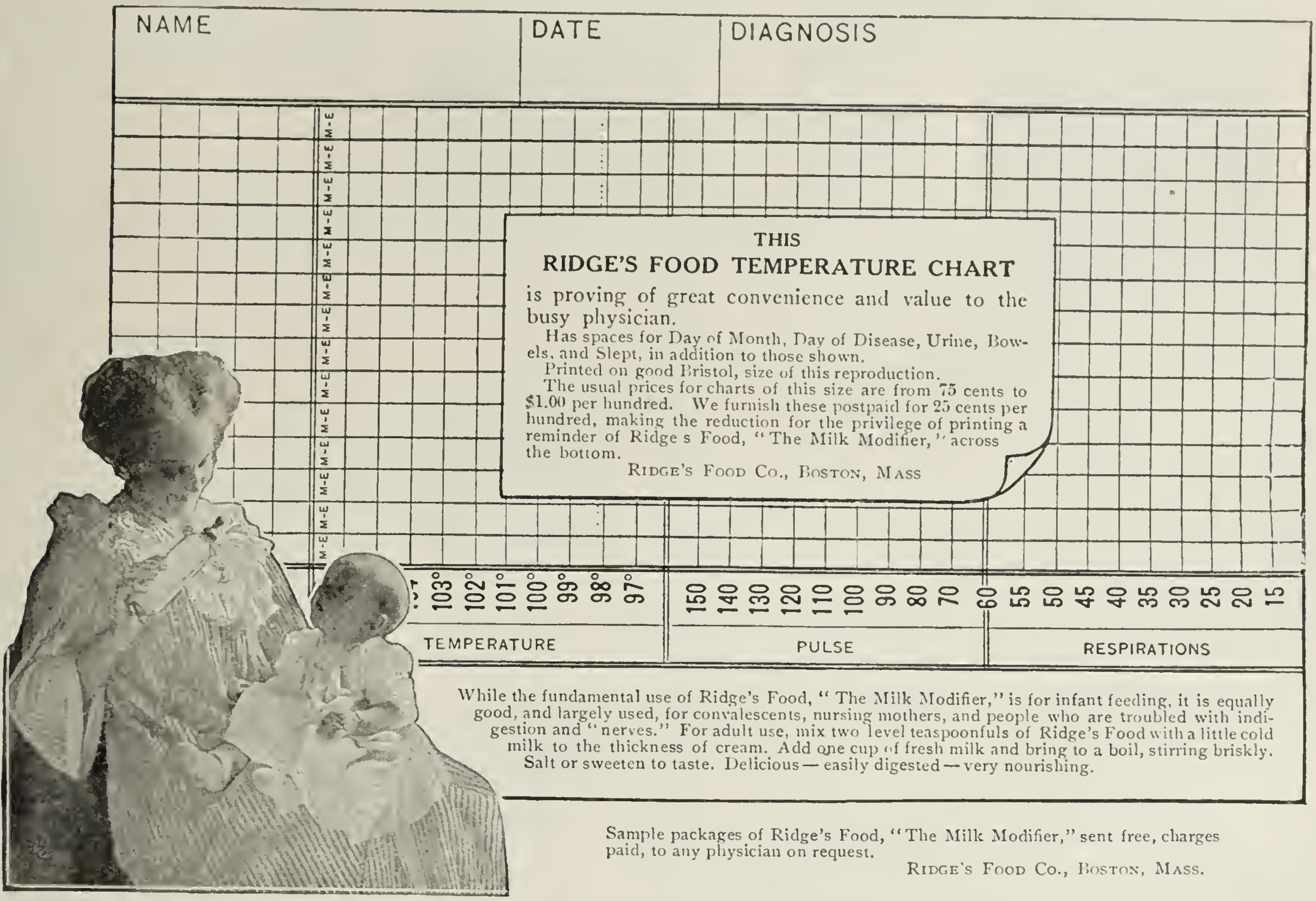

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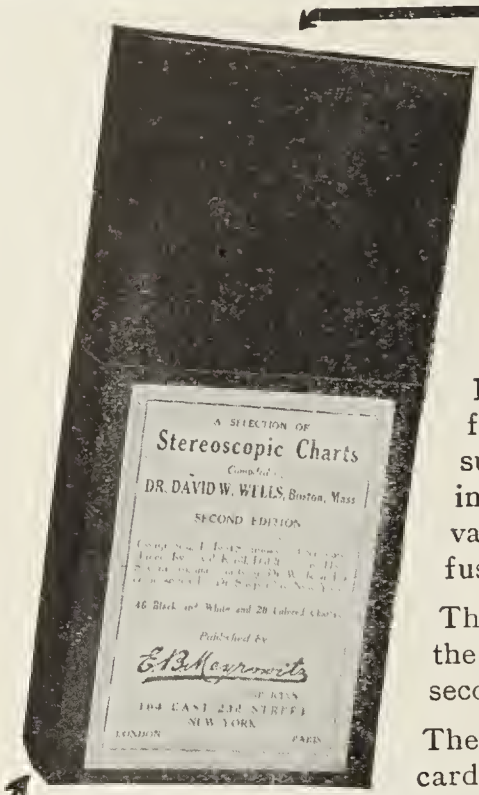

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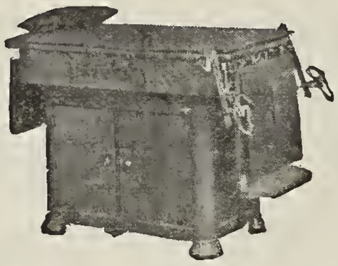

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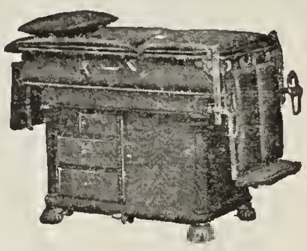

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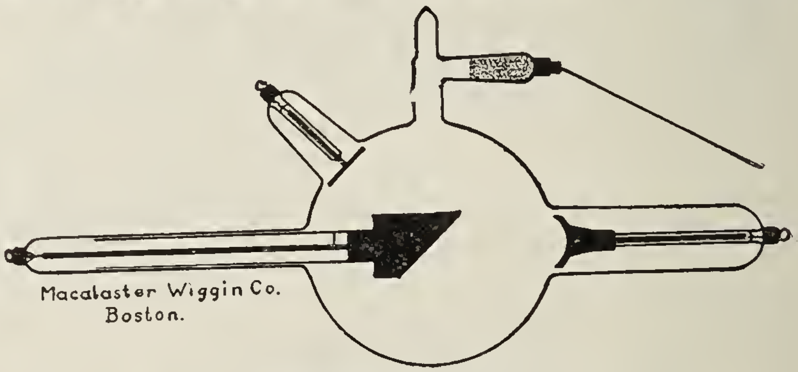

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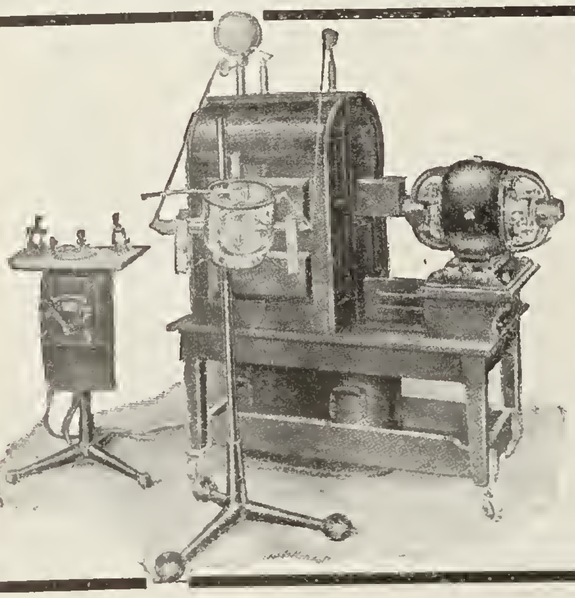

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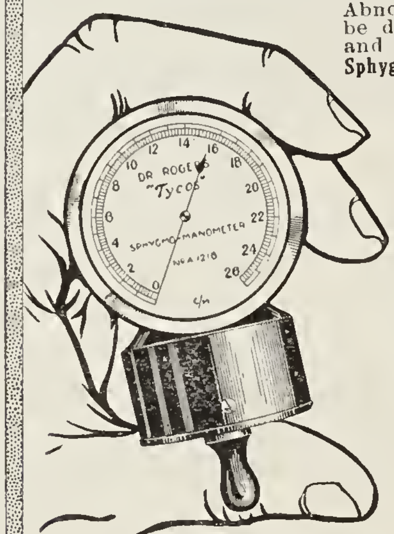

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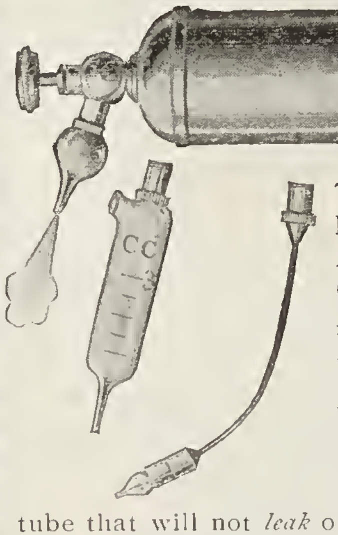
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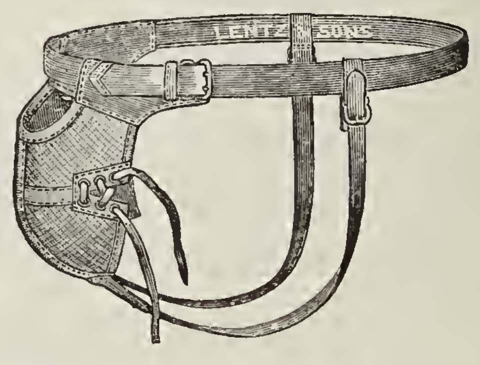

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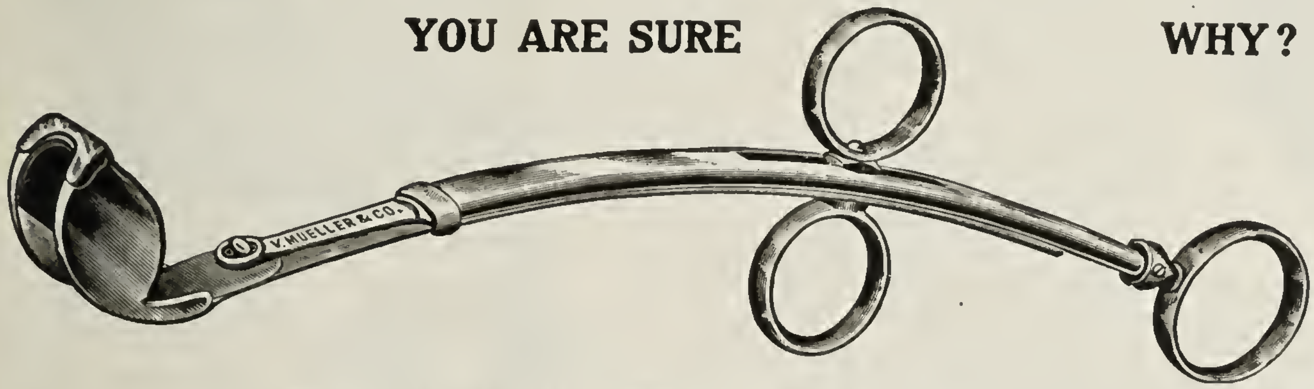

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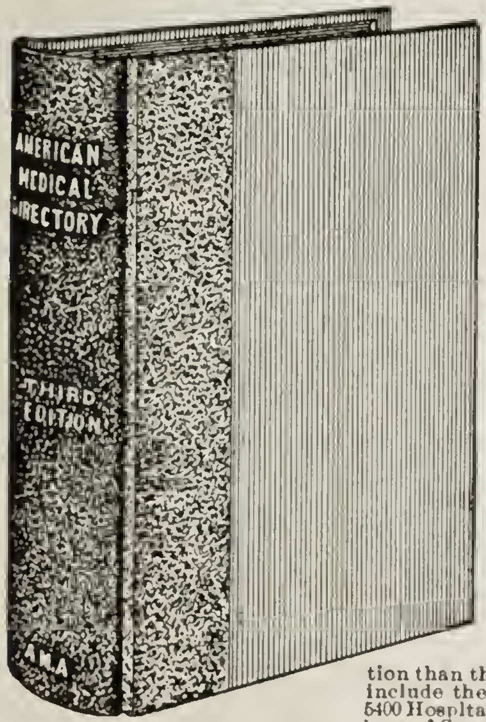

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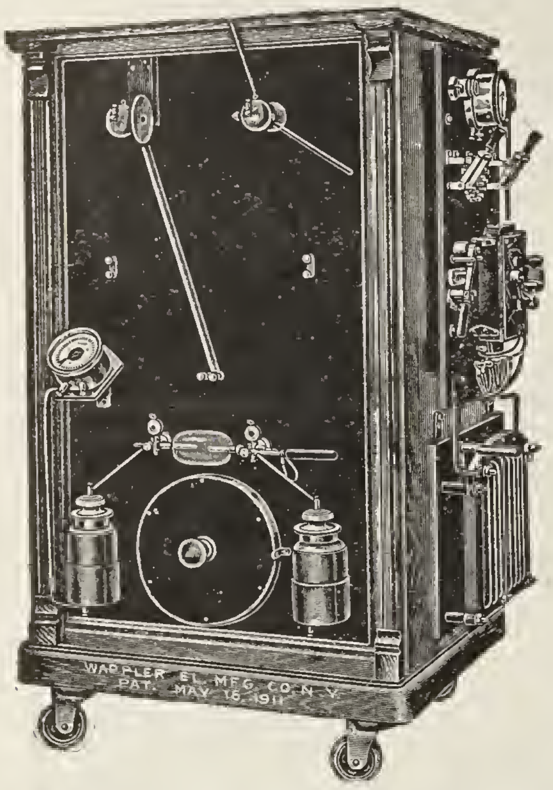

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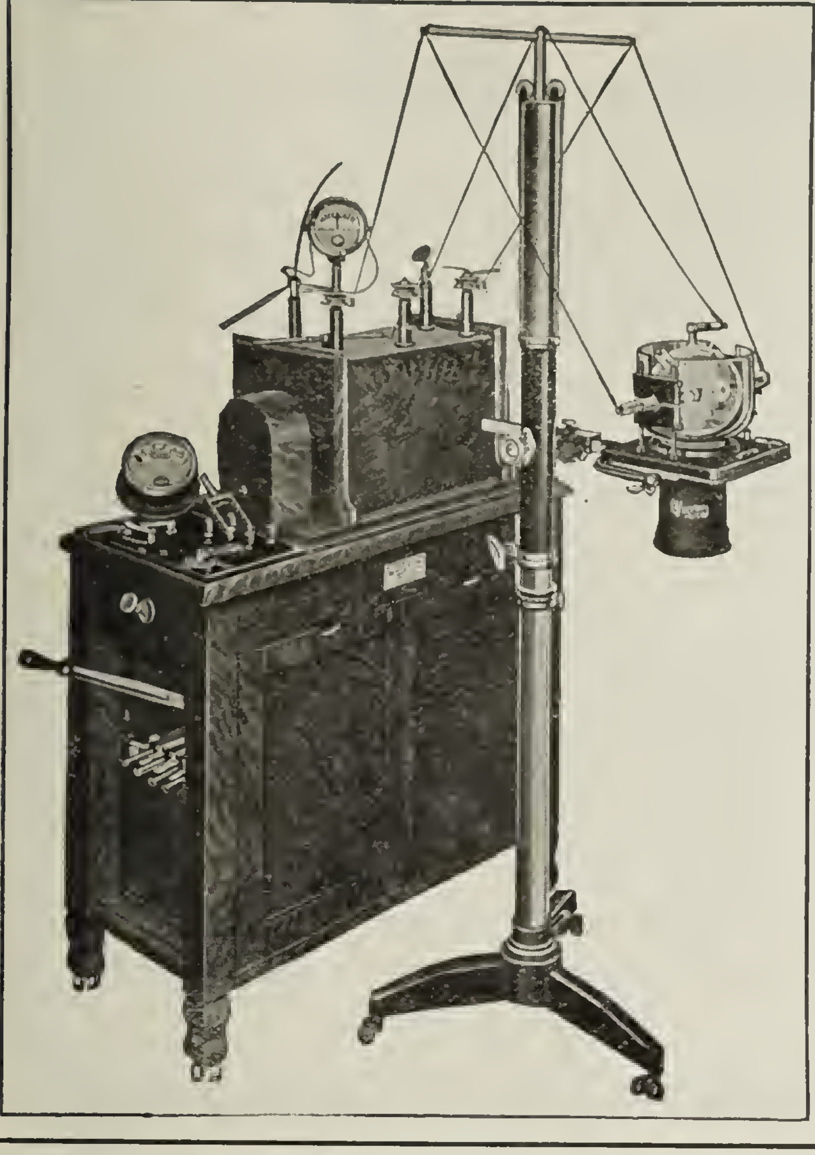

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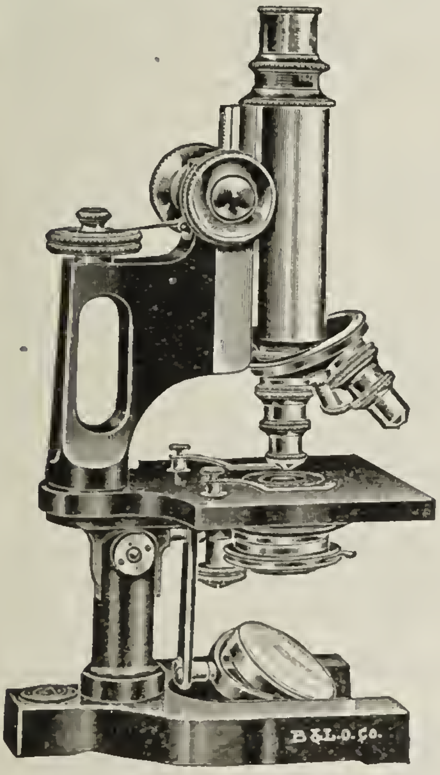

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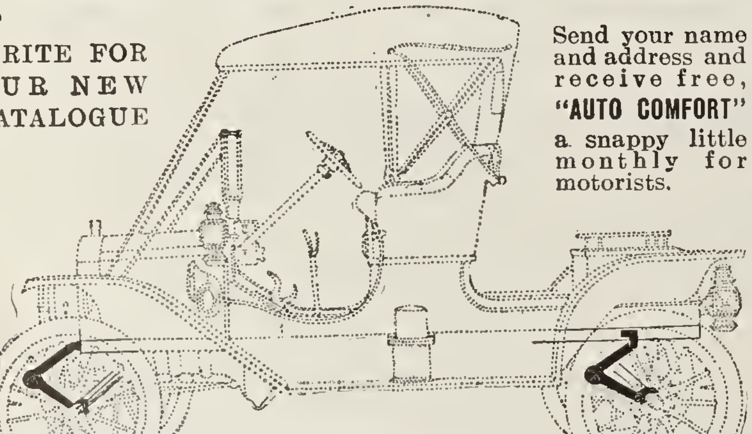

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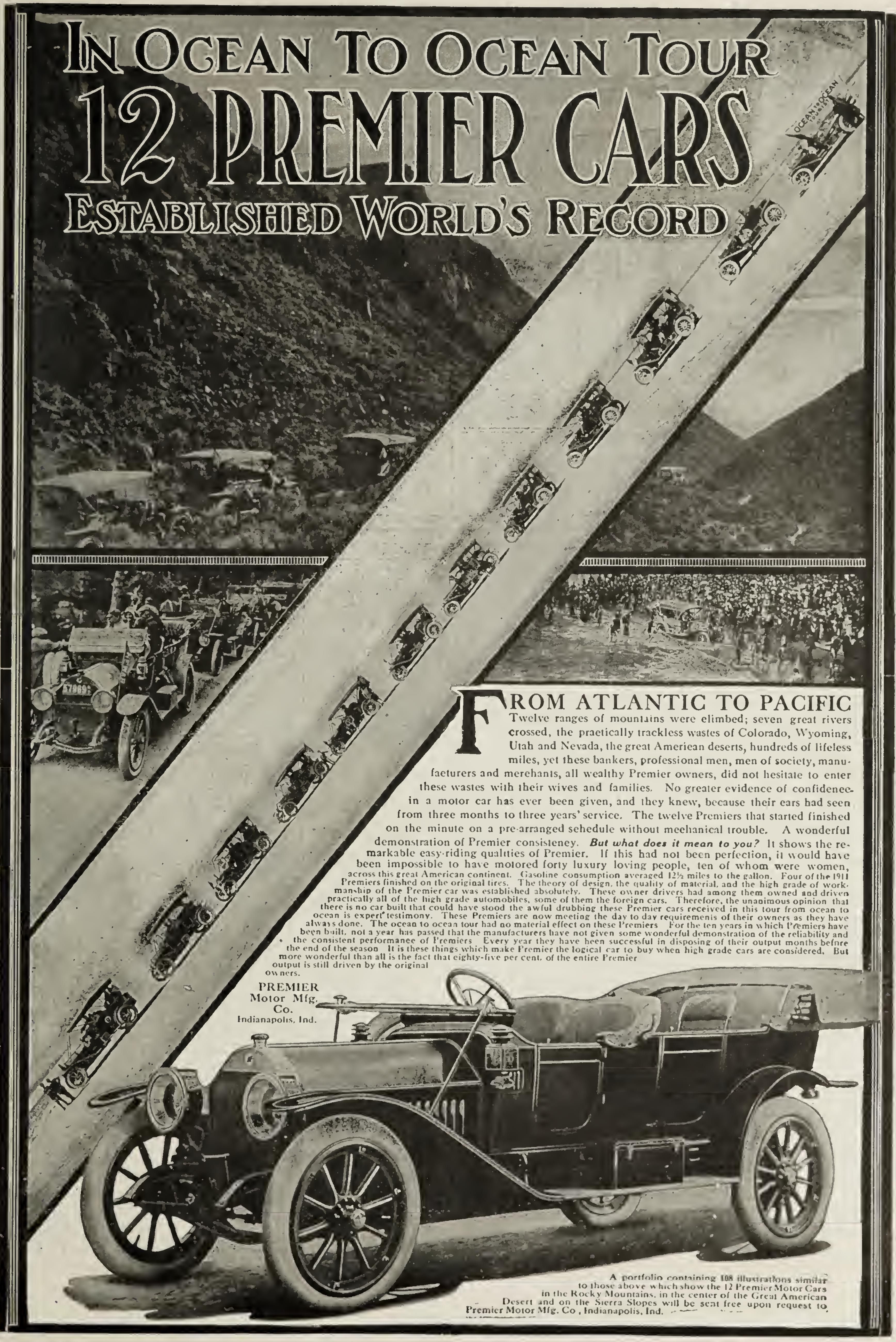

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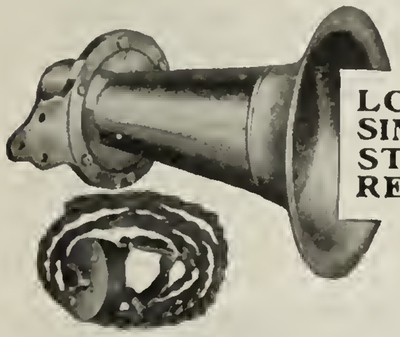

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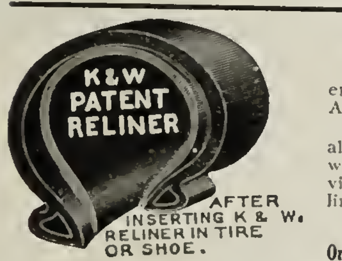
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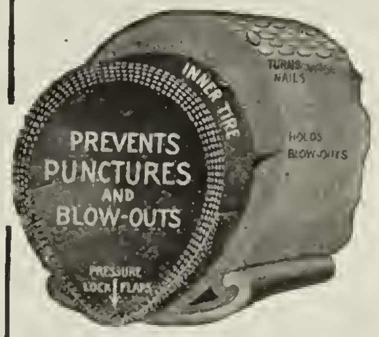

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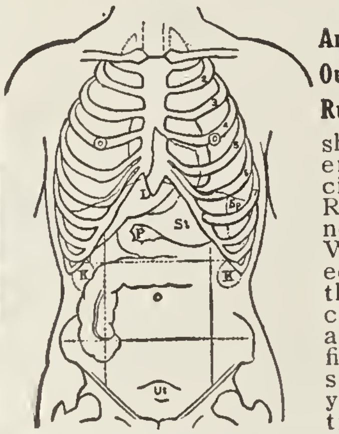

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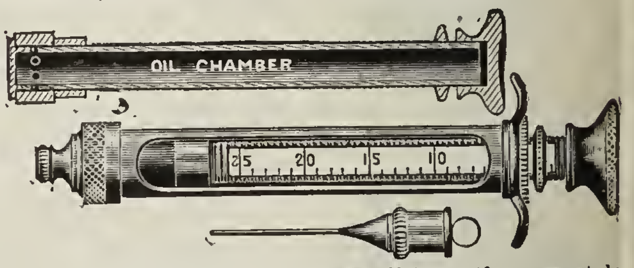

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FOR SALE—KANSAS—$2,200 PRACTICE, office fixtures, drugs and household furniture in county seat town in gas and oil belt; will stay a short time to introduce; practice can easily be increased; good reasons given; $500. Add. 2416 N, % AMA.

FOR SALE—VIRGINIA—LOCATION OFfered; unopposed country practice; tidewater section; nearest physician, 12 miles; churches and schools convenient; good people, good roads, fine farming section; 10-room residence, barn, etc.; reason for selling, want to specialize. For full particulars add. 2444 N, % AMA.

FOR SALE—KANSAS — WELL-ESTABlished and unopposed practice; railroad town, 300 population, in wealthy farming country; best schools, churches, etc.; lot 50x200, office building, barn, drugs and everything except library, for $1,200; one-half cash, balance long time; practice brings $2,000 annually; am retiring and moving to Kansas City. Add. 2501 N, % AMA.

FOR SALE—MICHIGAN — $3,500 PRACtice; thriving town 2,000; two main railroads; good surrounding farming country; good high school, churches, two banks; fees and collections good; German and American people; a first-class 3-room office outfit and thorough introduction for $500; a bargain for some one who can talk German. Add. Box 1, Reed City, Mich. N

FOR SALE — MICHIGAN — $2,400 PRACtice; village 600; hour and half from Detroit; good schools, churches, fine roads; beautiful lakes; many summer resorts near; opposition just right, one other doctor; two-story building, 30x50, living rooms above office; will sell or rent to right party; with real estate, $1,500; without real estate, $500 cash; going to city. Add. 2504 N, % AMA.

FOR SALE—SOUTHERN MINNESOTA—Town and country practice free to the purchaser of my office outfit and household goods in German-American town of 1,200; good school, churches, roads, electric lights and water; Competition OK; must sell at once; have accepted hospital position; exceptional offer. Add. 2538 N, % AMA.

FOR SALE — S.E. MINNESOTA — UNOPposed $3,000 practice in growing town of 275 located in richest farming district of Minnesota; nationalities, Norwegian, German and American; territory 7-12-13-18 miles; collections 99 per cent.; price of practice, with complete new equipment, $650 cash. Add. 2313 N, % AMA.

FOR SALE—MISSISSIPPI — IN AGRIcultural hills of southwest part, 10 miles from Mississippi River; 8-room house, 3 cabins, 120 acres of land and all conveniences for country life; with practice $2,500-$3,000 yearly; no opposition; all for $5,000; cash payment and balance in notes. Add. Dr. J. D. Shields, R. F. D., Stanton, Miss.N

FOR SALE—NORTHEAST MISSOURI—Will turn over $3,500 town and country practice to man buying office fixtures and drugs; established 4 years; town on railroad; 300 population; no competition worth mentioning; can turn over practice almost without exception; price, $750; good real estate optional; a bargain to good man; will show my books to purchaser. Add. 2526 N, % AMA.

FOR SALE—SOUTH MISSOURI—COUNTY seat town, 1,000; 4 churches, 2 banks, railroad; 4-year approved high school; fine farming and stock-raising community; $3,000 practice free to purchaser of 7-room residence and 2-story office building; all in excellent repair; will leave state; reason, impaired health; competition light; price $3,000; terms, half down, balance one and two years; answer quick; no triflers. Add. Doctor, Box 5, Greenville, Mo. N

FOR SALE—NEBRASKA — $1,800 VILlage and country practice with small stock drugs in eastern Nebraska; town 250 in rich farming community; no opposition; good roads and collections; excellent opportunity for young doctor; easy to swing; investigate. Add. 2534 N, % AMA.

FOR SALE—NEBRASKA—I WILL TURN my practice to the purchaser of my drug stock, invoice, $6,500; only store and only physician in county seat town; wealthy stock country; big territory; can make money from the start; have a good practice and business and good reasons for selling. Add. 2535 N, % AMA.

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FOR SALE—NEBRASKA — MY $3,000 practice, established 14 years, with railroad and insurance appointments, goes free to purchaser of my new and modern residence property; if you have the cash and ability of a successful physician, write for particulars; collections 98 per cent.; competition light; wealthy farmers; German Baptist and Catholic religions predominate. Add. 2437 N, % AMA.

FOR SALE—NEBRASKA—$7,000 PRACtice, general medicine and surgery in stock-raising and farming country; good schools, churches and hospital facilities; $5,500 buys modern residence, two garages and good will; half can be carried easy terms; business growing; a snap for capable man willing to work. Add. 2446 N. % AMA.

FOR SALE—NEBRASKA—MEDICAL AND surgical practice; established 20 years; office fixtures, etc.; will consider partnership 6 months to introduce successor; will sell 10-room modern residence with or separately, in town of 5,000 in best farming country in United States; good honest, thoroughly competent man can clear $10,000 per year; ill health reason leaving. Add. 2522 N, % AMA.

FOR SALE — NEVADA — UNOPPOSED practice of $2,600; rich agricultural valley, 42 miles from railroad; salary as health officer, $25 monthly; excellent place for physician who wants to take a rest and make money easily; eight rooms completely furnished, operating chair, drugs, good will, all for $1,000 cash. Dr. Duesing, Paradise Valley, Nev. N

FOR SALE—NEVADA — $5,000 UNOPposed practice given to purchaser of my 7-room furnished house and 2-room office with drugs; town of 400; fine climate; mining and stock raising; on S. P. Railroad; price, $3,500; $2,000 down, balance on 6 per cent. note. Add. Dr. G. F. Pope, Battle Mountain, Nev. N

FOR SALE—NEW HAMPSHIRE — $700 buys growing practice, $2,000 to $2,500 yearly in live manufacturing town of 5,000; 5 minutes to P. O. and R. R.; office on main street; good roads, schools and churches; competition light; married man preferred to take my office and tenement; rent reasonable; good reasons for selling; make money from the start. Add. 2396 N, % AMA.

FOR SALE—NEW MEXICO—UNOPPOSED $2,500 practice, drug store, household goods, office fixtures and auto at invoice price in county seat town on transcontinental railroad; local surgeon for 2 railroads, county health office and twelve insurance companies thrown in; population town, 800; altitude, 4,000 feet and located in beautiful river valley; good all-year climate; fine hard, dry roads; deposits in local national bank, $190,000; $25,000 courthouse and jail; $20,000 school house; excellent schools with 12 grades; 6 general merchandise stores; large wholesale house; 3 churches, 4 hotels; large lakes adjoining town; fine duck and other shooting; population county, 12,000; equal American and Spanish, most all English-speaking; no physician or drug store for 20 miles south, 45 miles east, 42 north and 40 west; office, drug store and dwelling in one centrally located building and rents for $21 a month; store nets $125 a month; will sell at actual invoice price; stock invoices about $3,000, including almost new oak fixtures and only fountain in town; auto, office equipment and household goods, $800; reason for leaving, am buying interest in hospital in large New Mexico city; $2,000 cash required and rest in bankable paper; invite thorough personal investigation, but will answer only those letters that mean business and have the money; will remain 45 days and introduce. Add. 2540 N, % AMA.

FOR SALE—NEW MEXICO—RAILROAD town; large country practice; money from beginning; good for tuberculars; fees good; only physician; have offer east; some property to sell, reasonable. Add. 2541 N, % AMA.

FOR SALE — EYE, EAR, NOSE AND throat practice of Dr. C. A. Sheridan of Oswego, N. Y.; Dr. Sheridan died February 15, leaving a well-established practice of from $4,000 to $5,000 per annum; fine location in business center; latest improved instruments and fixtures; library can be had also if desired. Add. Mrs. C. A. Sheridan, 123 E. 4th St., Oswego, N. Y. N

(Continued on next page)

FOR SALE — CENTRAL NEW YORK—$3,000 unopposed practice in fine village of 400; railroad, telephone and water system; electricity; surrounding country rich farming lands; good collections; equipment, consisting of two good horses, rigs, office furniture, stock of drugs, etc., worth $1,000; will sell and give good will and introduction for $1,200 cash. Add. 2482 N, % AMA.

FOR SALE—NEW YORK—$2,500 PRACtice; easily increased; railroad town of 1,500; high school, four churches; factories with $1,500 weekly pay rolls; good surrounding country; good collections; $1,000 takes practice, driving outfit and equipment inventorying $1,200; real estate optional; good reasons for selling; will stand rigid investigation. Add. 2418 N, % AMA.

FOR SALE—NORTH DAKOTA—$7,000 A year practice to a Scandinavian, first-class surgeon, who can buy modern residence and fixtures at a moderate price; large, live town, with good hospital accommodations; $3,000 cash, balance on time. Add. 2517 N, % AMA.

FOR SALE — NORTHWESTERN OHIO — Town of 1,000, on railroad and electric line; fine farming community; established practice of $2,500-$3,000; city water, electric lights, good schools and churches; will give thorough introduction; an opportunity for a live man; wish to sell by May 1. Add. 2544 N, % AMA.

FOR SALE—CENTRAL OHIO—SPLENDID opportunity for physician to take charge of $3,000 practice in thriving and rapidly growing railroad town of 4,000; office within stone's throw of square; has thorough and modern equipment; furniture, instruments, drugs, etc., invoice $625; all useful and in fine condition; rare opportunity for right man; death of doctor reason for selling; don't write unless you mean business. Add. 2539 N, % AMA.

FOR SALE—OHIO—$3,600 PRACTICE TO the purchaser of my 10-room modern house and 3-room office (separate); surgeon to two railroads; town 600; first grade high school; good roads; finest farming community in eastern Ohio; price, $2,000, less than cost; part cash, part on time. Add. 2477 N, % AMA.

FOR SALE — NORTHERN OHIO—PRACtice averaging $2,800 per year; rich farming community; town of 500; for net value of residence, including office rooms, good barn, large yard and garden, centrally located; only physician; competition light; steam and electric lines; level country; stone roads; will introduce successor. Add. 2275 N, % AMA.

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FOR SALE—OKLAHOMA—TOWN AND country practice free to purchaser of my well-improved farm of 156 acres of good land 1½ miles from town; 9-room residence; good water; good roads and oil prospects; will introduce; expenses low; price, $8,000; half cash; balance terms. Add. 2417 N, % AMA.

FOR SALE—RANDLETT, OKLA.—I HAVE a nice practice here that I will turn over to some energetic M.D.; nice inland town; good class of people; have made some money in Oklahoma; going to go into other work. Add. with self-addressed stamped envelope, J. D. Kernodle, Randlett, Okla. N

FOR SALE—PENNSYLVANIA — ONE OF the best locations for the village and country practice of medicine in N.-W. Pennsylvania; good business, people, roads, churches, schools, and money from the start; no competition nearer than 5 to 12 miles; reason for selling, age and ill health; $2,500; make it first year. Add. 2335 N, % AMA.

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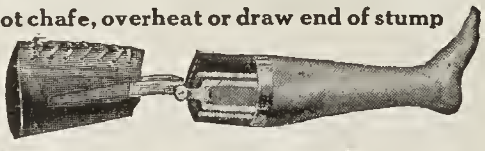

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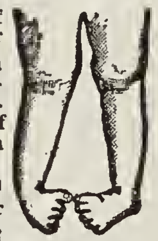

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Catalog on request. Physicians' patronage everywhere solicited and correspondence invited. THE WOLFERTZ DEFORMITY APPLIANCE & TRUSS MFG. CO. Founded 1886. Incorporated 1906. **154 N. FIFTH AVENUE, CHICAGO, ILL.**

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FOR SALE—PHILADELPHIA, PA.—GOOD paying office practice, consisting of genito-urinary and electrotherapeutic work; also special work among department-store employees; good will, surgical instruments, electrical appliances and furniture in moderate priced offices in central building; price $1,000; retiring from practice. Suite 510, Empire Bldg., Philadelphia, Pa. N

FOR SALE—PENNSYLVANIA — GOOD growing practice in town of 700; midway between Williamsport and Eagles Mere; established 30 years; good surrounding country; hold the appointments of railroad surgeon and township health officer; also examiner for many insurance companies; facts and figures on request. Add. Doctor, Box 135, Picture Rocks, Pa. N

FOR SALE—EASTERN SOUTH DAKOTA —County seat town 1,000; a $5,000 practice with the purchase of my property, office, house, 3 extra lots, barn, for $4,000; must have $3,500 cash to close deal; do not answer unless you have the money. Add. 2329 N, % AMA.

FOR SALE — SOUTH DAKOTA — $6,000 practice in fine town; office fully equipped—Birtman *x*-ray (16-plate), Globe nebulizer, Allison nose and throat cabinet, McDonnald operating chair, etc.; splendid reception-room furnishings, modern residence, garage and automobile; will introduce; between $6,000 and $7,000 cash; reason for selling, wife's health; answer quick if you want something good. Add. 2475 N, % AMA.

FOR SALE—TEXAS—DOCTOR—I MUST make a change; I can introduce you into a $3,500 practice (cash) for the price of my residence, outbuildings and half city block; $2,000 cash, balance two notes 8 per cent.; county seat; population 2,500; one competitor; churches and schools first class; territory large; fees good, roads good; country developing rapidly; to be spent in next two years, $1,500,000 in irrigation district; if you can't come and investigate don't write me. Add. Box 53, Cotulla, Texas. N

FOR SALE—SOUTHWEST VIRGINIA—A good town and country practice; fine farming and stock-raising country; good roads being built; good people; good schools and churches; practice worth about $1,800 per year; may be increased; $250 takes horse and drugs. Add. T. E. Chapman, Dryden, Va. N

FOR SALE—WESTERN WASHINGTON—village and country practice of $4,000; 98 per cent. collectable, turned over to an immediate purchaser of $350 outfit cash; exceptional opportunity. Add. 2528 N, % AMA.

FOR SALE — WISCONSIN — GENERAL practice in one of largest up-to-date manufacturing cities; excellent railway facilities; good schools, churches and splendid boating and fishing; collections good; practice averages $6,500 yearly; wish to sell office equipment and practice; no real estate; thorough introduction; going abroad to specialize. Add. 2330 N, % AMA.

FOR SALE — NORTHERN WISCONSIN — $3,000 country practice, established ten years, drawing from 2,000 rich farmers; nearest competition 8 miles; good churches, roads, schools; nationality mixed; I will sell practice, office equipment and residence for $1,750; less than cost of residence; good for $2,000 first year. H. C. Caldwell, Ridgeland, Wis. N

FOR SALE—WISCONSIN—AM LEAVING a $3,200 cash country and village practice free to purchaser of my office equipment, drugs, instruments and household furniture; everything new; driving outfit, etc.; price for personal property, $700 cash; real estate optional; immediate possession given upon sale; rich farming community; modern village of 500 inhabitants; electric light; will remain and introduce successor; don't reply unless you have the money. Add. 2450 N, % AMA.

(Continued on next page)

FOR SALE—WISCONSIN — $4,000 PRACTICE in village of 1,000; railroad, high school, five churches, electric lights; rich farming country; good roads; collections 98 per cent.; one competitor; will sell barn, complete stock of drugs, office outfit, including practice, for $2,000; sell or lease residence; reason for selling, other business. Add. 2467 N, % AMA.

FOR SALE—WISCONSIN—RARE OPPORTUNITY; $4,000 eye, ear, nose and throat practice; finest up-to-date office and best location in college and factory town 18,000; competition very mild; possession some time between now and June; satisfactory reasons first-class introduction; equipment and hospital interests, $2,000 cash. Add. 2532 N, % AMA.

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FOR SALE—NEW YORK—LARGE BRICK house, 18 rooms; two stories finished off; garret may be if desired; shade and fruit trees; streets on two sides; less than 10 hours from New York, Boston, Baltimore, Washington, Philadelphia and eastern cities; fine location for sanatorium, private rest cure or private school. Add. B. N. Payne, 71 Penn Ave., Elmira, N. Y. P

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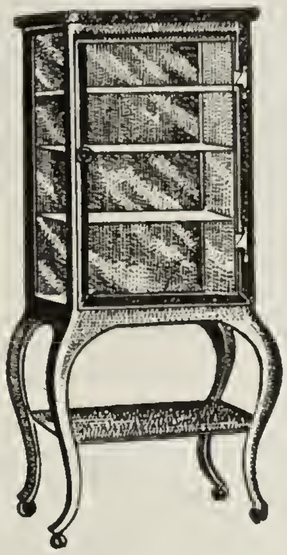

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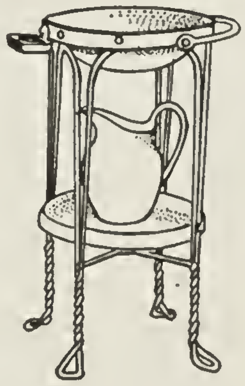

This is the finest portable wash stand to be had at any price. It is all metal with an ever lasting coating of snow white enamel. Exactly as cut. 30 inches high, 14 inches in diameter at top. White enameled pitcher, bowl, soap dish and towel rack included. No other dealer charges less than $8.50 for a wash stand anywhere near as good. Our price, cash with order, complete only------------------------- **$5.00**

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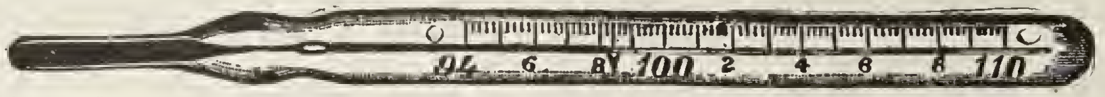

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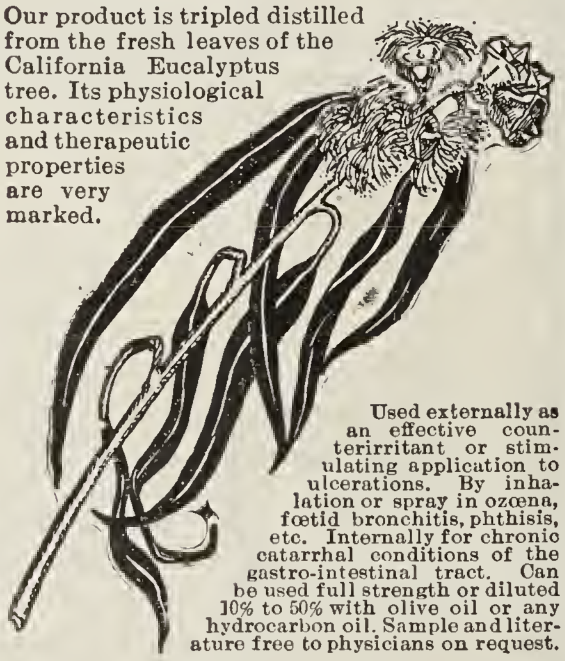

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(Continued on next page)

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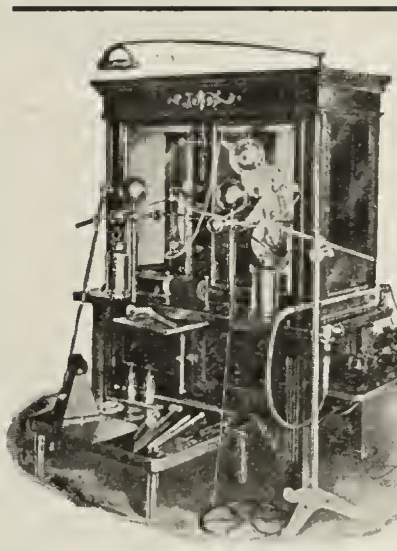

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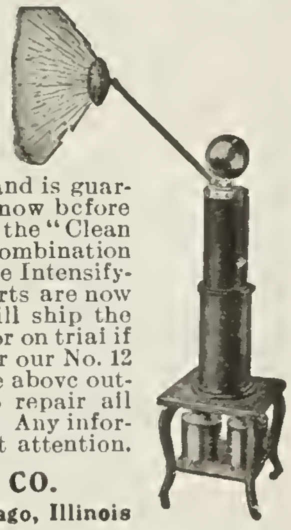

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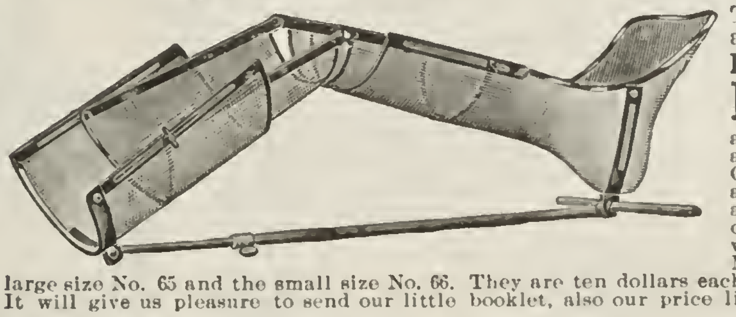

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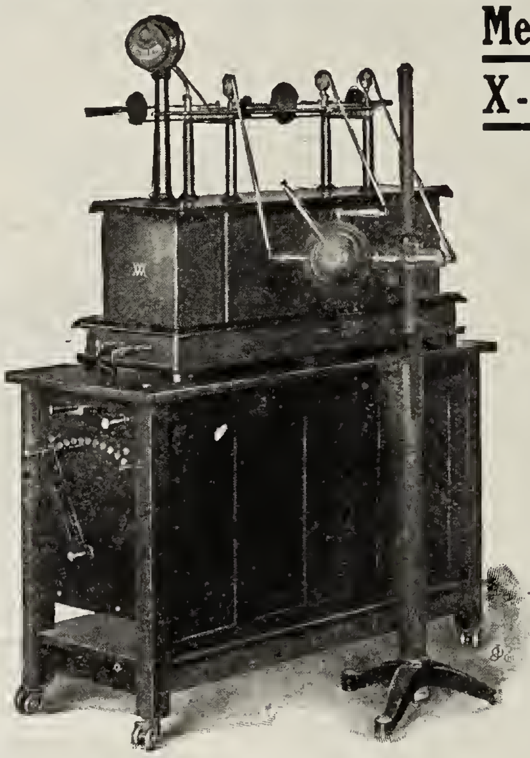

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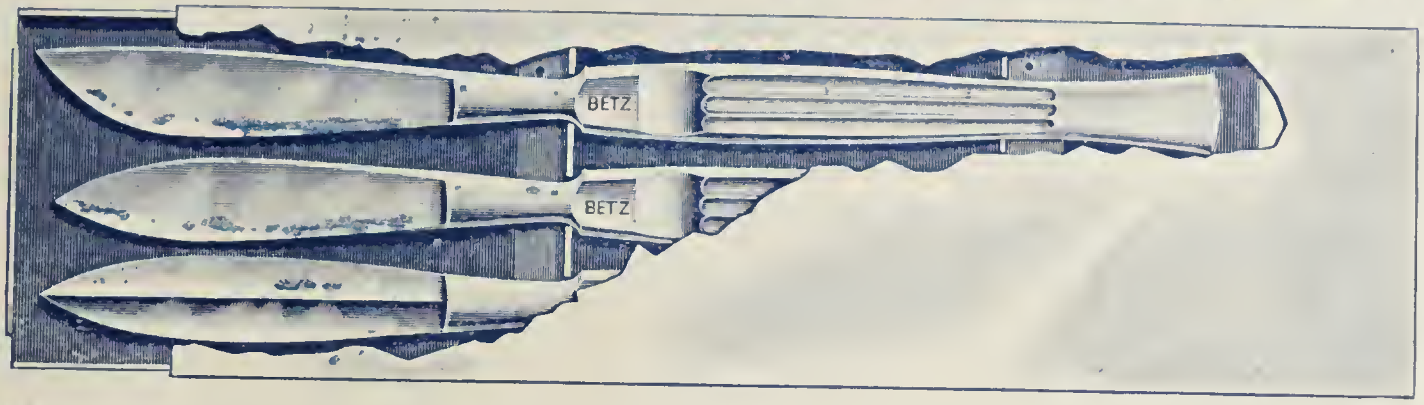

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